

PSYCHOLOGICAL APPLICATIONS AND TRENDS 2020

EDITED BY
CLARA PRACANA
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Psychological Applications and Trends

2020

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FOREWORD

This book contains a compilation of papers presented at the International Psychological Applications Conference and Trends (InPACT) 2020, organized by the World Institute for Advanced Research and Science (W.I.A.R.S.), that this year had to be transformed into a fully Virtual Conference as a result of the Coronavirus (COVID 19) pandemic.

Modern psychology offers a large range of scientific fields where it can be applied. The goal of understanding individuals and groups (mental functions and behavioral standpoints), from this academic and practical scientific discipline, aims ultimately to benefit society.

The International Conference seeks to provide some answers and explore the several areas within the Psychology field, new developments in studies and proposals for future scientific projects. The goal is to offer a worldwide connection between psychologists, researchers and lecturers, from a wide range of academic fields, interested in exploring and giving their contribution in psychological issues. We take pride in having been able to connect and bring together academics, scholars, practitioners and others interested in a field that is fertile in new perspectives, ideas and knowledge.

We counted on an extensive variety of contributors and presenters, which can supplement the view of the human essence and behavior, showing the impact of their different personal, academic and cultural experiences. This is, certainly, one of the reasons there are nationalities and cultures represented, inspiring multi-disciplinary collaborative links, fomenting intellectual encounter and development.

InPACT 2020 received 240 submissions, from more than 45 different countries from all over the world, reviewed by a double-blind process. Submissions were prepared to take form of Virtual Presentations and Posters. 75 submissions (overall, 31% acceptance rate) were accepted for presentation in the conference.

The conference also included:

- One keynote presentation by Prof. Dr. Michael Wang (Emeritus Professor of Clinical Psychology, University of Leicester; Chair, Association of Clinical Psychologists, United Kingdom).
- One Special Talk by Prof. Dr. Matthias Ammann (PhD, Department of Social Sciences, Uminho; Psychotherapist and psychoanalyst at Equilibrium Oporto; Climate activist, Portugal).

We would like to express our gratitude to our invitees.

The Conference addresses different categories inside Applied Psychology area and papers fit broadly into one of the named themes and sub-themes. The conference program includes six main broad-ranging categories that cover diversified interest areas:

- **CLINICAL PSYCHOLOGY:** Emotions and related psychological processes; Assessment; Psychotherapy and counseling; Addictive behaviors; Eating disorders; Personality disorders; Quality of life and mental health; Communication within relationships; Services of mental health; and Psychopathology.
- **EDUCATIONAL PSYCHOLOGY:** Language and cognitive processes; School environment and childhood disorders; Parenting and parenting related processes; Learning and technology; Psychology in schools; Intelligence and creativity; Motivation in classroom; Perspectives on teaching; Assessment and evaluation; and Individual differences in learning.
- **SOCIAL PSYCHOLOGY:** Cross-cultural dimensions of mental disorders; Employment issues and training; Organizational psychology; Psychology in politics and international issues; Social factors in adolescence and its development; Social anxiety and self-esteem; Immigration and social policy; Self-efficacy and identity development; Parenting and social support; Addiction and stigmatization; and Psychological and social impact of virtual networks.

- **LEGAL PSYCHOLOGY:** Violence and trauma; Mass-media and aggression; Intra-familial violence; Juvenile delinquency; Aggressive behavior in childhood; Internet offending; Working with crime perpetrators; Forensic psychology; Violent risk assessment; and Law enforcement and stress.
- **COGNITIVE AND EXPERIMENTAL PSYCHOLOGY:** Perception, memory and attention; Decision making and problem-solving; Concept formation, reasoning and judgment; Language processing; Learning skills and education; Cognitive Neuroscience; Computer analogies and information processing (Artificial Intelligence and computer simulations); Social and cultural factors in the cognitive approach; Experimental methods, research and statistics; and Biopsychology.
- **PSYCHOANALYSIS AND PSYCHOANALYTICAL PSYCHOTHERAPY:** Psychoanalysis and psychology; The unconscious; The Oedipus complex; Psychoanalysis of children; Pathological mourning; Addictive personalities; Borderline organizations; Narcissistic personalities; Anxiety and phobias; Psychosis; Neuropsychoanalysis.

This book contains the results of the different researches conducted by authors who focused on what they are passionate about: to study and develop research in areas related to Psychology and its applications. It includes an extensive variety of contributors and presenters that are hereby sharing with us their different personal, academic and cultural experiences.

We would like to thank all the authors and participants, the members of the academic scientific committee, and of course, to the organizing and administration team for making and putting this conference together.

Looking forward to continuing our collaboration in the future,

Respectfully,

Prof. Clara Pracana

*Full and Training Member of the Portuguese Association of Psychoanalysis and Psychoanalytic Psychotherapy, Portugal
Conference and Program Co-Chair*

Prof. Michael Wang

*Emeritus Professor of Clinical Psychology, University of Leicester, United Kingdom
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KEYNOTE LECTURE

THE PSYCHOLOGICAL RESPONSE TO THE COVID-19 PANDEMIC

Prof. Dr. Michael Wang

*Emeritus Professor of Clinical Psychology, University of Leicester;
Chair, Association of Clinical Psychologists (United Kingdom)*

Abstract

Every country and every people have been profoundly affected by the pandemic as governments struggle to contain the infection, and health and social care service are put under enormous pressure. Much of the population of the world are in, or have experienced “lock-down” resulting for many in social isolation and interruption of normal community activity and support. Many of us have friends and relatives who have the infection and sadly, some of us will have been unexpectedly bereaved because of Covid-19. For most of us, this is the most severe national crisis we have ever experienced.

In addition to medical, social and economic impacts, the pandemic is also taking its toll on public mental health, worsening the condition of those who have existing psychological problems and provoking widespread health and death anxiety in those who previously were psychologically stable. The loss of normal social intercourse, and interruption of relationships and communication, will make society more vulnerable to depression and suicide. Lock-down also creates huge challenges to those in abusive relationships. Those with obsessional compulsive difficulties may be worsened by the very real risk of infectious contamination from strangers and friends alike.

Frontline health and social care staff are particularly exposed, with incredible levels of work stress, frequent confrontation with death of their patients, who cannot be comforted by their relatives in their final hours, alongside fear of personal infection and the possibility of bringing that infection home to their loved ones. What is the role of psychology in this exceptional situation? How can we assist with public anxiety and individual mental health in these extraordinary circumstances? Do we have a role and responsibility to support frontline medical, nursing and care staff in our hospitals and residential care homes?

I will describe my own experience as Chair of the Association of Clinical Psychologists UK; my interactions with senior management in the British National Health Service; national provision for psychological support, especially for healthcare staff; and the particular problems faced by Covid-19 patients during ICU admission and after discharge.

Biography

Prof. Michael Wang, BSc(Hons), MSc(Clin.Psy), PhD, C. Psychol., FBPSS, is Emeritus Professor of Clinical Psychology in the Clinical Psychology Unit, Centre for Medicine, University of Leicester, and former Director of the National Health Service-funded Doctoral Postgraduate Clinical Psychology Training Course (2005-2014). He is a former Chair of the Division of Clinical Psychology of the British Psychological Society. Prof. Wang is also a full practitioner member of the BPS Division of Neuropsychology and a member of the BPS Division of Health Psychology. He is Chair of the Association of Clinical Psychologists UK.

He has worked as a clinical psychologist for more than 35 years. Prior to his appointment in Leicester he was Director of the 6-year, integrated Doctoral Clinical Psychology Training Course at the University of Hull. Throughout his academic career he has maintained an Honorary Consultant role in the NHS, treating patients with anxiety disorders, depression and obsessional compulsive disorder. He has more than 20 years' experience of examining patients with traumatic brain injury for the UK courts.

He obtained his three degrees from the University of Manchester: following graduating with a BSc in Psychology in 1978 he began his professional postgraduate training in Clinical Psychology in the Faculty of Medicine. Subsequently he completed a research PhD in 1990 which investigated learning and memory in alcoholics.

Over recent years Prof Wang has gained an international reputation for his research on cognitive and memory function during general anaesthesia. In 2004 he organized the 6th International Symposium on Memory and Awareness in Anaesthesia and Intensive Care (in Hull) – the foremost international forum for clinical research in this particular field. He has held appointments on a number of prominent committees in the British Psychological Society including the professional accrediting body for clinical psychology training, and a committee that is in the process of determining national standards for competence in the use of neuropsychological tests. He has served as an expert advisor on a NICE (UK) Committee in relation to the monitoring of depth of anaesthesia and also as an expert member of the Royal College of Anaesthesia's National Audit Project 5 (a national audit of anaesthetic awareness reports). In 1999 he was made Fellow of the British Psychological Society and is also a Fellow of the Royal Society of Medicine.

In 2015 he was awarded the Humphry Davy Medal by the Royal College of Anaesthetists for his contribution to the understanding of accidental awareness during general anaesthesia.

Prof. Wang has published more than 60 papers in peer-reviewed journals, and numerous book chapters. He has been an invited speaker at international conferences on more than 30 occasions. In collaboration with colleagues he has won more than £1.2 million in research funding. He has supervised more than 40 doctoral research projects over the past 25 years. He has been a regular contributor and session chair at recent InPACT conferences, and recently joined the conference team as a co-organiser.

HOW PSYCHOANALYSIS CAN HELP US TO BEAR THE THOUGHT OF CLIMATE CHANGE?

Matthias Ammann

Department of Social Sciences, Uminho (Portugal)

Abstract

A growing number of people are realizing that climate change might be a real threat to present and future generations. Despite protests of some people, and parts of us which do not want to see it, a growing amount of scientific evidence shows us day after day that our way of life might endanger human existence on the planet in a scale never seen before. Dealing properly with this fact is not easy, because the individual psyche cannot bear the pain of these thoughts, using different strategies to repress, negate or even disavowal completely this reality. Psychoanalysis has much to say about it. The present paper suggests a relational approach to deal with the emotions brought up by the growing evidence about this subject. Once we realize and accept the scientific evidence and regain our social and relational strength, we might still have a chance to make real changes and promote a sustainable life.

Keywords: *Anxiety, climate change, disavowal, dark optimism, conviviality.*

1. Introduction

Every day more and more scientific evidence shows us that: 1) climate change is a scientifically-proven reality; 2) human behavior is responsible for the vast majority of it; and, 3) we have to drastically change our way of interacting with nature to secure our survival as a species.

According to Anderegg et al. (2010), more than 97-98% of the peer-reviewed scientific articles support the idea of anthropogenic climate change. In the United Nations (UN) IPCC (2018) report, 1.300 scientists from different countries affirmed that, with a probability higher than 95%, human activity is responsible for the largest part of the climate change in the last 50 years. In 2019, a letter was published in the *Journal of BioScience* with more than 11.000 scientist's signatures from 153 countries (Ripple et al., 2019) stating that we are in a climate emergency and that we have to take real measures to assure a sustainable life in the future.

Evidence is around us. Although many of us are still reluctant to deal with this problem. Understanding the actual environmental crisis without understanding how the human psychic deals with painful ideas is a mistake.

One way of looking at the problem is by focusing on the human rational evaluation and decision making/actions. A perspective many times adopted by political scientists, communications experts, economists and some psychology experts from the cognitive and behavior areas. Certainly, all areas have much to contribute and different epistemic approaches are crucial to address the current environmental crisis which can be seen as a hyperobject (Morton, 2013) – an entity of such vast temporal and spatial dimension defeats traditional ideas about what a thing is in the first place. But, surprisingly, the psychoanalytical field and its abundant theoretical, clinical and conceptual resources are underrepresented despite efforts of some academics as Searles (1960), Nichol森 (2002), Randall (2009), Dodds (2011), Weintrobe (2013), Lertzman (2015) and others.

The present article aims to summarize some central ideas in the psychoanalytical theory, putting them in the context of environmental changes and then emphasizing the importance of good relations for comprehending the environmental reality. A comprehension that needs to integrate the thought of our dependency on the natural world and also our profound impact on it.

2. Psychoanalysis

It is always important to remember that, according to psychoanalysis, we are not a revealed, unitary, rational and self-aware entity. Rather, we are complex and dynamic parts which most of the time conflict with each other.

In Freud's work, we can find successively words as conflict, ambivalence, opposition, ambiguity, contradiction, partial tendencies, deformation etc. And these words try to better portray the enigma between desire-censorship, pleasure-culture, pleasure-reality, ego-id, superego-ego, erotic-auto conservation drives, Eros-Thanatos, manifest-latent dreams content and finally conscious and unconscious.

Realizing that we are not one homogenous unit and that many times we are not in control is what Freud (1917) called the third blow on the human narcissism. The first was done by Copernicus showing we are not the center of the universe, then Darwin showing we are not different from other animals and finally the psychological blow showing we are not even sovereign in our own minds. We could argue a fourth blow, realizing we are totally dependent on the environment we live in.

Our psychic mind has many partial instincts, drives, needs and desires. Some of them are conscious or known (*Bewusst*) and some unconscious – less known or totally unknown (*Unbewusst*). These partial tendencies carry conscious and/or unconscious qualities and depending on the topologic, dynamic and economic (intensity) arrangement there is more or less gray, but never just black or white.

Despite our rational desire to organize, categorize and control life in binary boxes, there is usually complex and contradictory internal relations, some more evident and others less.

When we talk about apathy, we are most likely talking about one strong tendency that dominates or suppresses the rest, but there is always a counterhegemonic potential.

As you might know, *pathos* is a Greek word that means feeling, suffering and emotion. Apathy or the absence of *pathos* is surely a matter of perspective once nobody alive has a total absence of emotions. However, our more regressed and sensible parts will often try to isolate us from the “dangerous” and vital flow of emotions

Psychoanalysis has given special attention to the different pathologies (studies of the suffering, feelings). A vast field of study that tries to understand the complex compositions built between joy/meaning and pain/suffering/ignorance in each historical period.

A riddle that changes every day and can never be completely understood once it varies from person to person and also within oneself along time, but that usually has some invariant elements.

One invariant element is that, unlike other animals, we are not born “ready”. We depend on our immediate environment and relations to survive and create a meaningful existence for an extended period of time.

First, more on a sensorial level and associated with our immediate needs and then, gradually, more on an abstract and symbolic level which allows us to build complex symbolic systems – cultures.

Despite a certain level of autonomy that we might obtain during life, it is also true that we are continuously dependent on our natural e cultural environment, a reality that our narcissistic and regressed parts cannot easily accept as Weintrobe (2013) points out. Narcissism or bad narcissism is always a reaction to an unbearable reality (Ammann, 2017). If there is a deep fall into nothing, we construct a self-sustaining ideal bridge. Celestial bridges which might never disappoint, but that do not connect anything. On the other hand, they pull us away into a solipsist and empty existence.

The less we need creating impossible and fantastic solutions, the more we are exposed to reality and are capable of feeling, thinking and dealing with our temporary existence.

But seeking for the impossible is not only an individual creation. Surely there are people who are more sensitive than others, but a vast amount of turning the impossible possible can be created in intimate and meaningful relations. Especially the first child-caretaker relations offer a privileged space for that. Nevertheless, if we had bad initial relations, we still might have a later chance to resume our maturation in good enough (Winnicott, 1986) restorative relations.

Relation(s) that offer a generous holding and progressively adapts to the person's needs creating self-confidence and, later, feelings of gratitude and concern towards the caring environment. Relations that also sustain the limits, absences and incomprehensive pieces of reality in content and content (Bion, 2004) interplay enabling the possibility to think together these difficult situations and, therefore, creating an apparatus to think reality for ourselves and in contact with others.

The first offers an internal and hopeful landscape on which existence might be built on. The second, builds a capacity to deal with existence without appealing to quick fixes or magical solutions.

Freud (1911) emphasizes how important it is to tolerate discomfort and avoid the reproduction of old quick-fixes which are actually escapes from reality or symptoms.

Tolerating the pain and being able to find better and integral solutions depends directly on the strength of the ego (Freud, 1923). Otherwise, people tend to repeat old defense mechanism not being able to grow, change and learn from experiences (Bion, 1962) and, therefore, amplifying the disparity between fantasy and reality.

But as we said above, we are not a unity. All of us have a concerned, grateful and reality loving part built through the environmental care relations; but also, some narcissistic, sensitive and fragile parts which tend to flee from reality using omnipotent thinking to avoid unbearable pain.

The first part loves reality and readily accepts complex notions of proportionality and causality which might come from science, sensorial experiences and other forms of cultural interactions. This part is built continuously in emotional and meaningful relations and creates an expansive and curious position towards complex, different and even difficult realities. The second part, still overwhelmed by helplessness and aloneness creates magical solutions sustaining grandiose and delusional states which deny substantial parts of reality and prevents the person or community to take responsibility for its present and past actions once recognizing them would imply being able to feel guilt, shame and loss.

And let's remember that the first and the second position are many times unconscious and, most of the time, not exclusive. In other words, it is very likely that there are two parts – a concerned part and an avoiding part – acting simultaneously and, therefore, configuring a psychic conflict.

3. Psychoanalysis in the context of environmental inter-dependency

If we accept inter-dependency as the core of the ecological principle, i.e., that we are a part of a big interdependent living system and add up our past and current destructive impact which is producing an environmental hyperobject that overwhelms us as it endangers our survival, an avalanche of extreme feelings comes up. Loss, anger, guilt, shame and fear are some of these feelings and being able to contain, digest and transform them into something meaningful is not easy.

Recognizing that a big part of our western identity is based on an exploitive economy and that we are responsible for destructing the environment we love and depend on is a difficult task. And even if our narcissistic parts deny that we are another being in a closed system called earth and we depend directly on this ecosystem, another part understands the dimension of the destruction, which leads to more anxiety. Unfortunately, it is also true that the bigger the anxiety, the more primitive and far from reality defenses we tend to use. Omnipotent thinking, projection and denial are a few ways to diminish or eliminate the anxiety that comes from reality (Weintrobe, 2013).

Omnipotent thinking usually tries to create magical solutions. Probably the most invested magical thought in our society orbits around technology. Many people think that a solution in a *deus ex machina* mode will come and save us all. An idea that neglects the intensity and the extent of the problem.

Projections try to put the problem away. Blaming some groups like the North Americans and Europeans, China, the wealthy, the oil industry, Government, etc. In a way, it is true that these groups bear a large amount of responsibility, but blaming them can be a way to avoid our share of the problem.

Denial is probably one of the most complex ways of dealing with it. In denial we have negation which is usually the first step of mourning, i.e., once we have a shocking loss, negate it might be a transitory phase to later, gradually, feel the anger and pain of the loss and being able to grieve. But far more complex than negation is disavowal – a radical excision of reality. Different from negation, disavowal might belong to a more organized and enduring defensive structure.

In a way, disavowal became a central issue in our society and culture. Besides perverse groups that intentionally fund media campaigns to corrupt scientific evidence, disavowal sets in under the following conditions:

the reality has become too obvious to be ignored, there is anxiety that damage is too great to be repaired, it is felt that there is not enough help, support and containment to bear the anxiety and suffering that insight brings and there is anxiety that parts of the self will not survive change that now feels catastrophic and too much to face. (Weintrobe, 2013, p. 40)

When the reality becomes too painful to bear, evading it might be the only “solution”.

The recognition of reality carries always a quantitative or economic dimension. The amount of joy, fear, reward or pain plays a central role in the mind. If we recognize that the gap between problem-solution is becoming bigger, our underlying anxiety might also become bigger appealing to stronger defenses “against” the ecological truth. But it is also true that in trustful social bounds, we can bear more intense and complex realities.

On this point, it seems that psychoanalysis has a central contribution. Besides the efforts of communications experts to give more, better or more tailored information, we need to create social spaces/bounds able to support the vulnerable parts of ourselves in the context of the painful idea of climate change.

Admitting and sheltering the helpless parts, which are usually hidden under narcissistic, magnificent and magical solutions or blasé faces of indifference, needs social support.

If there is not enough individual and collective support, is more likely that the person can jump back to radical forms of disavowal.

4. Depressive position, dark optimism and thinking with the other

Minimizing the problem, negating, disavowing or playing dead (apathy) most likely hides strong feelings of impotence, helpless and aloneness.

Integrating *pathos* in our life is not easy, once we inevitably contact unpleasant feelings and it is very difficult to do it alone.

Being in intimate, safe and honest relations with others (analyst, counselor, friend, group of people) is the only way to undo a fragile individuation, being contained by a reliable environment (Bion, 2004), placing the difficult emotion in scene and, gradually, with support, giving meaning to it and perhaps, after a while, being able to express concern and the need to repair the current and past destruction.

Talking, expressing ideas and emotions in a non-judgmental space while still being listened to is only possible in a social surrounding able to empathically accept and tolerate difficult feelings such as loss.

A place that inevitable alternates paranoid-schizoid and depressive positions (Bion, 2004) and is especially capacitated to sustain the last. The depressive position is a privileged position in which we realize our love/pain of losing and potency/destructiveness. A paradoxical position that many times people try to avoid, but which is central to existence and to the ability to think. In a way, consolidating a thought is only possible in a depressive position.

Once we start dipping our toes in the pond of *pathos*, we inevitably become wet. Anger, fear and anxiety come up, but also more and more joy, pleasure and strength.

On one hand, we live in dark times which can be sad, on the other hand, with the closeness of a possible finitude, people might actualize/concentrate the vitality/strength in the present as also the capacity to transform life.

Dark optimism is an expression coined by Shaun Chamberlin it summarizes the need to face dark truths while believing firmly in the human potential. A potential that necessarily is around the loving parts and needs to be increased and sophisticated in collective relations. Potential to contain and be contained, create and be created.

A position of curiosity and unlimited acceptance of the environmental scientific truth and also a position that stimulates the need to be in contact with the other(s), to share, to learn and to become more.

Thinking about painful ideas alone easily can bring up narcissistic and “magical” solutions to avoid reality or push people into a melancholic and helpless position. In intimate, generous and meaningful relations, we expand vastly our capacity to face difficult realities, support them in our minds and gradually care/think about them. An approach especially needed when we are facing a hyperobject that outranges every singular attempt to address it.

5. Loss, support and conviviality

Creating support structures for dealing with the consecutive and continuous losses is central for this task. One to one psychotherapy sessions, group sessions, gatherings, talks, etc. are ways people might have a chance to express and fully recognize their emotions regarding the subject.

In climate change, people usually split the present losses and project them into the future making it catastrophic and unmanageable (Randal, 2009). But many losses are happening now and many more will happen if we do not start seriously addressing the problem.

And, besides mourning our impact on the environment, we also have to mourn or deal with the complex and ambivalent feelings of our way of life (having cars, travelling, eating meat etc.) and all its reminiscences that are strongly entangled with our identity but that might show themselves more or less incompatible with a sustainable future.

Recognizing losses and mourning is always a process and it takes time. It is impossible to realize and mourn the implications of climate change at once. But with a few steps, we can make it easier.

First, we must start telling the truth (Randal, 2009). Avoiding the truth or hiding the problem only amplifies the amount of anxiety.

Second, we have to choose leaders that recognize the problem. Leaders that are not afraid to tell the truth to the public and deal with painful and unappealing realities. Surely, many people prefer that someone would save them with magical quick fixes and a promised land, but endorsing these thoughts only amplify underlying anxieties.

Third, creating support structures based on careful listening and acceptance, avoiding moralistic and judging readings.

And, fourth, stimulating a culture of conviviality (Illich, 1976). Our society has created an individualistic and isolated existence that contacts itself mainly in the competitive space of the market. Although, the capacity to live together and rely on each other, despite the protest of our narcissist parts, might be a good way to feel again a sense of belonging and using the full human potential of cooperation and thinking together.

To conclude, loss is painful and we “need to detach ourselves piece by piece from what is past and gone, or from that which is no longer sustainable. We need to grieve, with the full range of emotion which that implies. Only then will we become able to re-make our futures using all of our creativity, reason, feeling and strength” (Randal, 2009, p. 20). In addition, more than dealing with the loss and its painful ideas, we also have to rediscover or create the joy in the encounter – encounter with the other and with nature.

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Biography

Prof. Dr. Matthias Ammann has a Bachelor in Economics at UNICAMP (2007), was a Researcher at Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira (2008-2013), has a Master in Education at UnB (2011), and a Psychoanalysis specialization at Escola Paulista de Psicanálise (2016), he also has a PhD in Cultural Studies at University of Minho (2017), and has been a Researcher at the University of Minho (2019). He received Psychoanalysis training at Associação Portuguesa de Psicanálise e Psicoterapia psicanalítica (2019), and he is also a Climate activist.

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VIRTUAL PRESENTATIONS

POSITIVE YOUTH DEVELOPMENT PERSPECTIVE: THE INTERPLAY BETWEEN THE 5Cs AND ANXIETY

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Abstract

Anxiety is one of the most frequent psychological difficulties in childhood and adolescence (Neil & Christensen, 2009), and is related to numerous short- and long-term negative outcomes (Kozina, 2013; Twenge, 2000). A large body of evidence consistently shows that the 5Cs of Positive Youth Development (PYD) are positively related to adolescents' contribution to self, family and society as well as negatively related to risky behaviors and emotional difficulties, such as anxiety and depression (Lerner, et al, 2013). The 5Cs represent competencies, such as competence (a sense of positive self-worth and self-efficacy), confidence (positive view of one's actions in specific domains), connection (positive reciprocal bonds an adolescent has with people and institutions), character (possession of standards for correct behavior with respect to societal and cultural norms) and caring (sense of sympathy and empathy for others) (Lerner, 2007). In the present paper, we investigate the relationship between the 5Cs and anxiety in a Slovenian youth sample ($N = 195$, $M_{age}=17.10$ years), by using PYD questionnaire (Geldof et al., 2013) and AN-UD anxiety scale (Kozina, 2012). The PYD perspective (Lerner 2007) is used for the first time as a framework for an in-depth understanding of the 5Cs and anxiety among adolescents in Slovenia. The findings show negative associations between anxiety and the PYD dimensions of competence, confidence, connection and character. The strongest correlations were observed with confidence and connection. However, a positive association was observed between anxiety (and its components) and caring. The findings are informative for intervention within an educational framework targeting the 5Cs with the aim of decreasing risky behaviors and emotional difficulties. Still, extra care would have to be taken in the promotion of caring in anxious students. In that matter, the paper raises the question of what could be considered as optimal levels of caring in anxiety intervention and prevention.

Keywords: *Positive youth development, anxiety, Slovenia.*

1. Introduction

Anxiety is by definition a combination of cognitive (e.g., worries), physiological (e.g., nausea), emotional (e.g. fear) and behavioral responses (e.g., avoidance) (Silverman and Treffers, 2001). Even though anxiety is common throughout the lifespan and a part of everyday life, it becomes problematic when it is persistent, frequent and severe enough to restrain an individual in their everyday functioning (Weems & Stickle, 2005). Difficulties related to anxiety are common in childhood and adolescence (Neil & Christensen, 2009) and are related to numerous short- and long-term negative outcomes. High levels of anxiety interfere significantly with children's and adolescents' adaptive functioning, social competence and social adjustment (Last, Hansen, & Franco, 1997; Schwartz, Hopmeyer, Gorman, Nakamoto, & McKay, 2006), and when present in childhood they may follow a chronic course (Ialongo, Edelsohn, Werthamer-Larsson, Crockett & Kellam, 1996; Woodworth & Fergusson, 2001). There is a documented increase in anxiety in Slovenia (Kozina, 2014) and abroad (Twenge, 2000) thus, indicating a need for prevention and intervention. A large body of evidence consistently shows that the 5Cs of PYD (competence, caring, confidence, connection and character) are positively related to adolescents' contribution to self, family and society as well as negatively related to risky behaviors and emotional difficulties, such as anxiety and depression and therefore show potential to be used as a prevention model (Lerner, et al, 2013). Positive youth development (PYD) is embedded in the relational development systems model (Overton, 2015) that emphasizes the potential of the individual to contribute to the development of self and the society (Lerner, 2007). Core elements of PYD are the 5Cs of competence (a sense of positive self-worth and self-efficacy), confidence (positive view of one's actions in specific

domains), connection (positive reciprocal bonds an adolescent has with people and institutions), character (possession of standards for correct behavior with respect to societal and cultural norms) and caring (sense of sympathy and empathy for others) (Lerner, 2007).

In the present study, we first examined associations between anxiety and PYD outcomes, such as character, confidence, connection, and caring in a convenience sample of adolescents in Slovenia and second, we analyzed the predictive power of the 5Cs for anxiety and its components. The focus on the anxiety components is especially important due to the multidimensional nature of anxiety. Since the different components of anxiety in childhood lead to different problems in adolescence and adulthood (Olatunji & Cole, 2009), a multidimensional evaluation of anxiety is crucial when planning an intervention.

2. Methods

In this study, we used a convenience sample of Slovene adolescents ($N = 449$, 312 females and 130 males) aged between 15 and 23 ($M_{\text{age}} = 17.10$ years) enrolled in upper secondary schools. Data collection took place in 2017. We measured anxiety and the 5Cs of PYD using: PYD questionnaire (Geldhof et al., 2013) and AN-UD anxiety scale (Kozina, 2012)

The PYD questionnaire (Geldhof et al., 2013) consists of 34 items answered on a 5-point Likert scale (with responses ranging from 1 = strongly disagree to 5 = strongly agree). The items measure the 5Cs: competence (e.g., “I do very well in my class work at school”), confidence (e.g., “All in all, I am glad I am me”), caring (e.g., “When I see another person who is hurt or upset, I feel sorry for them”), Character (e.g., “I hardly ever do things I know I shouldn't do”), and connection (e.g., “My friends care about me”). The questionnaire has proven to be psychometrically adequate in the sample used in this study with reliability coefficients as follows: .78 (competence); .82 (confidence); .74 (character); .91 (caring); .81 (connection). CFA (Confirmatory Factor Analyses) on the present data confirmed a good fit of the 5-factor structure: $\chi^2(517) = 8745.158$, $p < .001$, RMSEA = .063, 90 % CI [.062 - .065], CFI = .947; TLI = .942 (Gonzalez, Kozina, & Wium, 2017).

AN-UD anxiety scale (Kozina, 2012) measures general anxiety and three anxiety components with 14 self-report items: emotions – eight items (e.g., I suddenly feel scared and I don't know why.), worries – three items (e.g., I am very worried about my marks.) and decisions – three items (e.g., I have difficulties making decisions.). On the scale, students indicate the frequency (1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always). The component scores can be summed up into an overall anxiety score. The three-factor structure was confirmed with a confirmatory factor analysis (CFA) on samples of primary/lower-secondary students (RMSEA (Root Mean Square Error of Approximation) = 0.062; CFI (Comparative Fit Index) = 0.946; TLI (Tucker Lewis Index) = 0.933; SRMR (Standardized Root Mean Square Residual) = 0.033) and upper-secondary students (RMSEA = 0.066; CFI = 0.941; TLI = 0.928; SRMR = 0.036). The scale has proven to be psychometrically appropriate on the sample of lower-secondary students (reliable: $0.702 < \alpha > 0.839$; sensitive: $r_{\text{average}} = 0.600$; valid: $r_{\text{ANUD-STAI-X2}} = 0.420$) and upper-secondary students (reliable: $0.717 < \alpha > 0.878$; sensitive: $r_{\text{average}} = 0.600$).

3. Results

Table 1. Correlations between the 5Cs, general anxiety and anxiety components.

	competence	confidence	character	caring	connection	anxiety	emotions	worries	decision
competence	-								
confidence	.671**	-							
character	.347**	.461**	-						
caring	.077	.048	.501**	-					
connection	.501**	.579**	.446**	.191**	-				
anxiety	-.379**	-.476**	-.081	.245**	-.326**	-			
emotions	-.393**	-.493**	-.087	.239**	-.376**	.957**	-		
worries	-.191**	-.255**	-.001	.192**	-.072**	.733**	.578**	-	
decision	-.321**	-.386**	-.105**	.163**	-.268**	.805**	.690**	.438	-

Notes. ** $p < 0.05$

Table 1 shows a pattern of correlation coefficients between the 5Cs, general anxiety and its components. The highest coefficients can be found between general anxiety and *confidence*, followed by *connection*, while the coefficients are lower and mostly non-significant with *character*. Most of the coefficient between the 5Cs and anxiety are negative, with the exception of *caring*.

Table 2. Predictive power of the 5Cs for general anxiety and components of anxiety.

	<i>B</i> (<i>SE</i>)	β	<i>t</i>	R ²	R ^{2*}
Anxiety (F (5, 394) = 37.384, <i>p</i> = 0.000)					
constant	52.964 (3.669)		14.435***		
competence	-0.275 (0.157)	-0.101	-1.758		
confidence	-0.892 (0.170)	-0.342	-5.258***		
character	0.171 (0.141)	0.068	1.214		
caring	0.631 (0.118)	0.270	5.332***		
connection	-0.365 (0.114)	-0.173	-3.193**	0.322	0.313
Emotions (F (5,396) = 42.299; <i>p</i> = .000)					
constant	31.057 (2.286)		13.589***		
competence	-0.154 (0.098)	-0.089	-1.581		
confidence	-0.574 (0.105)	-0.346	-5.451***		
character	0.130 (0.088)	0.081	1.476		
caring	0.395 (0.074)	0.265	5.373***		
connection	-0.299 (0.071)	-0.222	-4.195***	0.348	0.340
Worries (F (5,397) = 10.009; <i>p</i> = .000)					
constant	9.638 (1.062)		9.074***		
competence	-0.052 (0.045)	-0.075	-1.155		
confidence	-0.151 (0.049)	-0.228	-3.072**		
character	0.020 (0.041)	0.032	0.498		
caring	0.120 (0.034)	0.202	3.504**		
connection	0.008 (0.033)	0.014	0.235	0.112	0.101
Decision (F (5,399) = 18.989; <i>p</i> = .000)					
constant	12.353 (1.016)		12.153***		
competence	-0.068 (0.044)	-0.097	-1.566		
confidence	-0.164 (0.047)	-0.247	-3.504**		
character	0.018 (0.039)	0.028	0.460		
caring	0.117 (0.033)	0.196	3.580***		
connection	-0.076 (0.032)	-0.140	-2.394**	0.192	0.182

Notes. ** *p* < 0.05; *** *p* < 0.001;

In Table 2, multiple linear regression for the components of anxiety is presented, with all 5Cs as predictors. *Confidence* is a negative predictor of general anxiety and all components of anxiety, while *connection* is a negative predictor of general anxiety and components *emotion* and *decision*. *Caring* is a significant positive predictor of general anxiety and all three components of anxiety. With included predictors, we can explain about 30% of the variance in general anxiety and its components, emotion. Variance explained was somewhat less for *decision*, about 18%, and *worries*, about 10%.

4. Conclusions

In the present paper, The PYD perspective (Lerner 2007) is used for the first time as a framework for an in-depth understanding of the 5Cs and anxiety among adolescents in Slovenia. *Confidence* and *connection* are significant predictors of anxiety and all its measured components in expected direction, indicating the important role that PYD can play in anxiety intervention and prevention within an educational framework. However, extra care would need to be taken when promoting *caring*. Our findings show positive associations between *caring* and anxiety and its components indicating that high levels of *caring* are related to high anxiety. Thus, future research can look into the question of what can be considered as optimal level of *caring*.

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IMPROVING THE ASSESSMENT OF CHILDREN AND YOUTH WHO PRESENT WITH GENDER DYSPHORIA

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Abstract

Practitioners working with gender non-conforming children and youth ascribe to general guidelines based on the World Professional Association for Transgender Health *Standards of Care for the Health of Transsexual, Transgender, and Gender Nonconforming People* (2012). Guidelines inform clinical practice and assessment and emphasize the need for gender affirming care but do not include strict treatment criteria. Consequently, there are multiple perspectives and approaches in the field regarding effective assessment and treatment of gender diverse and transgender clients. The current study investigates the perspectives and satisfaction of transgender youth and their parents surrounding gender health assessments (e.g., hormone readiness assessments). Twenty-five parents and 22 youth who were accessing gender health services through a community outpatient clinic completed a questionnaire about the assessment process. Data was analyzed using mixed methods. Similar response patterns were found between groups. When asked about the need for comprehensive assessment (92.0%; $n = 23$) of parents and (91.0%; $n = 20$) of youth agreed or strongly agreed that a comprehensive assessment is necessary. Emergent themes included the use of comprehensive assessment as a measure to rule out other contributing factors, to increase understanding and support for gender variant expression, and to aid in identity formation. Regarding the number of sessions needed to complete a comprehensive assessment, parents and youth shared similar perspectives with the mean number of 3.96 ($SD = 0.96$) desired sessions for parents and 3.14 sessions ($SD = 1.14$) for youth. Qualitatively, the most common theme shared by parents and youth was the importance of taking an individualized approach to assessment length depending on the needs of the child and family. The greatest variation between response groups was in reference to whether parents should be involved in the assessment process. Among parents, almost all (92.0%; $n = 23$) agreed or strongly agreed that parents should be involved in the process, whereas just over half of youth (63.6%; $n = 14$) felt this way. Additionally, 36.4% ($n = 8$) of youth disagreed or strongly disagreed with parental involvement. Rationale for involvement included increasing parents' understanding and support of the child and being able to provide important details about development. Many youth shared comments about the complexity of parental support and how involvement must depend on the level of support from the parents and their relationship with their child. This study aims to increase clinical understanding of the experiences of those seeking gender health assessment services to inform and improve practices to better serve this community.

Keywords: *Gender dysphoria, comprehensive assessment, children & youth, transgender, cross gender hormone treatment.*

1. Introduction

Currently in North America there is a trend for transgender youth to access gender-related health care and interventions based on the Informed Consent Model (Edwards-Leeper, Leibowitz & Sangganjanavanich, 2016). The consent model allows transgender clients, typically adults, to access treatment and interventions including hormone treatment and surgery without receiving a comprehensive mental health evaluation (Schulz, 2018). The Consent Model offers a more accessible, affirmative, timely and less restrictive treatment model for transgender individuals, but questions remain about its efficacy (Edwards-Leeper et al., 2016; Schulz, 2018). This approach continues to grow in popularity among adult clients and many practitioners; however, when applied to younger clients, debate remains. Children and youth have complex needs and are significantly more reliant on outside support systems for meeting their

needs including familial support, financial assistance, psychological support, housing, transportation and more (Edwards-Leeper et al., 2016).

Alternatively, comprehensive psychological assessments, or the current standards of care, for assessing Gender Dysphoria require clinicians to assess the mental health and well-being of the patient seeking care, in addition to having the opportunity to assess the socio-familial factors that are central to successful treatment implementation and adherence (World Professional Association for Transgender Health [WPATH], 2012). This approach is supported by such organizations as the American Psychological Association (APA, 2015), the Australian and New Zealand Professional Association for Transgender Health (ANZPATH, 2019) and the Royal College of Psychiatrists (2014). While more thorough than the informed consent model, there are both time-related and financial costs associated with the comprehensive approach. In addition, including a mental health assessment in the comprehensive assessment could contribute further to the pathologization of gender variance.

Given that the WPATH *Standards of Care for the Health of Transsexual, Transgender, and Gender Nonconforming People* (2012) do not have specific guidelines for the assessment of children and/or youth presenting with gender dysphoria, clinicians determine a course of treatment based on their training, comfort zone and previous experiences (Edwards-Leeper et al., 2016). Therefore, there is little consistency across professionals when supporting children and youth with gender variance. Often, clinicians feel pressure to act quickly, especially if the child/youth is dysphoric and presents with severe mental health challenges including self-harm and suicidal behaviours. While acting quickly may be intended as an act of support for the child/youth, it could be short-sighted by failing to consider the complexities of the age group and the long-term developmental, social, cultural and financial needs of the child/youth. For instance, a youth may be provided with a prescription for gender affirming hormones but be denied the financial and practical support necessary to access the treatment by their parents, which could trigger an exacerbation of prior mental health concerns. As such, comprehensive assessments that involve a parent or other supportive adult may result in greater long-term success and safety for the youth.

The ongoing debate among mental health and medical professionals involves a fine balance between the important facilitation of client access to services and consideration of the potential complicating factors previously mentioned. This study aims to increase clinical understanding of the experiences of those seeking gender health assessment services, both youth and parents of gender variant children, to inform and improve current practices in order to better serve this community.

2. Participants and methods

Forty-eight people participated in this study and were recruited through a community-based mental health service clinic in British Columbia, Canada. Participants were divided into two groups: 22 gender variant youth ranging from 13 to 19 years ($M = 16$; $SD = 1.95$) and 25 parents of gender variant children/youth ranging in age from 8 to 19 years ($M = 12.76$; $SD = 2.60$). Of the youth participants, 17 reported their affirmed gender as male, 2 as female, 1 as non-binary, 1 as questioning and 1 did not report. Of the parent respondents, 15 reported their child's affirmed gender as male, 6 as female, 1 as gender fluid and 3 as non-binary. Of all respondents, 25 had previously undergone a comprehensive gender assessment, 16 had not, 3 were in progress of getting an assessment and 4 did not report if they had had an assessment or not. After completing appropriate informed consent procedures, participants completed a three-item questionnaire. Items queried participants' perspectives about (1) the need for a comprehensive assessment when a youth presents with gender identity concerns, (2) the number of sessions needed to complete a comprehensive assessment, and (3) the importance of parents being involved in the assessment process. For each item, a categorical response option (e.g., strongly disagree, disagree, neutral, agree, strongly agree) was provided, in addition to an open-ended option. Frequency tables were analyzed to determine differences in responding between the two groups, and open-ended responses were analyzed for emergent themes. Exemplar quotes are shared to help illustrate each theme.

3. Results

Preliminary results of this ongoing study are provided below. Analyses are divided into three sections based on the questionnaire items, and emergent themes are explored within each item's responses.

3.1. Necessity of a comprehensive assessment

Item 1 asked participants the extent to which they agreed that a comprehensive assessment is needed when a child or youth presents with gender identity concerns. Patterns of responding were similar across groups with almost all parents (92.0%; $n = 23$) and youth (91.0%; $n = 20$) agreeing or strongly agreeing that a comprehensive assessment is necessary. Of the remaining participants, one parent and one youth strongly disagreed and one parent and one youth provided a neutral response. Open-ended responses among parents highlighted the **importance of the assessment for recommendations on how to best support their child**. One parent wrote, “The report that came from the assessment has helped my child. It is part of their school file and the recommendations have been used as a guide for sports/classes. The assessment is fine but is all things us (parents) knew already.” Another parent shared “We did not know about the details of transitioning until we did the assessment. I feel better as a parent about treatments having gone through the assessment process.”

Common themes among both groups included **the importance of the assessment for ruling out underlying and contributing factors**, as well as **the importance of the assessment for identity formation**. One parent shared that it “helps to gain clarity of where your child's emotions and feelings are coming from - if there is anything underlying (contributing factors), [to] gain an understanding of [the] child's self-perception, [and to] give [the] child an opportunity and voice to share and hopefully make sense of their feelings and self-perception.” One youth shared that “I think that it is very important that a child gets to learn about themselves through an assessment like this one. As long as the concerns are great enough, then it would be a good idea.” Another youth expressed that “[an assessment] can isolate other factors that may give them gender confusions (mostly in young children). I think most teenagers are mature and independent enough to decide their gender for themselves.” Some youth also shared a more reserved perspective indicating that an assessment is “not initially [necessary]. One should have their own time to figure things out rather than be bombarded with questions.”

3.2. Number of sessions needed

Item 2 asked participants how many sessions would be adequate to complete a comprehensive gender related assessment. Response options included a half hour appointment, 1 session, 2 sessions, 3 sessions, 4 sessions and ‘other’. On average, parents ($M = 3.96$; $SD = 0.96$) and youth ($M = 3.14$; $SD = 1.14$) reported that a similar number of sessions would be necessary. Parents’ open-ended responses reflected the idea that the **assessment length should be determined by the professional and based on the individual circumstances and needs of the child and their family**. One parent noted that “this should be left up to the professional. Each child is unique and a ‘cookie cutter’ approach does not acknowledge this. [The] age of [the] child, past history, [and] current life circumstances all impact willingness of [the] child and family to disclose what is happening.” Similarly, several youth pointed out that **the age of the client may impact the number of sessions needed**. For example, one youth shared, “I was 18 and felt that 2 sessions was enough, but I was also sure how I wanted to pursue. I think younger people, or those who are unsure, should have longer to explore in sessions.”

3.3. Parental involvement in the assessment

Item 3 asked participants the extent to which they agreed that parents/caregivers should be involved in the assessment process. Among parents, almost all (92.0%; $n = 23$) agreed or strongly agreed that parents should be involved in the process. Of the two remaining parents, one was neutral, and one strongly disagreed. Conversely, there was much more variability among youths’ responses to this question. Over half of youth (63.6%; $n = 14$) agreed or strongly agreed in favor of parent involvement, whereas 36.4% ($n = 8$) disagreed or strongly disagreed. In addition to these figures, the themes that emerged through open-ended responses provide important detail to conceptualize this data.

The most prominent theme that emerged from parents’ open-ended responses included that **the assessment process helps to increase parent’s understanding and support of their child**. One parent wrote that “the entire family is transitioning and learning. The youth needs the support of their parents and family.” Another wrote that the assessment provides “an opportunity for parents to learn about this aspect of their child - an opportunity for improved communication and understanding between parents and child.” The second most prominent theme that emerged from parent responses was that **parents can provide unique knowledge about their child that is important for the integrity of the assessment**. For example, one parent wrote that “parents are an important part of a child's life and often know much of what the child is going through.”

Alternatively, the most prominent theme that emerged from youths’ open-ended responses was **the complexity of parental support**. Almost unanimously, youth expressed that if parents are supportive of their child’s gender identity journey then parental involvement is generally beneficial. One youth wrote that “I believe it truly depends. If parents are accepting and supportive - yes. If they want to, they should,

unless the child doesn't want them to.” Alternatively, concerns about the impact of parental involvement were raised. One youth wrote that “I don't think parents should be involved during the assessment because they can limit the openness and safety felt by the child.” Notably, although a similar theme arose in the parent data, only three parent respondents raised this concern. Another prominent theme that emerged for youth was **the beneficial impact the assessment can have on parents insight and ability to effectively support their child**. This theme is similar to the one that emerged among parents as previously discussed. For instance, one youth highlighted that “the opportunity for parents to be present could be seen as beneficial towards their learning of their child's feelings and the subject.”

Other less common themes across both groups included **the importance of a child-focused assessment, regardless of parental involvement** and **the child's dependence on the parent to help direct the assessment process and implement recommendations**. Parental dependence was noted to be particularly important for younger children.

4. Discussion

Results of this research revealed several shared perspectives between parents and youth regarding gender health assessments. Commonalities were found in regards to the importance of having a comprehensive assessment, as well as the length (i.e., number of sessions) needed. However, differing perspectives were noted in regard to parental involvement in the assessment process. Parental involvement was a polarizing topic for many youth, and responses revealed the complex nature of parental support. Alternatively, parents were almost unanimously in favor of parental involvement.

Parents play a central role in the lives of youth. Financial, logistical, social/emotional and physical support are just some ways in which parents may support their children. Despite the capacity of some youth to legally consent to the assessment, in the vast majority of cases, it is not an ideal situation for a clinician to complete an assessment without completing a thorough evaluation of these areas of support and at least make attempts to engage these external support systems. At the same time, it may be necessary to consider other sources of support (e.g., other trustworthy adults) if parents are unsupportive of their child's needs. Relatedly, youth and parents in this study emphasized the importance of taking an individualized approach to assessment. Since there is no standardized, universally-accepted approach for conducting a gender health assessment, clinicians are responsible for considering all relevant familial, developmental, cultural, psychological, and logistical factors impacting clients with gender health concerns. A thorough consideration of these factors will not only help professionals facilitate youths' access to treatment but also increase the likelihood that their clients will successfully adhere to treatment and access support throughout this often challenging process.

4.1. Limitations

Primary limitations of this research include the homogenous nature of recruiting all participants through a community-based mental health office. All participants were affiliated with this office due to previously showing interest in pursuing an assessment and/or receiving some type of mental health support for gender health concerns. Additionally, the team behind this research includes clinicians from a specialized Gender Health Program, thus adding an additional confound. Another limitation is the moderate sample size of the study. It is hard to make gross generalizations given the sample size and heterogeneity of the sample. That being said, the sample size is relatively large given the specificity of the topic and persons being researched.

5. Conclusion

Findings from both youth and parents indicate strong agreement with the need for a comprehensive gender health assessment with youth present with concerns about their gender identity. Both groups identified that a thorough and individualized comprehensive assessment can help parents better understand and support their children's overall needs, in addition to their gender-related needs. Additionally, a comprehensive assessment was noted to provide families with a clearer understanding of current and future transitions and challenges people may face along their gender identity journey. Both groups also reported that having multiple sessions was necessary for completing a comprehensive assessment given the complexity and uniqueness of each client. Having multiple sessions provides an opportunity for parents and youth to become more engaged in the process and provides opportunities for families to enhance their mutual communication and support.

Results also indicate that parents and youth have differing perspectives about parental involvement in the assessment process. While most youth see the benefit of having their parents involved, this involvement was dependent on whether the parents were perceived as supportive or unsupportive of their child's gender identity and journey. Many youth expressed caution about the motives of some parents in interfering with their child's progress and transition. While it is reasonable for youth to hold this view, it is also important to acknowledge that many parents are new to the gender assessment process, in comparison to their child. Parents are typically seeking more information to better understand what their child is going through and are sometimes resistant to the process due to a desire to protect their child. A lot of misinformation exists regarding gender variance, identity and expression, and parents may require professional guidance to support them in understanding what their child is going through. Arguably, for this reason, having parents involved may be even more crucial in helping to clarify misconceptions thus allowing them to provide more informed, proactive support for their child.

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SCREENING PROTOCOL FOR SIGNS OF AUTISTIC SPECTRUM DISORDER FOR BABIES

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Abstract

The objective of the present work is to present a proposal of a Screening Protocol for Signs of Autism Spectrum Disorder for babies. The motivation for the development of this work lies in the clinical practice of rehabilitation and care for babies at the Sarah Hospital of Rehabilitation of São Luís. The change in the profile of care to this population implied the need to systematize the skills of the team for specialized assessment of development. The method was outlined based on a review of specific literature in the field, in particular Gadia's studies, data from the Brazilian Society of Pediatrics, in accordance with international evaluation parameters. Observation was used as a methodological procedure. As a result, an evaluation systematics has been established that points out objective criteria for early insertion in a program of stimulation and / or referral to specialized services, enabling interventions that promote changes in patterns of behavior and development. The tool includes a qualitative assessment of social development and language milestones in infants under 18 months of age; application of Screening for early screening between 18 to 24 months of age; performing complementary screening tests; and standardized assessment of development through specific scale application.

Keywords: *Autism spectrum disorder, babies, child development.*

1. Introduction

The aim of this paper is to present a proposal for Medical Screening Protocol for Signs of Autistic Spectrum Disorder in Babies. The development of this work was motivated by the clinical practice of rehabilitation and care for babies at Sarah Rehabilitation Hospital, in São Luis. There has been a significant increase in the number of babies treated at the institution since 2015, with the beginning of the Program for Admission of Babies via internet. The change in procedures of taking care of this population implied the need to systematize the Hospital team's repertoire for specialized development assessment, aiming the early identification of problem behaviors and signs of delay in neurodevelopment, consequently early initiation of a stimulation program and / or specialized referral.

According to DSM V, Diagnostic and Statistical Manual of Mental Disorders, Autistic Spectrum Disorder (ASD) may be characterized by persistent deficits in social communication and interaction in multiple contexts, including deficit in social reciprocity and nonverbal behaviors used for social interaction and in skills for developing, maintaining and understanding relationships (American Psychiatric Association, 2014).

There is also reference to restricted and repetitive patterns of behavior, interests or activities. Among the established diagnostic criteria, there are specifiers of the beginning of symptoms that must be present early in the development period, which shows that problem behaviors are usually recognized at the age of 12 months, although they can be observed before this age if developmental delay is severe or failures in critical behavior are more evident.

Contributions of Gadia and other authors on the assessment of ASD signs at an early age are listed here as reference and guideline for this work, motivated by the understanding this author has pointed to the need for developmental pediatricians to be involved in the process of identifying behavioral signals which are relevant to the longitudinal diagnostic process of ASD. Gadia presents the importance of pediatricians, in interface with areas of child development, recognizing developmental skills in the evaluation process.

Initially, this work lies in an interdisciplinary understanding of assessment and analysis of child development, as only it can provide adequate care for children with neurodevelopmental disorders. It is understood that as important as the availability and accuracy of the practice of professionals, who already work directly in the area of child development, is the early identification by other professionals who work in the initial sphere of monitoring, medical screening services and initial evaluation of pediatrics.

This interface of action between areas of knowledge can optimize the progress of clinical follow-up of infants who have neurodevelopmental and / or neuropsychiatric disorders. In addition to the paralyzing diagnostic search, there is the diagnostic search that alters paths and focuses on what we call resilience. It alters vulnerability and risk, transforming the possibility of quality of life of babies, children and their families.

The Sarah Network of Neurorehabilitation is reference in the treatment of neurological problems in children and adults in Brazil. It consists of nine units and serves patients from all over the country. In childhood, most of the patients are diagnosed with cerebral palsy or traumatic brain injury. Children and adolescents are treated through many modalities by an interdisciplinary health team. The São Luís, Maranhão unit is located in the neighborhood of Monte Castelo and has the Neurological Rehabilitation in Spinal Cord Injury, Neurological Rehabilitation and Orthopedics Programs, where adults and children are admitted.

2. Methodology

The method was based on a review of specific literature in the area of knowledge that points to the interface between pediatrics and development, especially Gadia studies, by authors addressing the importance of early assessment and stimulation in ASD, current data from the Diagnostic Manual and Mental Disorders Statistics (DSM V) and information recommended by the Brazilian Society of Pediatrics, in accordance with international assessment parameters. In addition, observation was used as a methodological procedure.

3. Results

As a result, a screening protocol for signs of autistic spectrum disorder has been developed to be used in the clinical practice of the hospital rehabilitation team. Therefore, there is a simplified evaluation system that aims at objective criteria for early insertion in stimulation and / or referral to specialized services, enabling interventions that promote changes in behavioral and development patterns and increase in the quality of babies' and their families' lives. The tool includes qualitative assessment of social and language development in infants younger than 18 months; Screening application for early diagnosis in children between 18 and 24 months of age and complementary exams in addition to standardized assessment of development through specific scale application.

It is relevant to note that the protocol obtained has been used in clinical practice paired with the other qualitative data that are recorded by the hospital interdisciplinary team during care, as already practiced at the Child Rehabilitation Center. The qualitative aspects narrated by family members are part of all clinical procedures performed and are saved in an electronic medical record, a registration and monitoring tool used by the team.

Specific information about the developed Protocol is presented below and includes qualitative assessments of behavior and development (based on family history and direct observation of assisted infants), application of the Modified Checklist for Autism in Toddlers (M-CHAT) scale for infants between 18 and 24 months of age, additional tests requested by the pediatrician, and the possible use, according to the hospital team's analysis, of the Bayley Scales Test of Infant and Toddler Development.

3.1. Screening protocol for autistic spectrum disorder signals in infants

Assessment of infant development is one of the key roles of the hospital interdisciplinary rehabilitation team in the care process for infants at risk. This evaluation aims to point out global development acquisitions and correlates to developmental markers that allow the identification of a strengthened repertoire in the process of constitution or the detection of flaws that suggest development delay.

Commonly assessed axes involve global cognition, language, motor development, and behavioral framework. Based on the analysis of literature regarding developmental signs possibly related to ASD, we highlight as evaluation system for babies up to 18 months of age, evaluations that are significant for the hospital team analysis. This evaluation makes up the first screening stage.

3.2. Qualitative assessment of development, social interaction and language in infants up to 18 months

a) eye contact analysis: observation of the ability to initiate and maintain visual response to the contact of the interlocutor and quality of eye contact. Observe if there is avoidance or vague look, peculiar characteristics in the way the child looks at objects;

b) analysis of social interaction schemes: observation of the skills to establish social exchanges, participation in simple interactions, transmission and response to social smile. Observation of interest in

social stimuli, including behavioral fixation of the human face, response modification upon presentation of specific social stimuli (e.g. caregivers);

c) analysis of the language development stage: discrimination of signs that suggest delay; observation of sounds as well as features of language functionality. Discrimination of atypical language processes, persistence of expressive jargon at an unexpected stage. Evaluation of verbal and nonverbal communication repertoire;

d) analysis of auditory responses: discrimination of signs of changes in responsiveness to auditory stimuli, sound response, source location. Evaluation of changes in the responsiveness of sounds of physical and social environment;

e) assessment of social imitation behaviors: evaluation of immediate imitation sound schemes or motor schemes as expected in global development. Assess whether imitation responses occur spontaneously or require support from others;

f) assessment of shared attention schemes: assessment of behaviors that indicate the child's ability to follow social stimulus toward other environmental stimuli, as well as the ability to sustain interaction with stimuli presented by the interlocutor;

g) evaluation of symbolic thinking schemes: evaluation of behaviors during play that indicate ability for symbolic representation, either from imitation behaviors or spontaneously in interaction with objects arranged in the environment or imaginary objects;

h) motor development analysis: assessment of the overall motor repertoire; identification of signs of delay or atypical, stereotyped and poorly functioning motor behavior.

The objectives of systematizing these evaluation axes are aimed at favoring the observation of behaviors and critical developmental skills by professionals of the hospital interdisciplinary team. However, it is understood that the identification of the previously mentioned skills is not conclusive of a priori diagnoses, making it fundamental to contextualize and analyze the global development which allows an interpretation of the observed data.

3.3. Initial evaluation

a) Application of the M-CHAT Scale for babies aged 18 to 24 months

In the present study, the data expressed in the methodology, were sought to support the use of standardized tools for assessing signs of ASD in infants. Within this scenario, considering the assumed relevance to clinical practice, the use of the M-CHAT Scale aimed at children aged between 18 and 24 months, version translated into Portuguese by Losapio and Pondé (2008).

M-CHAT is a screener to assess ASD traits in young children. It is a simple tool that can be used by pediatrics and other health professionals, and can point out signs of behavior or development that point to critical flaws that indicate the need for specialized diagnostic evaluation (Losapio & Pondé, 2008).

The instrument should be applied to parents or caregivers and has high sensitivity and specificity. It is made up of 23 yes / no questions, is easily available in electronic version and points to the final impression of whether there is a risk for ASD or not. It is a screening tool, not a diagnostic tool, which facilitates the identification of situations to be better investigated in services in ASD (Brazilian Society of Pediatrics, 2017).

The application of the M-CHAT scale is directed to babies between 18 and 24 months of age, since literature has indicated that its application at an earlier age is more strongly associated with false positives. Thus, we opted only for qualitative analysis of behavior / development stages up to 18 months (as presented in the previous item) and, from this age on, complementary application of the M-CHAT scale in all infants treated.

The objective of choosing this instrument was to achieve a quantitative data that complements the assessment performed by the hospital team and supports, together with other evaluations and complementary exams, the definition of follow-up conducts either in stimulation in the program and / or referral to specialized services.

b) Evaluation of complementary exams and discussion with pediatrics

Clinical assessment and stimulation of infants at risk also points to the need for additional tests to support important differential diagnoses in developmental clinics, enabling further elucidation between primary sensorial changes, global development delay, language disorders, TEA, among others.

Significant complementary exams for the screening stage and initial investigation are listed below:

- Hearing screening: study of Auditory Evoked Potential (AEP) and Brainstem Evoked Response Audiometry (BERA);

- Behavioral auditory assessment: this is a complementary research tool with qualitative basis, whose data are measured in situations of interaction with the child and discussed with the hospital speech therapy team;

- Neuroimaging: for those who have risk factors for brain injury, in pre-, peri- and postnatal history;

- Molecular biology: Requested for those without etiology for ASD, consists of mutation (deletion / duplication) research in regions 15q11-13 and 16p11 and 22q13 by the Multiplex Ligation-Dependent Probe Amplification (MLPA) technique and relative quantification of regions 15q11-13 and 16p11 and 22q13. Cytogenetically visible chromosomal changes, such as rearrangements, deletions, and duplications, have been identified in 3 to 5% of ASD patients, while microdeletions are found in approximately 10% of cases (Vorstman et al., 2006; Morrow et al., 2008). Among the chromosomal changes most commonly found in ASD patients are deletions and duplications in 15q11-13 (Sharp et al., 2005; Pagnamenta et al., 2009), 16p11 deletions (Ballif et al., 2007; Kumar et al. 2008; Marshall et al., 2008) and 22q13 deletions (Moessner et al., 2007; Sykes et al., 2009). The MLPA technique allows the search for mutations, specifically deletions and duplications in these three described regions.

c) Development Assessment

The assessment of global development consists of the analysis of the acquisition of cognitive, motor and language axes and is performed by the interdisciplinary rehabilitation team from qualitative analysis frameworks and ecological development perspective, and may also have standardized tools for analysis. It also allows deepening on the significant behavioral data measured in screening instruments or resulting from family history.

In the studied clinical practice, the hospital team opted to use the Bayley Scale Test as a standardized tool. The Bayley Scale Test is a tool for screening cognitive, motor and language delay in infants from 1 to 42 months of age. It is an instrument that is easy and quick to administer and is therefore usable in hospital and outpatient settings. The application enables testing of different development domains and inference as to the indication of a more extensive and comprehensive assessment of development. In the evaluation context, the baby is encouraged to participate in playful activities and the evaluation data are compared with cutoffs according to age group.

d) Orthopedic evaluation

In addition to the abovementioned assessments, all infants treated are evaluated for the indication of participation and follow-up in a protocol of gait digression, with the orthopedics team, using triceps shortening criteria.

e) Medical Referral Criteria

After behavioral analysis, development and complementary tests that favor differential diagnosis, in case of positive impression of signs of ASD, all evaluated babies are referred to a specialized diagnostic service for diagnostic elucidation (neuropsychiatrist or infant psychiatrist), based on data given by the global team assessment. In addition, infants with brain injury up to 18 months of age are referred to the developmental stimulation group with the interdisciplinary team in the Child Rehabilitation program.

Confirmed diagnostic data are later saved in a specific electronic medical record icon for proper notification and database recording for future studies.

The proposal of the signal assessment protocol for ASD previously described has been implemented within the context of Child Rehabilitation at the present service. At this stage, in which the initial protocol proposal was concluded and its application started in the clinical context, there is a positive analysis by the interdisciplinary team about its effectiveness, especially regarding a more objective and standardized documentation of the development and clinical aspects of these babies, enabling even greater safety on the part of the team in the conduct definition process, either by indicating with more objective goals for the stimulation program (discrimination of target behaviors and developmental skills to be achieved) or by defining regarding the need for referral to specialized service, when necessary.

In future studies, we may also seek to identify results about the correlation between data obtained with the protocol and confirmed diagnostic data for Autistic Spectrum Disorder or other neurodevelopmental changes. It is well known that early intervention programs point to more significant gains for children with these conditions (Lampreia, 2007; Losapio & Pondé, 2008; Brazilian Society of Pediatrics, 2017).

4. Final considerations

This work presents contributions aimed at the qualification of the evaluation in the health service that sometimes constitutes a trigger for a specialized diagnostic evaluation process. It is well known that misinformation and little repertoire for health professionals' assessment of development is one of the main barriers in the early diagnosis process for neurobehavioral disorders, including Autistic Spectrum Disorder.

Although there is documentation of specific instruments with validation for the Brazilian population that are focused on the development of the baby, it is important to note that there are still few specific instruments aimed at assessing signs of development correlated with ASD. The available scales

for evaluating the development of infants are extremely useful in clinical practice, but usually allow inferences more associated with global development and are not used in most services as isolated predictors of specific behavioral conditions.

The evaluation of signs of Autistic Spectrum Disorder in infants is discussed in specialized literature, so it is known that evaluation at an early stage of development may imply the identification of false positives or interventions in infants who will be evaluated in the future as a group out of the spectrum. In babies with risk factors, such as prematurity, this data is even more relevant. Nevertheless, it is understood that early assessment and intervention can support the structuring of alternative paths for development and benefit qualitatively the repertoire and acquisitions of large groups of infants and children.

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ADHERENCE TO TREATMENT ASSESSMENT IN PATIENTS WITH CARDIOVASCULAR DISEASES FROM A CLINICAL AND PSYCHOLOGICAL PERSPECTIVE

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Abstract

Introduction. The behavior of patients with cardiovascular diseases in the course of therapy is of key importance, since their survival and quality of life depend on their lifestyle and adherence to physicians' recommendations. Adherence to treatment and its assessment is considered to be a medical problem, but numerous studies show that it is multifactorial and it must be considered from an interdisciplinary point of view.

Material and Methods. CHD patients of the cardiac rehabilitation department were examined (n=112). Patients' behavior in the therapy process, their clinical, emotional and social status and psychological characteristics were studied. Supervising doctors and clinical psychologists who followed up the patients made an expert opinion on their level of adherence to treatment and divided them into two groups. At the same time, they filled out a specific questionnaire for each patient, which contained several aspects of patients' therapeutic behavior, both pharmacological and non-pharmacological.

Results. Adherent and non-adherent patients were found to differ in all the aspects included in the questionnaire ($p < 0,001$; $p < 0,05$ for the indicator "alcohol consumption"). The factor analysis of all the questions from the questionnaire identified three major factors that combined various aspects of treatment adherence. Three obtained factors explain 70% of the total dispersion. The 1st one included the following aspects: regularity of cardiological examinations, regularity of blood pressure self-monitoring, intake of prescribed medications regularity; the 2nd, control (and, if necessary, reduction) of weight, following a diet, the level of physical activity; the 3rd, alcohol consumption (frequency and dose) and smoking (smoking cessation/number of cigarettes per day). Based on the three identified factors system, patients can be divided into more specific categories.

Conclusion. Nevertheless, it is essential to consider not only the level of adherence to treatment and its aspects, but also the reasons of patients' behavior: their awareness of the treatment regimen, their consciousness and motives for following the recommendations, the value of health and the subjective disease perception. It is important to take account of the factors that may interfere in adherence to treatment, and patients' resources for an optimal therapeutic behavior. Therefore, adherence to treatment is based on both clinical and psychological aspects. Its theoretical and practical study should be based on the biopsychosocial approach to the problem and an individual approach to each patient.

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Keywords: *Therapeutic behavior, adherence to treatment, assessment, cardiovascular diseases.*

1. Introduction

The problem of adherence to treatment is relevant primarily for chronic diseases: according to the WHO the rates of non-adherence are about 50% (WHO, 2003). At the same time, a low level of adherence to treatment presents a menace both to the patient's health condition (for example, in cases of diabetes, coronary heart disease, etc.), and to others' health (in cases of tuberculosis, HIV, etc.).

It is also noted that patients' adherence to treatment is significant for the healthcare system: low adherence leads to repeated manifestations of the disease and increases the cost of treatment, as well as leads to a decrease of trust in the doctors due to poor treatment results, undermines the belief in medicine among patients and their families.

The behavior of patients with cardiac diseases in the treatment process is of key importance, since their survival and quality of life depend on their lifestyle and following the doctors' recommendations on pharmacotherapy. Nevertheless, to date, adherence to treatment among such patients remains low, and mortality rates for this group of diseases are leading.

A high level of adherence to treatment is also crucial after cardiosurgical interventions: the duration of the positive effect of such operations as heart transplantation, myocardial revascularization (coronary stenting and bypass surgery) depends on how accurately the patient will comply with the cardiologists' recommendations.

In connection with the particular urgency of the patients' adherence to medical recommendations problem, the question of its assessment becomes actual. In practical medicine, adherence to treatment is most often assessed in a conversation with the patient. Any doubt about the sincerity of the patient is resolved by questioning relatives and/or (less commonly) additional diagnostic procedures and tests. Patients' regular visits to the check-ups, their active participation in the discussion of treatment issues, trustful attitude indicate a higher level of adherence (Konradi A.O., 2007). The most commonly used methods aim at measuring pharmacological adherence (Fofanova T.V., 2015). However, adherence to treatment for coronary heart disease (CHD) is not limited to adherence to pharmacotherapy, but includes a whole range of aspects – constant monitoring of blood pressure, healthy nutrition, recommended physical activity, etc., which are associated with the specifics of the disease. It is worth mentioning that in terms of adherence to non-drug therapy, a single criterion of adherence has not yet been developed (Jin J. et al., 2008). The existing clinical methods, as well as self-report methods, indicate that this problem is of a medical nature. However, in practice, the task of assessing the level of adherence is often assigned to the clinical psychologist who treats the patient at the pre- and postoperative stages.

2. Material and methods

Objective: to study the behavior of patients in the therapy process – their adherence to the recommendations regarding pharmacological and non-pharmacological treatment, lifestyle changes; and to study the possibility of using a multifactorial model in the assessment of the level of patients' adherence to treatment taking into account various behavioral aspects.

The present study is part of a larger research, which results show the great role of the patients' psychological characteristics (in conjunction with social and clinical characteristics) in the rehabilitation process after surgical treatment of coronary heart disease (Iakovleva M. et al., 2019). The research is being held at the St. Petersburg State University and on the basis of the Almazov National Medical Research Centre (Saint Petersburg), from 2012 to the present time.

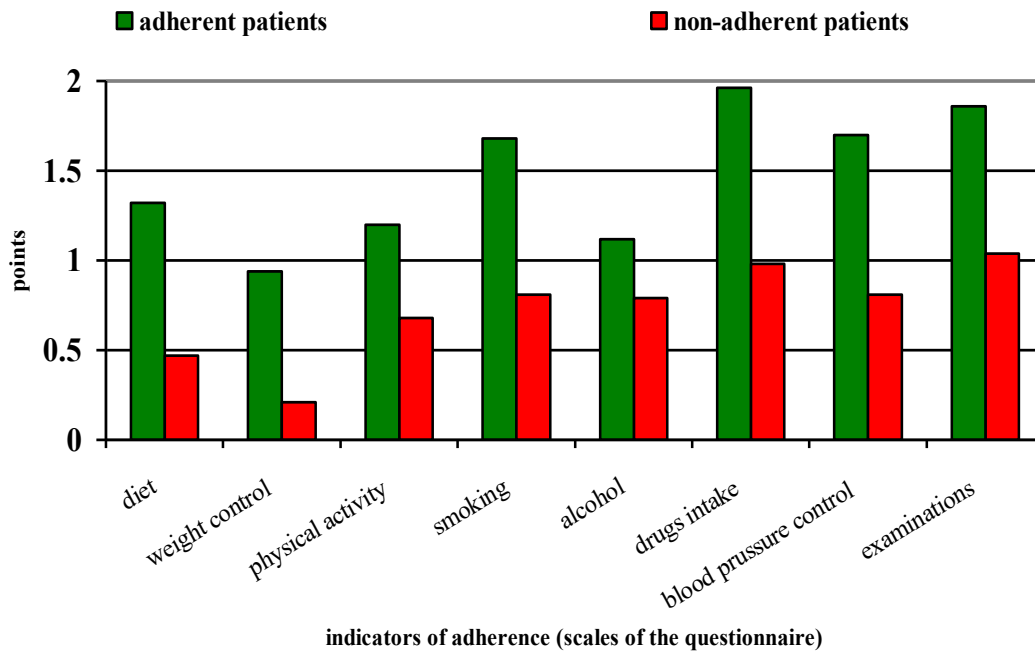
A survey of 112 patients undergoing treatment in the cardiology department is presented. All examined patients were diagnosed with CHD, they underwent direct myocardial revascularization; no mental pathology or cognitive decline was found. 81% were men; 58,4 years was the sample average age.

The assignment of a patient to a group of adherent or non-adherent to treatment was made by an expert method, jointly by a cardiologist and a clinical psychologist. At the same time, for each patient a questionnaire was filled out, taking into account many behavioral factors associated with adherent behavior. In total, it contained 8 questions (indicators) (see Figure 1), each of them could be rated at 0, 1, or 2 points. Higher scores indicated a higher level of adherence. Further analysis of the questionnaire showed that all the aspects indicated in it are significant for determining adherence to therapy and should be taken into account when assessing it.

3. Results

Data obtained using the adherence to treatment questionnaire was analyzed in the study. Indicators on each of the 8 scales included in the questionnaire (i.e. aspects of adherence) for the two groups of patients are presented in Figure 1.

Figure 1. Mean values in the groups of adherent and non-adherent to treatment patients according to different aspects of treatment adherence.



Note. The minimum number of points that a patient could score on each of the scales is 0 (correspond to the pole of non-adherence to treatment); maximum – 2 (correspond to the pole of adherence to treatment).

Comparison of two groups of patients according to various indicators included in the adherence to treatment questionnaire revealed that patients differ in almost all aspects of the questionnaire: following a diet, weight control, physical activity, smoking, medication intake, blood pressure self-monitoring, regularity of medical examinations ($p < 0.001$). The groups also differ in terms of “alcohol consumption” ($p < 0.05$). Thus, patients assigned to the group of adherents to treatment significantly gain more points on all scales of the questionnaire, i.e. they have higher indicators of adherence, which may say for the effectiveness of the questionnaire.

Next, the whole set of questions on the adherence to treatment questionnaire, i.e., various aspects and indicators of the phenomenon of adherence, was subjected to factor analysis using the principal component method.

As a result of varimax rotation with Kaiser normalization, three major factors that combined various aspects of treatment adherence were revealed. The content of three factors obtained, i.e., which parameters are included in a particular factor and what is their these coefficient (factor weight), can be identified based on the data of mathematical analysis (Table 1). These three factors account for 70% of the total variance of characters.

Table 1. The results of factor analysis of various adherence aspects (factor weights and factorization).

Aspects of adherence to treatment	Component		
	1	2	3
Check-ups	0,878		
Blood pressure control	0,819		
Intake of prescribed medications	0,788		
Weight control		0,841	
Diet		0,802	
Physical activity	0,434	0,511	
Alcohol consumption			0,765
Smoking			0,660

Factor 1. This factor included the following indicators (aspects) of adherence to treatment: regularity of medical examinations; regularity of blood pressure self-monitoring; regularity of prescribed medications intake (dosages and regimen). The informative value of this factor is 30%; it could be designated as “medical”.

Factor 2. It included the following indicators: patients' control (and decrease, if necessary) of weight; following a diet (restrictions on various groups of products); level of physical activity, regularity of physical exercise. The informative value of the factor is 23%; it could be called "physical condition".

Factor 3. It included the following two indicators: alcohol consumption (frequency and dose) and smoking (recommended smoking cessation / frequency and number of cigarettes smoked). The informative value of the factor is 17%; it could be called "bad habits".

All indicators included in the abovementioned factors have a positive factor weight: the positive pole of the factor is interpreted by the positive poles of the variables included in it, that is, a larger value (and therefore, a better result) is obtained with large points scored for these variables.

4. Discussion

Patient samples can be divided into more specific categories based on the three identified factors. So, for example, a group of patients who regularly seek for medical help, take medications, but who have not abandoned bad habits (i.e., taking into account the 1st and 3rd factors), or a group of patients who do not consume alcohol and tobacco, but refuse pharmacotherapy, can be distinguished. Patients from these groups may differ in their psychological characteristics, in motivation for continuing treatment and health beliefs; therefore, it is more effective considering them, as well as developing psychocorrectional programs for them, taking into account these differences, and not according just to one isolated quantitative indicator of adherence to treatment.

5. Conclusions

Adherence to treatment is usually considered a medical problem. Thus, recommendations in case of patient's non-adherence are also of a medical nature. However, numerous studies show that this is a complex multifactorial problem, and its consideration seems more productive from an interdisciplinary point of view. Adherence to treatment for most chronic diseases is not limited to adherence to drug therapy, but includes a whole range of aspects related to a lifestyle change, specific to the illness.

Summarizing the above, adherence to treatment is a complex phenomenon associated not only with the patient's behavior in the therapy process, but also with his/her attitudes, level of awareness, health literacy, previous medical experience, the influence of relatives, the relationship with the doctor and the perception his/her disease. It is important to take account of the factors that may interfere in adherence to treatment, and patients' resources for an optimal therapeutic behavior. Therefore, adherence to treatment is based on both clinical and psychological aspects. Its theoretical and practical study should be based on the biopsychosocial approach to the problem and an individual approach to each patient.

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THE EXAMINATION OF THE ASSOCIATIONS AMONG PERFECTIONISM, SELF-HANDICAPPING, SELF-COMPASSION AND PSYCHOLOGICAL SYMPTOMS

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Abstract

The aim of the current study was to examine the associations among perfectionism, self-handicapping, self-compassion and psychological symptoms. For this purpose, 653 volunteer participants (360 females and 293 males) whose ages were between 18 and 50 ($M = 24.90$, $SD = 7.57$) were recruited from various cities in Turkey. Demographic Information Form, Multidimensional Perfectionism Scale (MPS), Self-Handicapping Scale (SHS), Self-Compassion Scale (SCS) and Brief Symptom Inventory (BSI) were administered in data collection. The result of the hierarchical regression analysis revealed that psychological symptoms were positively associated with socially prescribed perfectionism and self-handicapping, but negatively associated with self-compassion. Limitations, future directions and implications of the study were also provided.

Keywords: *Perfectionism, self-handicapping, self-compassion, psychological symptoms.*

1. Introduction

In literature perfectionism is considered as a risk and maintaining factor for various psychological problems (Egan, Wade, & Shafran, 2011). However, some researchers claimed that perfectionism is a multidimensional construct and may not be a completely negative concept (Stoeber & Otto, 2006). Moreover, different mechanisms are involved in the relationship between perfectionism and psychological health. Since perfectionism may cause some negative psychological consequences particularly in a failure situation (Stoeber, Schneider, Hussain, & Matthews, 2014), it is important to highlight its role and related mechanisms in psychological symptoms.

One of these related mechanisms is self-handicapping, because individuals with higher perfectionistic expectancies are more likely to use self-handicapping behaviors (Frost, Marten, Lahart, & Rosenblate, 1990; Pulford, Johnson, & Awaida, 2005). Self-handicapping is a cognitive strategy which people generally use for protecting their self-esteem by avoiding any effort, in the case of possible failure (Kolditz & Arkin, 1982). Although these strategies seem to be useful in the short term; they might lead to negative psychological consequences in the long run (Zuckerman, Kieffer, & Knee, 1998; Zuckerman & Tsai, 2005).

In contrast to self-handicapping, self-compassion is a well-being enhancing attitude which enables people to handle with a negative situation or failure in an adaptive way (Akın & Akın, 2015). People having higher level of self-compassion are more likely to attribute their personal experiences to their own abilities without comparing their achievements and abilities with others (Neff, 2011); to accept their failures (Neff, Rude & Kirkpatrick, 2007) and to focus on gaining new experiences instead of trying to protect their self-esteem (Neff & Vonk, 2009). Therefore, self-compassion might be functional coping mechanism, with respect to perfectionism and self-handicapping, in order to protect and flourish psychological health.

To sum up, providing a better understanding about the multidimensional nature of perfectionism by considering related risk and protective factors is important for achieving comprehensive theoretical and practical knowledge. Therefore, the aim of the current study was to examine the relationships among different perfectionism traits, self-handicapping, self-compassion and the predictive roles of these on psychological symptoms.

2. Method

2.1. Participants

653 volunteer participants (360 females, 293 males) were recruited from various cities in Turkey by using convenient sampling method. The age range of the participants was between 18 and 50 ($M = 24.90$, $SD = 7.57$). Majority of the participants (89%) were either university students or had a minimum bachelor's degree. 488 of the participants (74.7%) are married and 101 of them (15.6%) were single.

2.2. Measures

Multidimensional Perfectionism Scale (Hewitt & Flett, 1991b) was used in order to examine different perfectionism traits. The scale consists of 45 items with 3 subscales, namely: self-oriented perfectionism, others-oriented perfectionism and socially prescribed perfectionism. Turkish adaptation study of the Multidimensional Perfectionism Scale was conducted by Oral (1999). In the present study, Cronbach's alpha coefficient for internal consistency was found as .86 for total scale, .86 for self-oriented perfectionism, .67 for others-oriented perfectionism and .78 for socially prescribed perfectionism.

Self-handicapping Scale (Jones & Rhodewalt, 1982) was used to assess self-handicapping strategies such as procrastination, lack of preparation and effort, use of alcohol and medicine, substance abuse, lack of sleep and emotional symptoms. Turkish version (Akın, 2012) was administered and its reliability was calculated as .71 in the current study.

The Self-Compassion Scale (Neff, 2003b) was used in order to measure individual's tendency to be compassionate toward self. The scale consists of 26 items with 6 subscales, namely: self-kindness vs self-judgment, common humanity vs isolation, mindfulness vs over identification. Turkish version (Akın, Akın, Abacı, 2007) was administered in this study and Cronbach's alpha coefficient was reported as .92 for total scale, .79 for self-kindness, .84 for self-judgment, .74 for common humanity, .76 for isolation, .77 for mindfulness, .78 for over-identification.

Brief Symptom Inventory (Derogatis, 1993) was administered to examine participants' psychological symptoms. The original form consists of 53 items with 9 subscales (somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism) and 3 indices of global stress (Global Severity Index, Positive Symptom Distress Index, and Positive Symptom Total). Turkish version of this scale (Şahin & Durak, 1994) contains only 5 subscales; anxiety, depression, paranoid ideation and hostility. In the current study, reliability was reported as .97 for total scale, .89 for anxiety, .91 for depression, .90 for paranoid ideation, .85 for somatization and .82 for hostility.

2.3. Procedure and analysis

After the approval of Maltepe University Ethics Committee, self-report questionnaires were administered to volunteer participants by paper-pencil technique or via online survey. Participants signed an inform consent informing them about the purpose and the procedure of the study. It took approximately 20 minutes to complete all items. Collected data was analyzed by using SPSS IBM 23. Firstly, Cronbach's alpha coefficients were calculated for all the scales. Secondly, relationships among variables were examined with Pearson's Correlation Analysis. Thirdly, predictors of psychological symptoms were assessed with hierarchical regression analysis.

3. Results

3.1. Intercorrelations among variables of the study

Since the sample size is large, only correlation coefficients above .20 were accepted as significant. The findings revealed that total perfectionism was positively correlated with self-judgment ($r = .25$, $p < .001$), isolation ($r = .32$, $p < .001$) and over-identification ($r = .22$, $p < .001$); but negatively correlated with total self-compassion ($r = -.28$, $p < .001$). Additionally, socially prescribed perfectionism was positively correlated with self-handicapping ($r = .31$, $p < .001$), self-judgment ($r = .35$, $p < .001$), isolation ($r = .37$, $p < .001$) and over-identification ($r = .30$, $p < .001$), while negatively correlated with total self-compassion ($r = -.37$, $p < .001$), self-kindness ($r = -.22$, $p < .001$), common humanity ($r = -.20$, $p < .001$) and mindfulness ($r = -.21$, $p < .001$). Moreover, self-handicapping was positively correlated with self-judgment ($r = .54$, $p < .001$), isolation ($r = .55$, $p < .001$) and over-identification ($r = .61$, $p < .001$); but negatively correlated with total self-compassion ($r = -.58$, $p < .001$), self-kindness ($r = -.35$, $p < .001$) and mindfulness ($r = -.39$, $p < .001$) (See Table 1).

Table 1. Intercorrelations among Variables of the Study.

Variable	1	2	3	4	5	6	7	8	9	10
1	1	.67**	-.28**	-.15**	.25**	-.18**	.32**	-.12*	.22**	.10*
2		1	-.37**	-.22**	.35**	-.20**	.37**	-.21**	.30**	.31**
3			1	-.80**	-.81**	.56**	-.75**	.76**	-.79**	-.58**
4				1	-.49**	.58**	-.37**	.71**	-.44**	-.35**
5					1	-.21**	.71**	-.39**	.71**	.54**
6						1	-.15**	.55**	-.16**	-.11*
7							1	-.36**	.72**	.55**
8								1	-.48**	-.39**
9									1	.61**
10										1

Note: * $p < .01$, ** $p < .001$; 1 = Multidimensional Perfectionism Scale total, 2 = Multidimensional Perfectionism Scale-Socially Prescribed Perfectionism, 3 = Self-compassion Scale total, 4 = Self-compassion Scale-Self-kindness, 5 = Self-compassion Scale-Self-judgment, 6 = Self-compassion Scale-Common humanity, 7 = Self-compassion Scale-Isolation, 8 = Self-compassion Scale-Mindfulness, 9 = Self-compassion Scale-Over-identification, 10 = Self-handicapping Scale

3.2. Predictors of psychological symptoms

In order to examine the factors associated with psychological symptoms (as dependent variable), hierarchical regression analysis was performed. Independent variables entered into the equation via three steps via stepwise method. In the first step, age, education level and gender were entered to the regression analysis as control variables. In the second step, 3 perfectionism traits were entered. Finally, self-handicapping and self-compassion were entered in the third step.

The findings of the analysis indicated that age [$\beta = -.14$, $t(650) = -3.50$, $p < .001$, $pr = -.14$] was entered into the equation as a controlled variable and explained %2 of the variance in psychological symptoms by itself, $F_{change}(1,650) = 12.22$, $p < .001$. After controlling for demographic variables, only socially prescribed perfectionism [$\beta = .35$, $t(649) = 9.72$, $p < .001$, $pr = .36$] was significant predictor of psychological symptoms and increased the explained variance to %14, $F_{change}(1,649) = 94.56$, $p < .001$. Thirdly, self-handicapping [$\beta = .48$, $t(648) = 14.21$, $p < .001$, $pr = .49$] was entered into the equation and increased the explained variance to %34, $F_{change}(1,648) = 201.91$, $p < .001$. Lastly, self-compassion [$\beta = -.31$, $t(647) = -8.08$, $p < .001$, $pr = -.30$] was also significant associated with symptoms and explained variance increased %40, $F_{change}(1,647) = 65.25$, $p < .001$ (See Table 2). According to these results, after controlling demographic variables, increase in socially prescribed perfectionism and self-handicapping; and also decrease in self-compassion were significantly associated with increase in psychological symptoms.

Table 2. Predictors of Psychological Symptoms.

	F_{change}	df	β	t	pr	$Adj.R^2$
Step 1: Demographic Variables						
Age	12.22	1,650	-.14	-3.50*	-.14	.02
Step 2: Perfectionism						
MPS-SPP	94.56	1,649	.35	9.72*	.36	.14
Step 3: Self-handicapping and Self-compassion						
SHS	201.91	1,648	.48	14.21*	.49	.34
SCS total	65.25	1,647	-.31	-8.08*	-.30	.40

* $p < .001$; MPS-SPP = Multidimensional Perfectionism Scale-Socially Prescribed Perfectionism, SHS = Self-handicapping Scale, SCS = Self-compassion Scale

4. Discussion

The current study aimed to examine the associations among different perfectionism traits, self-handicapping, self-compassion and psychological symptoms. Firstly, results showed that total perfectionism and socially prescribed perfectionism were negatively correlated with total self-compassion and its positive subscales, namely: self-kindness, common humanity and mindfulness; while positively

correlated with negative subscales of self-compassion, namely, self-judgment, isolation and over-identification. In addition to that, self-handicapping was positively correlated with perfectionism, but negatively correlated with self-compassion. These findings are in the line with the previous studies (Akin & Akin, 2015; Ferrari et al., 2018; Hiçdurmaz & Aydın, 2017; Petersen, 2014). Self-compassion and perfectionism seem to activate opposite responses in the case of failure. In other words, perfectionistic attitudes are related to self-judgement and self-criticism in the failure, while self-compassion refers to being open and kind toward self and promotes to learn from negative experiences. Consistently, perfectionist individuals are more likely to engage in self-handicapping strategies to protect self-esteem. On the other hand, self-compassionate people do not need to externalize their failures; hence, they do not need to benefit from self-handicapping strategies (Neff & Vonk, 2009).

As another important finding, increase in psychological symptoms was associated with increase in socially prescribed perfectionism and self-handicapping, while decrease in self-compassion. These findings are consistent with previous studies indicating that trying to meet others' or society's expectations and self-handicapping strategies may lead to some psychological problems such as depression and anxiety (Frost, Heimberg, Holt, Mattia, & Neubauer, 1993; Zuckerman & Tsai, 2005); while self-compassion is a projective factors for these problems (Neff, 2003b; Sun, Chan, & Chan, 2016).

The findings of the current study indicate that socially prescribed perfectionism is related to more self-handicapping behaviors and less self-compassionate attitudes and all are associated with psychological symptoms. This comprehensive framework may contribute to literature by highlighting the dimensional differences of perfectionism and its related mechanisms to explain psychological outcomes. In addition to that, current findings point that therapeutic interventions focusing on perfectionism driven thoughts and behaviors (e.g. self-handicapping strategies such as procrastination and lack of effort) are beneficial, as well as, mindful self-compassion programs may improve psychological health and life quality.

Current study has some limitations as well. Firstly, the participants were mostly composed from females or young adults. Therefore, future studies with sample from different socio-demographic characteristics are recommended. Moreover, due to the cross-sectional nature of the study, it is not possible to infer causality or directions about these associations. Longitudinal studies may provide more insight about these relationships. Lastly, future studies including particular clinical groups are recommended to achieve knowledge for the role of different dimensions of perfectionism and related self-handicapping strategies in various psychological disorders.

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THE QUALITY OF MARRIAGE IN FUNCTION OF SATISFACTION WITH LIFE, SATISFACTION WITH WORK, DEPRESSION AND ALTRUISM¹

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Abstract

There are multiple contributors that help maintain and improve partner relationships in marriage, however, there are also those that cause the quality of marriage to decrease. As a result, the researched subject matters often were length of marriage, health of partners, personality traits, and number of children. One of the research goals, conducted in 2018 using PORPOS-3 battery, was to examine if satisfaction with work, satisfaction with life, depression, and altruism are significant predictors of different dimensions of marriage quality. Quality of marriage was measured using shorten scale Dyadic Adjustment Scale (DAS, Spanier, 1976) that estimate dyadic adaptability. Applying factor analysis three factors of the DAS scale were extracted: dyadic consensus ($\alpha=0.889$), satisfaction with marriage ($\alpha=0.847$), and risks for marriage stability ($\alpha=0.758$). Altruism was measured using the scale that represents combination of the Altruism scale (Raboteg-Šaric, 2002) and the Alzam scale (Cekrljija, Turjačanin & Puhalo, 2004) ($\alpha=0,938$). Participants evaluated the level of satisfaction with life and satisfaction with work on a scale from 1 (for completely unsatisfied) to 10 (completely satisfied). Depression was measured with scale Patient health Questionnaire (PHQ-9) ($\alpha=0,862$). The sample consisted of couples who are married or in a relationship (N=900), mean age 41 (SD=12,471) (aged 19 to 79), living in 37 urban and rural locations distributed through 20 administrative districts of Serbia. Hierarchical regression analyses were applied, whereby at the first step, we entered sociodemographic variables (age, education, number of children, gender), and at the second step we entered satisfaction with life and work, depression, and altruism. Only the predictors that were significantly correlated with the criterion were included in the models. Depression, satisfaction with life, age, and satisfaction with work were significant predictors of criterion variable dyadic consensus ($F(7, 733) = 26,310, R^2 = ,201, p = ,000$); depression, satisfaction with life, age, gender, and altruism were significant predictors of criterion variable risks for marriage stability ($F(6, 744) = 30,332, R^2 = ,197, p = ,000$), and depression, age, satisfaction with life, altruism, satisfaction with work, and the number of children were significant predictors of criterion variable satisfaction with marriage ($F(7, 741) = 30,657, R^2 = ,225, p = ,000$). Depression increased risks for marriage stability (risks entail disagreement and divorce discussion), and it negatively affected satisfaction with marriage and dyadic consensus. Altruism did not have a significant impact on dyadic consensus, but it influenced satisfaction with marriage and reduced risk of marriage stability. When lower satisfaction with life, risks of marriage stability increased. Satisfaction with work had a significant but low impact on dyadic consensus and satisfaction with marriage.

Keywords: *Quality of marriage, satisfaction with life, satisfaction with work, depression, and altruism.*

1. Introduction

Based on the literature regarding marital satisfaction, marriage quality and happiness in marriage, Spanier (1976) has developed a model of marital quality that encompasses three main domains. The first group consists of variables that people bring in with themselves into the marriage, e.g. self-esteem, mental health, abilities, and the author calls them personal resources. The second group refers to satisfaction with lifestyle, including composition of household, satisfaction with spouse's work, support from friends, relatives and the community. The third group refers to rewards from marital interaction, including emotional valuing, effectivity of communication, agreement in roles, amount of interaction and positive attitude towards spouse (Čudina Obradović & Obradović, 2006). Spanier (1976) defines marital quality as mutual/reciprocal adaptation of both partners.

Karney and Bradbury (1995) conducted metanalysis with 110 longitude studies, including 10.000 married couples. The results showed that the most predictive variable of women's perception of

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marriage stability is her own perception of quality of marriage, followed by her age, age when she married, sexual satisfaction in marriage, education, family income, etc. When it comes to men's perception of marriage stability, the most predictive variable was his sexual satisfaction in marriage, followed by his own perception of quality of marriage.

In order to examine importance some of the factors of personality when it comes to the quality of marriage, we decide to include altruism, depression, satisfaction with life and satisfaction with work. Altruism is a specific form of prosocial behavior that includes genuinely selfless behavior towards others, without vested interest. Altruism, which is manifested through care towards other people and behavior that contribute to their wellbeing, can have an important role in dyadic consensus in marriage (Joksimović, 1999). Satisfaction with life is one of components of personal wellbeing and is defined as global self-assessment of quality of life regarding own criterions, independent of some specific values, norms or goals (Vasić, Šarčević, & Trogrlić, 2011).

Person who in generally more positively estimate life and have higher self-esteem, more positively value intimate relationships and marriage (Todorović, 2005; Vidanović, Todorović, & Hedrih, 2006; Matejević & Todorović, 2012). General satisfaction with life is personal component that can contribute to satisfaction with marriage. In many researches, depression is perceived as a result of impaired quality of marriage and intimate relationships, but on the other hand, depression, as well other mental-health problems could influence quality of marriage (Čudina Obradović & Obradović, 2006). Depression manifests through experience of sadness and hopelessness, feeling of disappointment. The person does not enjoy anything, loses interest and energy. He/she gives up on normal activities and has problems with concentrate and remembering. Depression is usually accompanied by physical symptoms, poor and insufficient sleep, poor appetite, low self-esteem and low global satisfaction with life satisfaction. Satisfaction with work is especially indicated as an important parameter of personal satisfaction, which can spillover onto the quality of marriage. In Obaradović and Čudina-Obradović (2013) study, stress at work was shown to indirectly affect the quality of marriage. The model in which the mediating variable was marital stress was the strongest. According to the results of this research, wives experience negative spillover more intensively, as well as marital strain and depression.

The aim of present research was to examine whether satisfaction with work, satisfaction with life, depression and altruism represent significant predictors of dimensions of quality of marriage?

2. Method

2.1. Sample

The total sample of research is comprised of 1258 participants living in 37 urban and rural locations distributed through 20 administrative districts of Serbia (Hedrih & Ćirović, 2019). Locations were either a part of a larger city or strings of smaller settlements and villages. The results presented in this study refer to the sample of persons who stated that they were married or in a romantic relationship, representing 900 participants with mean age of 41 (SD=12,471) (aged 19 to 79). Out of that number 567 were women, and 315 men. When it comes to the level of education 2 participants did not finish elementary school (0,2%), 21 (2,3%) had finished elementary school, 381 finished high school (42,3%), 131 had college degree (14,6%), 342 had university degree (38%), and 5 had Ph.D. degree (0,6%). 274 participants did not have children (30,4%), 184 (20,4%) had one child, 365 reported to have two children (40,6%), 56 to have three children (6,2%), 7 to have four children (0,8%), 3 to have 5 children (0,3%), and participants reported to have 6 children (0,1%).

2.2. Variables and instruments

Quality of marriage was measured with shortened DAS scale (Spanier, 1976), that estimate dyadic adaptability. The shortened version has 16 questions. Applying factor analysis three factors of the DAS scale were extracted: dyadic consensus ("Please, indicate in what degree your partner and you agree when it comes to family finances, expression of emotions, etc.") ($\alpha=0.889$), satisfaction with marriage ("How often following situations happen between your partner and you: laugh together, etc.") ($\alpha=0.847$), and risks for marriage stability ("How often do you talk or think about divorce, separation or ending the relationship") ($\alpha=0.758$). The scale dyadic consensus consisted of six questions, scale risks for marriage stability of three, and satisfaction with marriage of seven questions.

Altruism was measured using the scale that represents combination of the Altruism scale (Raboteg-Saric, 2002) and the Alzam scale (Cekrljija, Turjačanin & Puhalo, 2004), with 12 questions ("I feel excellent when I can help the other person") ($\alpha=0.938$).

The level of satisfaction with life was measured with a question: "On the scale from 1 (for completely unsatisfied) to 10 (completely satisfied) rate the level of your satisfaction with life in general".

The level of satisfaction with work was measured with a question "On the scale from 1 (for completely unsatisfied) to 10 (completely satisfied) rate the level of your satisfaction with your present job."

Depression was measured with scale Patient health Questionnaire PHQ-9 (“In last 2 weeks, how often have you been bothered by any of the following problems: weak interest or satisfaction to do something, etc.”). The scale consisted of nine questions. Cronbach α on our sample was 0,862.

3. Results

According to the Table 1 we can see that dyadic consensus was in negative moderate correlation with depression, in positive weak correlation with satisfaction with life, satisfaction with work, altruism and education, and in negative weak correlation with age and number of children. Risks for marriage stability was in positive moderate correlation with depression, in negative weak correlation with satisfaction with life, altruism, satisfaction with work, age, and in weak positive correlation with gender. Satisfaction with marriage was in moderate negative correlation with depression, and in negative weak correlation with age, and number of children, and in positive weak correlation with satisfaction with work and life, altruism and age.

Table 1. Descriptive statistics and correlation between variables.

	4.	5.	6.	7.	8.	9.	10.	11.	M	SD
1. Dyadic consensus	,109**	,279**	-,366**	,104**	-,139**	,074*	-,088**	-,062	3,89	,92
2. Risks for marriage stability	,112**	-,231**	,403**	-,158**	-,089**	-,037	-,036	,093**	,97	,82
3. Satisfaction with marriage	,108**	,247**	-,328**	,162**	-,270**	,114**	-,186**	-,059	3,88	,91
4. Satisfaction with work	/	,490**	-,232**	,073*	-,103**	,156**	-,070*	-,018	6,72	2,37
5. Satisfaction with life		/	-,275**	,043	-,162**	,222**	-,087*	,029	7,26	1,99
6. Depression			/	-,201**	-,048	-,109**	-,042	,071*	,62	,57
7. Altruism				/	,008	,054	0,027	,090**	4,44	,67
8. Age					/	-,116**	,534**	-,105**		
9. Education						/	-,194**	,005		
10. Number of children							/	-,194		
11. Gender								/		

Hierarchical regression analyses were used to estimate the relative contributions of the independent variables (satisfaction with life and work, depression, altruism, age, level of education, number of children and gender) to the prediction of criterion variables (dyadic consensus, risks for marriage stability and satisfaction with marriage). In that way, we examined conjoint and separate contributions of predictors to criterion variables. At the first step, we entered sociodemographic variables (age, education, number of children, gender), and at the second step we entered satisfaction with life and work, depression, and altruism. Only the predictors that were significantly correlated with the criterion were included in the model (Table 1).

Table 2. Hierarchical regression analysis (method Enter), criterion variable Dyadic consensus.

	Predictors	Dyadic consensus				R ²	p	ΔR^2	p
		β	p	Tolerance	VIF				
I	Age	-,148	,000	,753	1,328	,023	,001		
	Education	,034	,362	,958	1,044				
	Number of children	,012	,773	,734	1,363				
II	Age	-,116	,003	,732	1,366	,201	,000	,178	,00
	Education	-,025	,469	,921	1,086				
	Number of children	-,017	,654	,730	1,369				
	Satisfaction with work	-,104	,008	,722	1,385				
	Satisfaction with life	,240	,000	,695	1,438				
	Depression	-,333	,000	,865	1,156				
	Altruism	,019	,572	,949	1,054				

In table 2 we can see that the second model was statistically significant ($F(7, 733) = 26,310, p = ,000$), and explained 20.1% of variance of criterion variable dyadic consensus. Depression, satisfaction with life, age, and satisfaction with work were significant predictors.

Table 3. Hierarchical regression analysis (method Enter), criterion variable Risks for marriage stability.

		Risks for marriage stability							
Predictors		β	p	Tolerance	VIF	R ²	P	ΔR^2	p
I	Age	-,079	,031	,994	1,006	,015	,003		
	Gender	,090	,014	,994	1,006				
II	Age	-,093	,006	,961	1,040	,197	,000	,181	,000
	Gender	,074	,027	,971	1,030				
	Satisfaction with work	,054	,160	,729	1,372				
	Satisfaction with life	-,175	,000	,709	1,411				
	Depression	,345	,000	,854	1,171				
	Altruism	-,070	,041	,932	1,073				

Table 3 shows that the second model was statistically significant ($F(6, 744) = 30,332, p = ,000$), and explained 19,7% of variance of criterion variable risks for marriage stability, whereby significant predictors were depression, satisfaction with life, age, gender, and altruism.

Table 4. Hierarchical regression analysis (method Enter), criterion variable Satisfaction with marriage.

		Satisfaction with marriage							
Predictors		β	p	Tolerance	VIF	R ²	P	ΔR^2	p
I	Education	,071	,046	,960	1,042	,081	,000		
	Number of children	-,050	,221	,728	1,374				
	Age	-,236	,000	,745	1,342				
II	Education	,023	,490	,924	1,082	,225	,000	,144	,000
	Number of children	-,076	,046	,724	1,382				
	Age	-,210	,000	,724	1,382				
	Satisfaction with work	-,086	,024	,722	1,386				
	Satisfaction with life	,161	,000	,696	1,437				
	Depression	-,300	,000	,863	1,158				
Altruism	,107	,001	,948	1,055					

According to the table 4 we can see that the second model is statistically significant ($F(7, 741) = 30,657, p = ,000$), and explained 22.5% of variance of criterion variable satisfaction with marriage. Depression, age, satisfaction with life, altruism, satisfaction with work, and number of children were significant predictors.

4. Discussion

Depression and satisfaction with life represent factors of personality which mostly contribute to the quality of marriage in present research. Depression increased risks for marriage stability (risks entail disagreement and divorce discussion), and it negatively affected satisfaction with marriage and dyadic consensus. On the other hand, satisfaction with life increased dyadic consensus, contributing to the agreement of partners when it comes to different issues of joint life, as well as satisfaction with marriage, and decreased risks for marriage stability. Altruism did not have a significant impact on dyadic consensus, but it influenced satisfaction with marriage and reduced risk for marriage stability. Satisfaction with work had a significant, but inversive and low impact on dyadic consensus and satisfaction with marriage, but when it comes to the risk of marriage stability this parameter is not significant. In line with that it could be said that satisfaction with work decreases the consensus between partners when it comes to arrangements related to different joint activities, as well as overall satisfaction with marriage, most likely due to the fact that partners are more preoccupied by work than with partnership. With age both dyadic consensus and satisfaction with marriage decrease, but also and risks for marriage stability. Colossal changes and divorce are avoided in older age, regardless of increase in marriage dissatisfaction.

5. Conclusion

Findings showed that personal characteristics, e.g. depression and satisfaction with life had significant contribution to all dimensions of marriage quality, compared to objective indicators, e.g. age, number of children, education, gender, but also and with satisfaction with work.

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THE COGNITIVE PROFILE OF THE GOOD QUALITY OF LIFE

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Abstract

The purpose of the study was to identify the psychological processes characterizing good quality of life (QOL), in terms of the Kreitler meaning system. The meaning system is a widely used theory and methodology for assessing different kinds of meaning. There are five major kinds of meaning variables referring to contents, types and forms of relation, forms of expression and shifts in the referent or input. Since previous studies showed that personality traits and emotions are correlated with specific sets of meaning variables, the hypothesis was that there would be a specific meaning profile characteristic for QOL. The participants were 230 undergraduates of both genders. They were administered online the Meaning Test, assessing the individual's meaning assignment tendencies, and the multidimensional QOL. The results showed that there were 24 significant correlations between QOL and the meaning variables. Regression analysis showed that the five major kinds of meaning variables accounted for 69% of the variance in QOL. A structural analysis showed that the profile deviated from that characteristic for personality traits. A contents analysis indicated that high QOL is a function of a realistic approach, reflecting both interpersonal and personal meanings, focusing on the facts as well as on the normative and desired aspects, revealing good analysis of situations, planning and creativity.

Keywords: *Quality of life, meaning, personality traits, emotions.*

1. Introduction

Happiness is one of the most persistent goals of human beings in all cultures (Compton, 2005; Diener, 2013). In the course of years different manifestations of happiness have been identified, such as the cognitive, affective, or physical ones, as well as correlates in the domains of personality, behavior and economics (Diener, 2006). The concept has undergone several conceptualizations that have resulted in constructs, such as quality of life, well-being, pleasure, and life satisfaction (Kim-Prieto et al., 2005). Recent studies have shown that the different constructs are highly correlated and support the concept of one global factor of well-being (Diener, 2006; Medvedev & Landhuis, 2018) that can be represented by the overarching construct of quality of life (QOL) (WHOQOL, 1994). Good QOL was found to be positively correlated with different psychological tendencies, such as purpose in life, personal growth, social relations, self-esteem, optimism, autonomy, and having the right emotions (Diener et al., 2010; Ryff & Keyes, 1995; Seligman, 2004; Tamir, Schwartz, Oishi & Kim, 2017) but much less so with social state, environmental factors and life circumstances (Costa, McCrae & Zonderman, 1987; Csikszentmihalyi, 1999; Lin & Ju, 1997; Lyubomirsky, 2007; Medvedev & Landhuis, 2018). Thus, stable individual differences are more useful than life circumstances in predicting QOL.

The findings concerning well-being and QOL support the conclusion that QOL is function of a basic psychological characteristic that contributes on the one hand to the enhancement of the positive correlates of well-being and on the other hand enables overcoming the potentially negative impact of environmental factors. The assumption underlying this study was that this basic psychological characteristic depends on the meanings that the individual assigns to one's life and one's external circumstances. The purpose of the study was to examine the meaning assignment tendencies that characterize individuals who score high on QOL as contrasted with those who score lower.

2. The meaning system

The study was done in the framework of the meaning theory which provides the constructs, methodology and a large body of studies concerning the nature, functioning and effects of meanings (Kreitler, 2020). The major tool of the theory is the meaning system which defines the variables describing meaning assignment tendencies and assigned meanings. Major assumptions underlying the system are that meanings are communicable, include a part that is interpersonally shared and another part which is more

personal and private, may be expressed verbally and non-verbally and that it is a complex multi-dimensional or multi-layered construct. The variables are based on extensive empirical data collected from a great number of subjects requested to communicate the meanings of different kinds of inputs (Kreitler, 2014).

On the basis of the empirical data and theoretical considerations, meaning was defined as a referent-centered pattern of meaning values. In this definition, referent is the input, the carrier of meaning, which can be anything, such as a word, an object, a situation, an event, or even a whole period, whereas meaning values are cognitive contents assigned to the referent for the purpose of expressing or communicating its meaning. For example, when the referent is 'Chair', responses such as 'made of wood' or 'stands in a room' or 'a piece of furniture' are three different meaning values. The referent and the meaning value together form a meaning unit (e.g., Chair - a piece of furniture) (Kreitler & Kreitler, 1990).

A full description of a meaning unit consists in describing it in terms of the following sets of variables: (a) Meaning Dimensions, which characterize the contents of the meaning values from the viewpoint of the specific information communicated about the referent, such as the referent's Sensory Qualities (e.g., Sky – blue), Feelings and Emotions it experiences (e.g., Mother –loves her child) or evokes (e.g., Darkness– fear), Range of Inclusion (e.g., Body - the head, arms, and torso); (b) Types of Relation, which characterize the immediacy of the relation between the referent and the cognitive contents, for example, attributive (e.g., Winter - cool), comparative (e.g., Spring - warmer than winter), exemplifying instance (e.g., Country - the U.S.); (c) Forms of Relation, which characterize the formal regulation of the relation between the referent and the cognitive contents, in terms of its validity (positive or negative; e.g., Yoga - is not a religion), quantification (absolute, partial; Apple - sometimes red), and status (factual, desired or desirable; Law - should be obeyed, Happiness - I wish I had more); (d) Referent Shifts, which characterize the relation between the referent and the original input or the previous referent, for example, the referent may be identical to the input or the previous referent, it may be its opposite, or a part of it, or a modification of it or even apparently unrelated to it; (e) Forms of Expression, which characterize the forms of expression of the meaning units (e.g., verbal, denotation, graphic) and its directness (e.g., actual gesture or verbal description of gesture) (Kreitler & Kreitler, 1990).

Each of the meaning variables represents a specific process of thinking and experiencing, for example, function, causes, comparison or metaphor. Thus, each variable has a unique contribution to the tools for understanding and reacting.

In assessing meaning communications, each unit of response is coded in terms of one variable from each of the five sets of variables. The variables of the meaning system are used for coding the responses of individuals to the Meaning Test (see Tools). The coding produces the individual's meaning profile which presents the set of meaning variables used by the individual.

3. Hypothesis

A great number of studies were performed for exploring the interrelations of the meaning system with personality traits. The paradigm consisted of administering to the same group of subjects the Meaning Test and a standard measure of some personality trait. The meaning variables that differentiated significantly between the high and low scorers on the personality measure were considered as constituting the meaning profile of that personality trait.

A body of research has shown that each of over 300 personality traits was correlated with a specific set of meaning variables (Kreitler & Kreitler, 1990). The studies dealt with the Big Five and other personality tendencies as the defense mechanisms (Kreitler, 2004) and the self-concept (Kreitler & Kreitler, 1987). Similarly, different emotions, including anxiety, anger and fear were found to be correlated with specific sets of meaning variables (Kreitler, 2003, 2011, 2014).

QOL is a tendency that was found to be correlated both with personality traits as well as with emotions (Pocnet et al., 2017; Watten, Syversen, & Myhrer, 1995; Wrosch & Scheier, 2003). Hence, it was hypothesized that QOL will be found to be correlated with a unique set of meaning variables. This set would constitute the meaning profile of QOL. It was expected that it would shed light on the nature and functioning of QOL.

4. Method

The study was empirical and consisted in a correlational survey.

4.1. Participants

The participants were 230 undergraduates in the behavioral sciences in the age range 22 to 27 years. They included 130 women and 100 men.

4.2. Tools

The two following tools were used: (a) the Multidimensional QOL Inventory (short version) which includes 22 items, each with four response alternatives (i.e., 'very true' to 'not at all true', scored as 4 to 1) (Kreitler & Kreitler, 2006). It provided a summative score and five sub-scale scores referring to activity, emotions, cognition, health, and social contacts. The reliability of the Inventory was in the range of .74-.82 in different samples. (b) The Meaning Test which consists of 11 familiar words (e.g., street, telephone, friendship). The task is to express their general and personal meanings using any means of response one chooses. A computerized analysis of the responses in terms of the five sets of meaning variables produces the individual's cognitive profile. The reliability of the profile is in the range of .70 to .79 in different studies.

4.3. Procedure

The study got the approval of the ethics committee of Tel-Aviv University. The two questionnaires were administered in random order on the internet unanimously. Participation was voluntary and provided the participants credits. The data was analyzed by SPSS 25.

5. Results

5.1. Control analyses

A preliminary principal components analysis done with the five scores of the QOL sub-scales showed that they all defined one factor. The communalities were .79, .65, .55, .51, .32 for actions, emotions, health, cognition and social connections, respectively. All eigenvalues were >2.10. The five sub-scales together accounted for 72% of the variance. Therefore, QOL was treated as one factor, based on the summative score.

Mean comparisons of the QOL and major summative scores in the meaning test (based on the sums of the different meaning dimensions, types of relation, forms of relation, forms of expression and referent shifts) showed no significant differences between the genders in terms of t-test results. Further, there were no significant correlations between age and QOL and the summative scores in the meaning test, probably due to the limited range of age used in the study. Thus, gender and age were not considered in further analyses in this study.

5.2. Regression analyses and correlations

The relations between QOL and the meaning variables were analyzed in two steps. First, the Pearson correlations between QOL and the different meaning variables in the subjects' meaning profiles were examined. A set of the significant correlations was prepared, including the positive and negative ones, summarized in terms of the standard clusters (e.g., emotions experienced or evoked are summarized as one, negative forms of relation are summarized as one regardless of whether they refer to absolute or partial statements) (Kreitler, 2020). There were 24 significant correlations (see last column, Table 1).

Table 1. Results of multiple regression analysis with the five sets of meaning variables as predictors and QOL summative score as the dependent variable and correlation coefficients of QOL with specific variables.

Predictors	Standardized beta coefficients	Specific meaning variables correlated significantly with QOL ¹	No. of variables related to QOL
Meaning dimensions	0.51**	Emotions .39; Cognitive Q. 45; Sensory Q. 44; Function .41; Action .55; Range of application .35; Causes -.29; State .33; locational Q. 25; Temporal Q. 32	10
Types of relation	0.44**	Attributive .57; Comparative: difference -.34; Exemp. -illustrative .33; metaphoric .38	4
Forms of relation	0.39*	Neg forms of relation -46; conjunctive positive .27; disjunctive -33; normative -.28; desired .37	5
Forms of expression	0.25*	Nonverbal: visual .34; Nonverbal motoric .29	2
Referent shifts	0.28*	Close shifts .45; medium shifts .52; distant shifts -.33	3

Dependent variable: QOL ($R = 0.831$; $R^2 = 0.690$) $F = 7.58$, $df = 4/225$, $p < .01$

¹All correlation coefficients in this column are significant at least on the $p < .01$ level

The second step consisted in submitting the data to a regression analysis. There were five predictors, representing the five sets of meaning variables, i.e., the mean of the significant correlations with QOL of the meaning dimensions, types of relation, forms of relation, forms of expression, and referent shifts. The model was significant and showed that the five predictors accounted for 69% of the variance in QOL. The meaning dimensions had the largest contribution to the prediction, followed by types of relation, with forms of relation in the third place, and referent shifts and forms of expression in the last places.

6. Discussion

The findings of the study indicate that there is a meaning profile specific for QOL. When the mean of correlations in the five sets of the meaning system are considered as predictors, they are related significantly to QOL and account for 69% of the variance in QOL. This finding indicates that QOL is supported by a set of meaning variables related to it. All five sets have significant contributions, with the largest being based on meaning dimensions and the lowest on forms of expression. The relatively large contribution of meaning dimensions signifies that QOL depends mainly on handling reality in terms of specific contents, e.g., attending to sensory qualities, location, time, and who or what are present. Also, the form of expression, for example, the non verbal one may be important for QOL but less than the contents of one's cognition. These results indicate that the meaning profile of QOL is a rich and variegated profile. Also, the number of significant correlations in the profile supports this conclusion ($n=24$). It is richer than that corresponding to personality traits (the mean for traits is 13.8 ± 6.5).

The meaning profile of QOL shows that there is a specific set of cognitive contents and processes correlated significantly with QOL. The specificity of the profile is manifested both structurally and in terms of contents. Comparing the meaning profile of QOL with the criteria characterizing the meaning profiles of personality traits (Kreitler & Kreitler, 1990) shows that the meaning profile of QOL deviates in all criteria from those corresponding to personality traits. Hence it is trait dissimilar. QOL seems to be supported by a set of meaning variables unique in terms of structure and contents.

In terms of contents the profile of QOL provides information about the habitual cognitive approaches of those who score high on QOL. These individuals have a broad and well balanced mode of thinking: they consider the external world (sensory qualities, range of application, state, time, location), the internal experiential world (emotions, cognitions) and the sphere of action (actions, function, causes). Their preferred types of relation indicate that they apply both the interpersonally-shared mode of meaning (attributive) and the personal-subjective mode (exemplifying-illustrative and metaphoric) which is characteristic of creative individuals (Kreitler, 2020). Notably they refrain from noting differences by comparisons. Their preferred forms of relation show consideration for both conjunction and disjunction, which indicates the weighing of alternatives and choice of possibilities, tendencies which characterize good planners (Kreitler & Kreitler, 1986). In the meaning profile of QOL there is an uncommon complementation of the realistic approach by awareness of the normative and desired aspects of reality. A most important characteristic is their abstaining from negation. The use of the nonverbal forms of expression indicates a tendency to express their subjective and personal experiences which lend themselves for better expression nonverbally than verbally. Finally, refraining from distant referent shifts and focusing to advantage on the close and medium shifts guarantees adherence to reality.

It is of interest to note the three meaning variables correlated negatively with QOL because they suggest the means of guarding oneself from reacting inadequately to inputs which may potentially reduce one's QOL. First in line is the tendency of ignoring negations, that is, overlooking things that are not available or have a negative impact, such as the things one does not possess. Secondly, there is the tendency of disregarding differences, such as the salary I get is different from that of my neighbor; I am not respected as highly as Mr. X. And finally, there is the tendency of suppressing the inclination to escape in one's thinking too far-fetched realms.

In sum, the meaning profile of good QOL describes an individual who has a strong grip on various aspects of external reality as well as internal reality; is focused on actions and function; is a good planner; takes into account many different aspects of situations; is creative; considers one's own needs and experiences; without deviating too much from reality leaves space also for what should be and what is desired; avoids dwelling on things that are missing, as well as on differences between oneself and others; and overcomes the temptation of succumbing to escapism.

The constituents of the meaning profile of QOL provide clear cut guidelines for interventions for improving and maintaining QOL by enhancing at least some of the involved meaning variables which may be missing or weak in the meaning profiles of individuals with lower QOL. In line with the suggestion of Seligman (2004), in order to improve one's QOL it is necessary to deal with the constituents and underlying tendencies rather than directly with QOL. The meaning profile of QOL provides precisely the opportunity to become aware of the underlying factors shaping and affecting one's QOL. There exists a systematic and targeted method of intervention for enhancing specific meaning variables in one's meaning profile (Kreitler, 2020).

7. Limitations

The major limitations of the study are the small size of the sample and its homogenous character. In order to further develop the results concerning the meaning profile of QOL it is advisable to repeat the study with larger samples of individuals in different age groups and cultures. Additionally, it is necessary to apply the intervention method for raising the level of QOL.

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THE RELATIONS BETWEEN TRAUMA EXPOSURE, SUBJECTIVE TRAUMA APPRAISALS, AND POSTTRAUMATIC STRESS SYMPTOMS IN A SAMPLE OF ROAD TRAFFIC ACCIDENT VICTIMS

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Abstract

The aim of this present study is to assess the relations between objective trauma exposure characteristics (i.e. the number of days of hospitalization, the number of deaths), subjective trauma appraisal and posttraumatic stress symptoms in victims of road traffic accidents (RTA). We also wanted to identify the moderating role of subjective trauma appraisals in the relations between objective trauma exposure and PTSD symptoms. The study involved a sample consisting of 162 participants that experienced an RTA in the last two years (62.3 % were men). The results showed that the number of days of hospitalization, traumatic fear, and the three types of posttraumatic cognitions were positively correlated with PTSD symptoms. However, only the number of days of hospitalization, traumatic fear, and negative cognitions about the self predicted PTSD symptoms. Further, the results showed that self-blame cognitions moderated the relation between the number of deaths and PTSD symptoms. The results are in line with cognitive models of PTSD and some previous studies sustaining the fact that subjective trauma appraisals are strongly related to PTSD, compared to objective indicators of trauma exposure. The implications of these results for interventions are discussed.

Keywords: *Objective trauma, subjective trauma appraisal, traumatic fear, posttraumatic cognitions, posttraumatic stress symptoms.*

1. Introduction

Posttraumatic stress disorder (PTSD) is a major and common consequence of road traffic accidents (RTAs) that involves four clusters of symptoms, represented by intrusions of the trauma, avoidance, alteration in mood and cognitions, and arousal (APA, 2013). Objective trauma characteristics (e.g., physical injury, number of days of hospitalization post RTA) and subjective appraisals of traumas (e.g., trauma-related feelings and cognitions) are related to PTSD and may impede post-trauma recovery (Martin, Cromer, DePrince, & Freyd, 2013). In this study, we aim to investigate if the relation between objective trauma characteristics (i.e., number of days of hospitalization post RTA, the number of deaths involved by the RTA) and PTSD symptomatology is moderated by subjective trauma appraisals (i.e., fear, posttraumatic cognitions). Understanding the relations among objective trauma, subjective trauma appraisal, and PTSD symptoms may inform practitioners in designing and implementing efficient trauma related interventions.

1.1. Objective trauma exposure and PTSD symptomatology

Severity of injury is the most often studied objective indicator of trauma exposure that manifested positive associations with PTSD (Koren, Norman, Cohen, Berman, & Klein, 2005). Having a fatality occur during an RTA, severity of the initial injury and persistent medical problems following the accident are among the most consistent predictors of PTSD for victims of RTAs (Chossegros et al., 2011; Kazantzis et al., 2012; Schönenberg, Jusyte, Hautzinger, & Badke, 2011). Further, other results showed that seeking medical attention after an RTA is a predictor of developing PTSD in the following year after the RTA (Blanchard & Hickling, 2004). On the contrary, other studies did not find a relation between objective measures of severity of injury and PTSD in samples of victims of RTA (Nickerson, Aderka, Bryant, & Hofmann, 2013; Stallard & Smith, 2007). Given these mixed results, our first aim is to assess the relation between two indicators of objective trauma (i.e. the number of days of hospitalization post RTA and number of deaths involved by the RTA) and PTSD symptoms. In this study, we expect to find a positive relation between indicators of trauma exposure and PTSD symptoms.

1.2. Subjective trauma appraisals and PTSD symptoms

One explanation for the mixed results concerning the relations between objective trauma characteristics and PTSD consists in the fact that subjective perceptions, rather than objective trauma characteristics, are predictive for subsequent posttraumatic symptoms (Nickerson et al., 2013; Hodgson & Webster, 2011) and more influential in the long term after trauma exposure (O'Donnell, Elliott, Wolfgang, & Creamer, 2007). This is consistent with the assumptions of the cognitive models of PTSD (Ehlers & Clark, 2003) that also suggest that a subjective experience, rather than an objective event, contribute to the development of PTSD.

Trauma appraisals, both at the time of trauma and later in life, manifest positive associations with PTSD symptoms (DePrince, Zurbriggen, Chu, & Smart, 2010). Traumatic fear was found to be a stronger predictor of traumatic stress symptoms, stronger than the objective indicators of trauma in different trauma populations (e.g., Rosendal, Şalcıoğlu, Andersen, & Mortensen, 2011), including RTAs (Hodgson & Webster, 2011). Cognitive models of PTSD also emphasize the importance of posttraumatic cognitions, defined as negative thoughts that often occur after a trauma, in eliciting PTSD symptoms. Negative cognitions about the self, the world, and self-blame regarding the traumatic event are among the most studied cognitions in relation to PTSD (Beck, Jacobs-Lentz, Jones, Olsen, & Clapp, 2011). Thus, previous studies documented positive relations between these posttraumatic cognitions and PTSD symptomatology in different trauma victims' samples (e.g., Barton, Boals, & Knowles, 2013), including road traffic accidents (Bennett, Beck, & Clapp, 2009; Ehring, Ehlers, & Glucksman, 2008; O'Donnell et al., 2007).

Without denying the potential of different trauma appraisal to predict PTSD symptoms there is, however, some evidence that did not support a significant relation between fear for life and PTSD 6 months and 1 year after the accident (Irish et al., 2008). In other studies, only negative cognitions about the self were associated with PTSD symptoms (e.g., Moser, Hajcak, Simons, & Foa, 2007). Moreover, the relation between self-blame cognitions and PTSD is not very clear, as some studies revealed non-significant associations among these variables (Cieslak, Benight, & Lehman, 2008; Müller et al., 2010). Further, one study identified a negative relation between self-blame and PTSD symptoms, and not positive, as expected (Startup, Makgekenene, & Webster, 2007).

Given these previous findings, the second aim of the present study was to assess the relations between traumatic fear, posttraumatic cognitions and PTSD symptomatology. We expected to find a positive relation between subjective appraisals and PTSD symptoms. Further, the third aim of the present study was to identify if subjective trauma appraisals moderate the relations between objective trauma exposure and PTSD symptoms. Some previous evidence also suggests that the relation between objective trauma exposure and PTSD symptoms may vary as a function of negative trauma appraisals (Hodgson & Webster, 2011). Thus, a high level of trauma exposure determines subsequent distress, predominantly when the participants also report high levels of fear (Hodgson & Webster, 2011). However, little is known about the interaction between objective trauma and subjective appraisals in predicting PTSD symptomatology and if objective characteristics can predict symptomatology above and beyond subjective perceptions and trauma appraisals.

2. Methods

2.1. Participants

A sample of 162 participants (62.3% men) was involved in the present study, selected from a larger sample based on the following criterion: personal involvement in at least one major road traffic accident (at least one person lost his/her life or needed medical care) in the past two years before conducting the study. The participants' mean age was 29.37 ($SD = 9.52$). All the participants were drivers and had a driving experience between 1 and 29 years ($M = 8.34$; $SD = 7.19$). During the accident, 73.5% of the participants were driving the cars, while 26.5% were passengers in one of the cars involved in the accident. The protocol for the study was approved by the Ethical Board of Alexandru Ioan Cuza University of Iași, Romania. After signing the informed consent, the participants were asked to report their experience concerning involvement in traffic accidents and, based on their answers, a specific set of questionnaires were offered. Only the participants that reported the experience of a traffic accident in the past two years were included in this study.

2.2. Instruments

PTSD Checklist for DSM-5 (PCL-5) (Weathers et al., 2013) is a 20-item self-reporting scale that measures PTSD symptomatology presented in the past month. The participants rated how much they were bothered by the presence of intrusions, avoidance, alterations in mood and cognition as well as arousal. The items are rated on a 5-point Likert scale from 0 (*not at all*) to 4 (*extremely*). In the present study, the total score was computed and the Alpha Cronbach coefficient is .92.

A *trauma appraisal questionnaire* (DePrince, Zurbriggen, Chu, & Smart, 2010) was used to measure the fear after the accident that also persists in the present (11 items). The participants were asked to think about the traffic accident that happened in the past two years, to read each item and to evaluate

how much they agree or disagree with the description of the item now when they think about the event. Each item was evaluated on a five point Likert scale, from 1 (strongly disagree) to 5 (strongly agree). The Alpha Cronbach coefficient in our sample is .89.

The *Posttraumatic Cognition Inventory* (PTCI) (Foa, Ehlers, Clark, Tolin, & Orsillo, 1999) is a 36-item measure, designed to assess the severity of three posttraumatic cognitions: negative cognitions about the self (21 items), negative cognitions about the world (7 items) and self-blame (5 items). Items are rated on a 7-point Likert scale from 1 (totally disagree) to 7 (totally agree). The Alpha Cronbach coefficients in our sample were .89 (negative self), .78 (negative world) and .77 (self-blame).

The *objective trauma appraisal* was measured with 2 items that require the following information: the number of days of hospitalization for the participant (if any) and the total number of deaths as a consequence of the accident.

The *demographic questionnaire* asked the participants to report their age, gender, education, driving experience, the number of accidents they were engaged in.

3. Results

3.1. Preliminary analysis

We conducted an independent sample *t*-test comparing the male and female participants' means on PTSD symptoms, traumatic fear and posttraumatic cognitions. The results showed that the women reported a high level of PTSD symptoms ($M = 2.45$, $SD = 0.72$), traumatic fear ($M = 2.81$, $SD = 0.83$) and posttraumatic cognitions related to self ($M = 1.78$, $SD = 0.58$), compared to the men (PTSD symptoms: $M = 1.93$, $SD = 0.77$; traumatic fear: $M = 2.52$, $SD = 0.93$; posttraumatic cognitions related to self: $M = 1.58$, $SD = 0.59$). For posttraumatic cognitions related to the world and self-blame, there are no significant differences between the men and women (all $p > .050$).

3.2. Associations among the study's variables

In order to assess the associations among the study's variables, Pearson correlations were computed (see Table 2). The PTSD symptoms positively correlated with traumatic fear, the number of days of hospitalization, as well as with the three types of traumatic cognitions analyzed in the present study.

Table 1. Pearson correlations between all the study variables.

	1	2	3	4	5	6	7	8
1. The number of days of hospitalization	1							
2. The number of deaths	.03	1						
3. PTCI negative self	.21*	.06						
4. PTCI negative world	.07	.13	.46***					
5. PTCI self-blame	.19*	.02	.45***	.26**				
6. Traumatic fear	.32***	.24**	.45***	.29***	.21**			
7. PTSD symptoms	.17*	.14	.61***	.22**	.26**	.57***		
8. Age	.02	.11	.06	.06	.02	.05	.09	
9. The number of months from the accident	.05	-.11	.06	.003	.02	.15	.08	.16*

* $p < .05$, ** $p < 0.01$, *** $p < .001$; $N = 162$

3.3. The relations between objective trauma indicators, subjective trauma appraisals, and PTSD symptoms

The results showed that from the objective indicators of trauma, the number of days of hospitalization is a significant positive predictor for PTSD symptoms ($\beta = .17$, $p = .020$). The number of deaths did not represent significant predictors of PTSD symptoms ($\beta = .13$, $p = .070$). Further, traumatic fear ($\beta = .37$, $p < .001$) and negative cognitions about the self ($\beta = .48$, $p < .001$) significantly predicted PTSD symptoms, while negative cognitions about the world ($\beta = -.08$, $p = .173$) and self-blame ($\beta = .004$, $p = .950$) are non-significant predictors of PTSD symptoms. The objective trauma indicators explained 5.2 % of the variance in PTSD symptoms above and beyond the variance explained by the subjective trauma appraisals, when gender and the number of months since the RTA occurred are controlled. The subjective trauma appraisals (i.e. traumatic fear, posttraumatic cognitions) explained 40.60% of the variance in PTSD symptoms.

The number of deaths interacted with self-blame cognitions in predicting PTSD symptoms ($\beta = -.20$, $p = .034$). Self-blame cognitions dampens the positive relationship between the number of deaths after RTA and PTSD symptomatology.

4. Discussion

This study aims to investigate the relations between characteristics of objective trauma exposure (i.e. the number of days of hospitalization, the number of deaths), subjective trauma appraisals

(i.e. traumatic fear, posttraumatic cognitions) and PTSD symptoms in a sample of motor vehicle accident victims, following two years after the accident.

Our results are in line with previous studies that highlighted the fact that subjective trauma appraisals manifest stronger connections with PTSD symptoms, compared to objective trauma exposure (Hodgson & Webster, 2011; Nickerson et al., 2013). Thus, in this study, the number of days of hospitalization was significantly positively related to PTSD symptoms, and this relation was weaker compared to the relations between the negative trauma appraisals and PTSD symptoms. From the subjective trauma appraisals, traumatic fear and posttraumatic cognitions about the self are the only significant predictors of PTSD symptoms. Previous literature also sustains the important role of fear in determining posttraumatic symptomatology, given the fact that fear implies an ongoing sense of threat and helplessness (Rosendal et al., 2011). Moreover, negative cognitions about the self were constantly related to PTSD symptoms, in samples of RTA victims (Bennett et al., 2009; Ehring et al., 2008). Therefore, perceiving the self as worthless or incompetent is more detrimental for an individual's mental health than perceiving the world as a dangerous place. The non-significant relation between self-blame and PTSD were also reported in previous studies (Cieslak et al., 2008; Moser et al., 2007) and was explained through the way these negative cognitions are measured, with only 5 items that assess both characterological and behavioral self-blame (Müller et al., 2010). These two types of self-blame may represent distinct factors that may manifest different relations with posttraumatic symptomatology (Mueller & Major, 1989). Thus, although the relation between posttraumatic cognitions and PTSD symptoms was often addressed in previous studies, more research is needed in order to clarify how and under what circumstance these cognitions are related to posttraumatic symptoms.

Further, our results showed that the relations between objective indicators of trauma exposure and PTSD symptoms are moderated by self-blame cognitions. Specifically, in the cases of accidents with higher number of deaths, higher PTSD symptomatology was reported by the participants with low level of self-blame. On the contrary, when the accidents involved lower number of deaths, higher PTSD symptomatology was reported by the participants with high level of self-blame. These results may be explained by the fact that high self-blame is particularly detrimental in the cases of less severe traumas. When the accident caused more deaths, high self-blame may be generated by the fact of being responsible for the accidents. This high level of self-blame prevents the development of other posttraumatic symptoms. Overall, these results highlight the complex relations that may exist between trauma exposure and posttraumatic symptomatology and also suggest that trauma exposure alone is not associated with posttraumatic stress symptoms, when it is not also associated with negative subjective trauma appraisals.

When interpreting these results, some limitations need to be considered. First, the cross-sectional nature of the study does not allow us to establish causal relations among the variables. Thus, future longitudinal studies are necessary in order to establish the fact that objective trauma exposure and negative trauma appraisal can be determinant factors for PTSD symptoms. Second, the small sample size and the fact that the participants are victims of RTAs limit the generalization of the results on this specific population.

In conclusion, the results of this current study provide support for the role of negative subjective trauma appraisals in the relationships between objective indicators of trauma exposure and PTSD symptoms. The number of deaths, posttraumatic cognitions about the world, and self-blame are non-significant predictors of PTSD symptoms, while the number of days of hospitalization, traumatic fear and negative cognitions about the self, represent significant positive predictors of PTSD symptoms. Additionally, self-blame cognitions interacted with number of deaths in predicting PTSD symptoms. These results are in line with the cognitive models of PTSD showing that subjective trauma perceptions are more important factors associated with posttraumatic stress symptoms after the trauma of an RTA. Given the cross-sectional nature of the current study, future research is needed to understand the causal relations among objective trauma exposure, subjective trauma appraisals, and PTSD symptoms.

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PRAYER AND ALTRUISTIC DESIRE AS PREDICTORS OF HAPPINESS

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Abstract

Suldo and Shaffer (2008) identify a dual factor model of mental health with well-being and mental illness at opposite ends of the spectrum. The objective of positive psychology is to investigate ways to make people happier. This is a difficult task given the international rise of mental illness. The study undertaken here reports on a comparative analysis of results from wave six (2010-2014) of the World Values Survey (WVS) for the USA ($n = 2,232$), Thailand ($n = 1,200$), India ($n = 4,078$), and Turkey ($n = 1,605$) to examine the positive mental health benefits of prayer versus using religion for altruistic purposes. These countries were selected for analysis in attempt to explore general differences based on representations of the world's major religions as well as the underlying effects of individualism and collectivism on happiness. The USA's concept of the pursuit of happiness is very much rooted in individualism. Although the USA has separation of church and state, the sample contains participants from across the religious spectrum. The other countries under investigation are considered collectivist and have religious majorities that identify with Buddhism in Thailand, Hinduism in India, and Islam in Turkey. Logistic regression analysis confirmed that prayer is significantly associated with increased happiness in India and Turkey. In India, those who pray often were more likely to report being happy than participants who do not pray (adjusted odds ratio (AOR) = 2.14, 95% confidence interval [CI] = 1.47, 3.12). In Turkey, those who pray often were also more likely to report being happier than participants who do not pray (adjusted odds ratio (AOR) = 2.43, 95% confidence interval [CI] = 1.33, 4.42). Prayer was not significantly associated with happiness in the United States or Thailand. Surprisingly, logistic regression analysis for using religion as a means 'to do good to other people' versus 'to follow religious norms' only significantly predicted happiness in India. Self-reports of prayer appear to be better predicting happiness in collectivist countries such as India and Turkey. Implications about focusing on the welfare of others are discussed.

Keywords: *Mental health, happiness, social connections, prayer, altruism.*

1. Introduction

People throughout history have turned to religious activities in seeking happiness. Two emerging themes in the literature is that prayer and altruism may predict happiness. The O'Connor et al. (2012) study reported that people who were other-focused as opposed to self-focused during meditation had lower depressive symptoms, maladaptive guilt, anxiety, and empathetic distress. Fredrickson et al. (2008) conducted a research study on the effects of loving-kindness meditation (LKM) on depression and overall life satisfaction. Fredrickson et al. paraphrases Salzberg (1995) to define LKM as "a technique to show feelings of warmth and caring for the self and others" (p. 3). The findings showed that LKM produced greater positive emotions which predicted greater life satisfaction and lower depressive symptoms. Post (2005) cited Luks (1988) to observe that, "Two thirds of helpers report a distinct physical sensation associated with helping; about half report that they experienced a "high" feeling, whereas 43% felt stronger and more energetic, 28% felt warm, 22% felt calmer and less depressed, 21% experienced greater self-worth, and 13% experienced fewer aches and pains" (p. 71).

The primary research that follows investigates whether prayer versus the desire for altruistic action predict greater levels of happiness. The results of a comparative study on four countries below offer insight that prayer is significantly associated with happiness in India and Turkey whereas the desire for altruistic action only shows significance in predicting happiness in India.

2. Method

A comparative analysis of data from wave six (2010-2014) of the World Values Survey (WVS) for the USA (n = 2,232), Thailand (n = 1,200), India (n = 4,078), and Turkey (n = 1,605) was used to examine the prayer versus using religion for altruistic purposes as a predictor for happiness. These countries were selected for analysis in attempt to explore possible differences based on representations of the world's major religions. Although the USA has separation of church and state, the USA sample contains participants from across the religious spectrum. The other countries under investigation have religious majorities that identify with Buddhism in Thailand, Hinduism in India, and Islam in Turkey. The WVS has two question items that are of interest in exploring this phenomenon. The question items used for analysis asked, "Apart from weddings and funerals, how often do you pray?" and "Taking all things together, would you say you are: Happy/Rather happy/Not very happy/Not at all happy." An additional item in the analysis asked, "With which one of the following statements do you agree most. The basic meaning of religion is to: Follow religious norms and ceremonies/To do good to other people." The variables for prayer and happiness were transformed into bivariate dummy outcome and predictor variables to facilitate logistic regression analysis.

3. Results

Table 1 shows the results of prayer in predicting happiness in the four countries under investigation. The data reveal that prayer significantly predicts greater happiness in India and Turkey. In India, the desire to use religion to do good for others significantly predicted happiness albeit the odds ratio was rather weak (adjusted odds ratio (AOR) = .76, 95% confidence interval [CI] = .59, .98). The use of religion to do good to others did not significantly predict happiness for the other countries under investigation.

Table 1. Logistic regression predicting happiness from prayer.

Apart from weddings and funerals, how often do you pray?	Participants reporting that are happy, No (%)	Participants reporting that they are not happy, No (%)	Sig ^a	exp b ^b (95% CI)
India	2450 (70.1)	306 (62.4)	.000	2.14 (1.47, 3.12)
Thailand	414 (37.8)	20 (24.7)	.672	1.38 (.310, 6.16)
Turkey	1096 (82.9)	183 (73.8)	.004	2.43 (1.33, 4.42)
United States	1311 (66.5)	137 (63.7)	.126	1.32 (.925, 1.90)

Note. ^aSignificance level for χ^2 that explored association between participants reporting that they are happy and how often they pray. ^bThe predicted change in the odds ratio, CI = confidence interval (rounded up to two decimal places).

4. Discussion

The finding that stands out the most is that prayer in India and Turkey predicted greater levels of happiness. One assumption is that the sense of collectivism and importance shown towards others in these countries effects levels of happiness. In other words, people in collectivist cultures who value strong social bonds are more inclined to pray for others such as their family or members of the community rather than for the self, increasing well-being and positive emotions. Suchday et al. (2018) conducted a survey on young people in Mumbai and found "Identification with being Indian correlated with collectivism ($r = .23$), religiosity ($r = .29$), spirituality/wellness ($r = .16$), and karma ($r = .23$) indicating strong association between self-perceived Indianness and traditional values" (p. 146). Yorulmaz (2016) also conducted a research study in Turkey using WVS data and found the same connection between prayer and happiness, but that research did not comment on causality. Yorulmaz's logistic regression models would suggest that religiosity served to increase happiness somewhat independently of income although hierarchical analysis was not used to explore for interactions between the predictor variables. Yorulmaz cited Okulicz-Kozaryn (2010) who suggested that it is not the religion that makes people happy, but rather, the social setting it offers.

Collectivism provides some insight as to why prayer in India and Turkey predicted happiness compared with the USA which values individualism. However, Thailand is a collectivist culture where the majority of the population believes in Buddhism. And yet, Thailand offers a conundrum in that prayer did not significantly predict happiness. Balthip et al. (2017) cited the Ramajitti Institute (2012) to indicate that while more Thai youth pray, there has been a shift away from the belief "...in the law of Karma that influences the consequences of one's deeds" (p. 296). Balthip et al. also cites Call et al. (2012) to state that, "Urbanization, globalization, and technology are impacting the family structure and the quality of connection among family members, which has diminished the traditional upbringing by an extended family" (p. 296). These observations stand in stark contrast to the strengthening of collectivist culture witnessed in India. Thus, the untethering of collectivism in Thailand might be one reason why prayer is not a predictor of happiness although there is not enough data at present to show causality.

5. Areas for future research

There is an important finding in this study that the desire to use religion to do good for others only predicted happiness in India. The results are surprising as one would intuitively think that an altruistic attitude would have a much greater impact than prayer as a predictor of happiness. To reiterate, Post (2005) and Luks (1988) highlighted an association between altruism and positive mental health benefits. The LaPiere (1934) study may offer some insight as to why the desire to do good did not predict happiness in Turkey, Thailand, and the USA. That research study indicated that attitudes do not always reflect actual behavior. As a result, the self-reports to use religion to do good do not necessarily translate into actual altruistic action and increased happiness. To reiterate, the Suchday et al. (2018) research indicated that Indian youth still significantly identify with the concepts of karma, collectivist values, and spirituality/wellness. Such values for Indian youth might contribute to altruistic attitudes being put into action although the odds ratio in predicting happiness was weak. Future research is advised to conduct naturalistic observation and experiments to observe whether religious individuals engaged in actual altruism and volunteerism predict happiness.

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THE ASSESSMENT OF THE AFFECTIVE-BEHAVIORAL DEVELOPMENT OF 2-3 YEARS OLD CHILDREN WITH AUTISM AND PERVASIVE DEVELOPMENTAL DISORDERS

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Abstract

The model and method of level development of affective-behavioral complexes (ABC, Bardyshevskaya) is presented in this paper. As an illustration, the paper presents the experience of using the ABC method to identify affective behavioral development options in 2-3 year old children with autism spectrum disorders (ASD) and pervasive developmental disorders (PDD).

Keywords: *Children, autism, development, assessment, affective-behavioral complexes.*

1. Introduction. The fundedness of the ABC model and method. Novelty and relevance

The model of the ABC was developed by Marina Bardyshevskaya (2012, 2018) on the basis of generalized data from systematic participant observation of 435 children with severe affective instability (autism, drive-related and behavioral disorders, emotional disorders, psychotic states). The empirical data used to create the model and the ABC method were collected by longitudinal observation (lasting from several months to 14 years, on average 2-3 years) of the mental development of 80 children aged from 0 to 16 years old. The number of hours of observations with documented data (written records after observation and sample video recordings of data) for each child varied from 3 to 120. Observations were conducted in 1996-2018 years firstly in the children's home and then, since 1997, mainly in the Moscow Scientific and Practical Centre for Mental Health of Children and Adolescents named after G.E. Sukhareva.

The ABC method allows to construct individual affective-behavioral profiles (diagrams of the ABC development) of a person on the basis of the analysis of observed behavior (based on video recording of diagnostic sessions). In the course of observation, stable patterns of emotional states and behavior are identified in response to specific affective loads for each ABC. The way the transition from one type of behavior to another is carried out shows the vector (zone of the proximal development) of different behavior types. The ABC method being used in work with patients with autism allows us to get out of the rigid framework of medical diagnosis and clearly show asynchrony between the development of different types of behavior, the amplitude of oscillations: the zone of proximal development (towards the norm) and the zone of risk of irreversible changes (towards disintegration). The ABC method differentiates moderate and mild forms of autism development more precisely than CARS (Childhood Autism Rating Scale) and is more sensitive to the dynamics of mental development of a child with ADS during treatment. A comprehensive qualitative and quantitative description of the individual profile of all ABCs makes it possible to draw up a scientifically substantiated correction program.

The sources of the model are the notion of age-specific symptoms in child psychiatry (Sukhareva, 1959); classification of disontogenesis (Lebedinsky, 1985); theory of level organization of movements (Bernstein, 1967); level model of emotional regulation (Lebedinsky et al., 1990; Bardyshevskaya, Lebedinsky, 2003); and also John Bowlby's attachment theory; Niko Tinbergen's ethological model of autism, psychoanalytic infant observation and some others.

2. The ABC model

The notion of an "affective-behavioural complex" (ABC) is introduced to denote holistic formations that are stable and easily recognised, which appear spontaneously during the course of maturation and development and which have become entrenched in evolution (Bardyshevskaya, 2012).

Each ABC includes emotional states of a specific register, which change in a particular range, specific repertoire of behavioural patterns, types of contact with people and objects and symbolic activity that correspond to them, the links between elements of one ABC and between different ABCs, sensitive to a specific range of affective loads, and specific mechanisms of emotional regulation. These

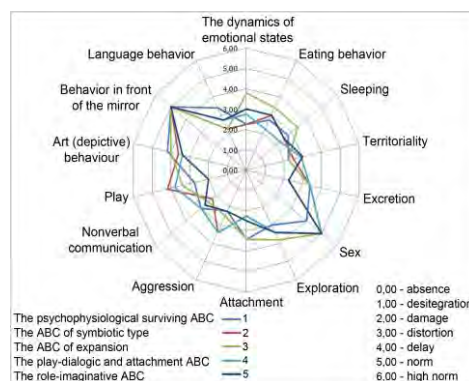
mechanisms do not allow critical emotional outbursts that may be dangerous for the development. Affective loads may be bearable, unbearable, optimal (they provide the safe movement to the zone of proximal development).

The elements of the ABC are emotional states, a special repertoire of eating behaviour, sleep and wakefulness, territorial, excretory, sexual and exploratory types of behaviour, attachment, aggression, non-verbal (demonstrative) communication and forms of symbolic activity: play, art-depictive (drawing, modeling), speech behavior and the behaviour in front of a mirror (14 items total), as well as certain kinds of links between elements of an ABC and between the ABC and the other ABCs (Bardyshevskaya, 2018).

There are **5 ABCs** (with their **sensitive periods**): 1) the psychophysiological surviving ABC (intrauterine period – the first 6-8 weeks), the ABC of symbiotic type (0 – 18-24 months), the ABC of expansion (8 months – 36-48 months), the play-dialogue and attachment ABC (3 months – 24-36 months) and a role-imaginative ABC (24 months – 5 years).

It is important to note the unity of semantic and technical organization of affect, behavior, motivation, communication and symbolization in ABCs (in different activity modes). For example, manifestations of different movement organization disorders which are typical for people with affective instability are unstable and vary in severity significantly. These variations depend on the actual affective load. So, we assess any particular behaviour in different regimes of activity separately. The visualization of the observation in an umbrella diagram (see Fig. 1) looks like a kind of "wind rose" of emotional states, non-verbal communication and behavioral development.

Figure 1. An example of a complex diagram that shows the scores for the five ABCs altogether of M. — 2 years old boy with pervasive developmental disorder (PDD).



The dominant ABC is identified on the types of connections the person does. Rapid assessment of the dominant ABC is made by analyzing the child's current non-verbal communication and by assessing the connections that the child establishes between the toys. These connections are assumed to reflect the child's connections to the people as he or she perceives them at the moment.

The following types of connections are most common for 2-3 years old children with autism. The absolute dominance of the psychophysiological surviving ABC is characterized by: *isolation* — disruption of any connections, blockade arising in a state of critical decline in psychic tone: *fusion, dissolution, confusion, interrupted connection*. *Tunnel connection* is a transitional form of connection between the psychophysiological surviving ABC and the ABC of expansion: in order not to be afraid of depth, the child "erases" what is around the focus of his or her attention; this includes isolation of a certain element, keeping it in a container or a "compartment". *Chaos, pile, fragmentation* is observed in patients with the predominant psychophysiological survival ABC with a tendency to transition to ABC of expansion (the child is not afraid of leaving traces or actively destroying things). The predominant ABC of symbiotic type is characterized by the *series, chains (varying in lengths and degree of rigidity)*. *A spider web, a network (a group without a hierarchy)* is observed at the stage of a child's transitioning from the predominant ABC of symbiotic type to the ABC of expansion. More complex types of connection (*hierarchy: rigid and flexible*) are rarely observed in 2-3 year old children with autism. However, it is important that the psychologist working with such a child thinks about these connections as a zone of possible (although not proximal) development.

The distance from each pattern to the norm can be approximated in points, which are used to build diagrams of the ABC development (Bardyshevskaya, 2018, p. 18-21):

High Norm (6.00). The complex pattern is used steadily, appears before the "right" age. *Norm (5.00)*. "Breakthrough" — the child enjoys practicing a pattern, it occurs at about "the right" age and is used spontaneously, steadily, without special helping effort from an adult.

Delay (4.00). Age-corresponding pattern appears on a negative emotional background, it is pronouncedly incomplete, it requires a lot of external stimulation, effort from the outside. The first unstable signs or precursors of pattern emerge. *Delay towards distortion (3.60)*. The child attaches and

fixates a specific meaning to the pattern corresponding to the younger age. *Delay towards damage (3.20)*. The pattern corresponding to the younger age is impoverished in a motivational and technical way and there are monotonous repetitions of the simplest elements of the pattern. *Delay towards disintegration (2.15)*. The pattern corresponding to the younger age disintegrates into incoherent chaotic fragments.

Distortion (3.00): Premature "breakthrough" (signs of conflict) is followed by unstable pattern use. *Distortion towards delay (3.40)*: The pattern emerges late but develops in a peculiar and uneven way: more complex pattern elements appear before the basic ones. *Distortion towards damage (2.50)*: Intense conflict, a new achievement "falls" into the latent state, i.e. the child abandons the practice. *Distortion towards disintegration (1.90)*: Behavioral orientation is distorted to such an extent that the pattern completely loses its adaptive value and there is confusion among different types of behavior which leads to self-mutilation and traumas. *Damage (2.00)*: *Damage towards delay (2.75)*: The pattern appears unexpectedly with a significant delay (of several years sometimes) against a manic background (the child laughs uncontrollably). *Damage towards distortion (2.25)*: Regression after a period of good mastery of the pattern, which is accompanied by deformation of the pattern, exaggeration of its individual elements. *Damage towards disintegration (1.50)*: Deformation of a pattern with progressive loss of its elements.

Disintegration (1.00): Loss of pattern. *Disintegration towards delay (2.75)*: After losing the pattern, the first signs of it appear as if its development started from scratch. *Disintegration towards distortion (1.75)*: After losing the pattern, it appears in distorted forms. *Disintegration towards damage (1.25)*: After losing the pattern, its deformed elements appear. *Absence (0.00)*.

3. Assessment procedure

1) The method implies conducting 2-3 participant observations each lasting 1-1.5 hours, with trial therapeutic interventions with the child, in the presence of the mother (parents). The observation synthesizes the ethological and psychoanalytic approaches (Bardyshevskaya, 1998). The ethological approach consists in the fact that affective-meaningful details and patterns of the child's behavior and his or her interaction with the mother (parents) and a psychologist are recorded on a camera by a specially trained operator and, if possible, are fully monitored by the psychologist. The operator shows a neutral interest in the child but is mainly silent. The psychoanalytic approach consists in the fact that the psychologist gives trial interpretations of changes in the child's current emotional state in connection with certain observed affective loads (external and internal - memories or feelings). Interpretations and comments are given in an imaginative language that the child understands (with the help of toys, drawings, non-verbal communication, speech, it is important that the psychologist uses several formats during one observation). A sign of correct interpretation and optimal selection of affective loads is a safe (without emotional breakdowns exhausting the child and the subsequent shift to a mode of psychophysiological survival during and/or after the examination) change of the child's mode of activity, as well as a consistent change to more highly organized ABCs. The psychologist immediately refuses to try to involve the child in contact if the load used is intolerable (the child hides and leave contact or is fixed on the simplest forms of symbiotic contact). 2) A protocol is made after the observation is completed: the phenomena shall be described in the sequence in which they were observed during the observation session. The protocol (and/or video recording) shall then be analysed by the expert group. For better understanding of what is happening, the psychologist and the operator preliminarily "cut" the video recording into fragments lasting from 1 to several minutes based on the dominant ABC. The sequence of changes in the ABC can be presented schematically to see the "positive" and "negative" episodes. 3) Each noticeable phenomenon shall be referred to a certain ABC. The vector of development of each such phenomenon is identified. To estimate the belonging of a pattern of behavior to this or that ABC, tables are used where typical (archaic, well-recognizable, specific) manifestations of emotional states, behavior and symbolic activity are grouped according to the ABCs - the emphasis is placed on the normal variants with the indication of typical deviations (Bardyshevskaya, 2018). For an estimation of a vector of development, qualitative descriptions and the score menu of estimations are used and also dominant types of connections which are established by the child with other people, toys and objects in a play room are defined. Scores are given for each of the 14 types of behaviour in the 5 ABCs. 4) Recommendations are offered which include the necessary changes in quality, total volume and intensity of mental stress (affective loads), optimal proportions of rigid/flexible structure of training, types of psychotherapy and conditions of socialization that will help to approach the norm.

4. An example of using a method of the ABC. The types of affective-behavioral development in children 2-3 years old with ASD and PDD

As an example, a brief description of a study of psychic development types in children with ASD and PDD using the ABC method is offered. The aim of the study is to identify groups of children according to the similarity of the ABC profiles (the predominant ABC, vector of development). Besides, the analysis of early development data on early hazards was done to compare the subjective perception of

these hazards by the mother and objective indicators (number, intensity, acuteness, time and duration of their impact). The hazards reported by the mother to the psychologist during the diagnostic examination and the hazards reported by her to the psychiatrist on admission to hospital were taken into account. In our work with families we use knowledge of the child's ABC profile while taking into account the psychological factors that mediate the influence of objective hazards on the child's development.

4.1. Description of the patients observed

In studies of children with autism and pervasive developmental disorders, the age of 2-3 years (the period of the "I will do it myself" crisis described by Vygotsky) is key. It is at this age that ASD is increasingly being diagnosed. The very fact of the diagnosis for many parents of children with ASD is a severe trauma. The age period from 2 to 5 years is traditionally considered to be the period of the highest prevalence of early childhood autism syndrome. Identification of early mental development types and options in autism is critical for a scientifically based selection of therapy for the entire preschool period of development, as well as for evaluating its effectiveness. The hazards that had an impact at the time of conception (and even before it), in the intrauterine period of development, during delivery and in the postpartum period, throughout the pre-verbal period of development, are still vividly represented in the memories of parents of at this age and they can be quite accurately "measured". The pathogenic effect of these hazards is detected exactly at the age of 2-3 years old, when the child does not have enough energy resources to switch to independent activity and to reconstruct behavior on the base of speech. At the same time, fears of development and refuse of activity can be fixed for a long time. Finally, at the age of 2-3 years old, the potential of sensomotor preverbal behaviour development reaches its peak. The behavioral repertoire presents a maximum of archaic, well-recognizable, species-specific non-verbal patterns.

The study included 40 2-3 year old children with ASD and PDD who were hospitalized with a parent in the "Mother and Child" department of the Center for Mental Health named after G.E. Sukhareva.

4.2. Study results

The variants of affective-behavioral development of children with ADS and PDD are outlined.

Variant 1. Children "on the verge of survival" (4 children, 10%). Predominant ABC is the psychophysiological surviving ABC (serious disruptions of the vital types of behavior, threatening the life of the child, are registered), development of the ABC of symbiotic type is limited by attraction to the inanimate (autoaggression in response to changes in intensity of any stimuli is expressed). Mental development of children fluctuates between damage and distortion (breakdowns of some types of behavior are combined with asynchronous development of other types). Mothers report a large number of pathogenic factors (interrupted pregnancies and miscarriages, the threat of miscarriage almost throughout the whole pregnancy, infections, intoxication, antibiotic treatment during pregnancy, caesarean section, general anaesthesia surgeries, intrusive medical manipulations in the early infancy) and considers the child seriously ill. There is a negative effect of early diagnosis (early stigmatization) and depression of the mother. With properly selected affective loads, the child establishes contact and shows elementary symbolic activity, albeit occasionally and in an unstable way, already at the first session. The mother is not happy with the small advances observed in the child's behaviour during the diagnostic session, considering them a coincidence. Paradoxically, the mother ignores the most important positive changes for development of her child: episodes of clear understanding of the conversational speech, attempts to repeat words by the child in contact with the psychologist (she is sure that the child "does not understand the conversational speech"). Mothers express frustration at the restricted possibilities of modern medicine to cure a child with autism, feel helplessness and expect only a miracle.

The use of "positive" (showing progress in development) videos of diagnostic sessions is promising for changing the image of a child in the mother's mind (from a seriously ill to a developing one). A selection of episodes with signs of playful-dialogic and attachment ABC and the role-imaginative ABC helps the mother to see the child's potential for the development which she "does not see" with the naked eye.

Variant 2. Children with the predominance of a disturbed ABC of symbiotic type (20 children, 50%) "stick" to the primitive sensomotor aspects of the experience, fixing themselves on the reproduction of certain inner feelings (16 children, 40%). A small proportion (4 children, 10 per cent) consists of children with fixation on abstract sequences (numbers, letters) and stereotyped ordering of objects according to formal attributes (color, size, shape, quantity) with oppression of vital needs (lack of interest in food). The amplitude of developmental fluctuations is wider: between damage and delay. Mothers note a stop in development at 6 months - 2 years of age, linking it to the effects of episodes of injuries, intoxications, infections, including severe complications that coincided with vaccination. In children with fixation on primitive sensorimotor self-stimulation and with auto-aggression in response to the change of stereotype, the contribution of episodes of physical abuse, early sexual trauma, severe emotional deprivation (child rejection) was most significant. Mothers accurately refer to the age of development failure or regression. Mothers report criminal cases of violence by the father. At a diagnostic session,

they, on the one hand, encourage the child's sexual behaviour and overstimulate him or her. At the same time, they inhibit the child's mental activity by repeating in an authoritarian way that the child wants to sleep and that he or she is not interested or wants to leave. In mothers of children fixed on primitive autostimulation one may notice rent attitudes, fear of cancellation of the diagnosis. In order to improve the situation in the family, it is important to involve the social care professionals, using flexible therapeutic observations in families.

The mothers of "symbiotic" children fixed on elements of abstract systems suffered from depression associated with conflict with their husband and forced relocation. Therefore, the father takes over the care of the child and a symbiotic relationship was formed between him and the child.

The elements of the playful-dialogic and attachment ABC and the role-imaginative one (initially represented by attempts to make a symbiotic tie with the psychologist and symbolization of symbiotic links) emerge in these children in the second or third session and, especially quickly, if a parent connected with the child by the symbiotic link gradually moves away from the child and leaves the playroom.

Variant 3. Children with difficulties in transitioning from predominant ABC of symbiotic type to the ABC of expansion (with autistic features and PDD) (8 children, 20%) whose development oscillates between distortion and delay. In the history there are indications of compromised genetics, older parents, episodes of early infections, injuries, intoxications. It is important that mothers are not fixed on these hazards. They are more concerned about their current relationship with the child. Mothers willingly cooperate with the psychologist, realize the limitations of fixation at the symbiotic stage of development, ask for the psychologist's help in getting out of symbiosis, and involve the father in working with the psychologist. In the conditions of psychotherapeutic consultations, children quickly advance in development of non-verbal communication, food behavior and self-service, active exploration, territorial behavior and constructive play. However, due to a delay in the development of conversational speech, art (depictive) behavior (drawing), the imbalance of development (distortion) is preserved: full understanding of speech when not using it; easy regression to symbiotic forms of contact with the mother.

4.3. Conclusions

1. There is a great variety of individual profiles, options and suboptions of affective behavioral development in childhood which can be discerned with the help of the level ABC development assessment. This article describes the variants of psychic development of 2-3 year old children with ASD and PDD. 2. The main purpose of psychotherapy for children with ASD and PDD in the model of level ABC development is to detect and activate the development of nascent forms of highly organized ABCs rather than fixing the child in the mode of survival and stereotypes. In psychotherapy, the minimum task is to replace the variant of development within the group with a more favorable one; the most ambitious task is to transfer the child to a group with less severity, closer to the norm. 3. There is a correlation between the predominant ABC and the number of early hazards. If there is a high concentration of hazards, their prolonged impact on the fetus and/or the baby, and the mother's strong psychological stress during pregnancy, childbirth and the postnatal period, the development of the child's behavior is fixated on the basic ABCs. The specifics of parental perception of the contribution of these objective hazards vary among children from different groups in terms of the severity of autism. These differences should be taken into account when choosing how to work with the families.

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THE ASSOCIATION BETWEEN INTERNALIZED AND EXTERNALIZED PROBLEM BEHAVIOR AMONG SLOVAK EARLY ADOLESCENTS

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Abstract

Background: Current research findings regarding risk behavior have suggested examining the association between externalized problem behavior (EPB) and internalized problem behavior (IPB). This submitted work explores a set of IPB as factors which increase the likelihood of specific EPB.

Aim: To assess the impact of IRB such as body dissatisfaction, bulimic symptoms and drive for thinness on EPB such as alcohol use, cigarette smoking and marihuana use.

Methods: The sample size consisted of 1180 pupils (50.1% girls; mean age=12.99; SD=.77) from all regions in Slovakia. The children were administered questionnaires to monitor EPB - alcohol use, tobacco or electronic cigarette smoking, marihuana use and IRB – drive for thinness, bulimic symptoms (Eating disorder inventory), body dissatisfaction (Children body image scale).

Results: Three separate models of logistic regression were performed to assess the impact of IRB factors on the likelihood that respondents would report EPB: (1) alcohol use, (2) cigarette smoking, (3) marihuana use. The models containing interactions of gender and independent variables were significant. Model 1: Being male and bulimic symptoms increased the likelihood of alcohol use. Moreover, the interaction between gender and the drive for thinness indicated that the association between alcohol use and the drive for thinness was significant among girls but not among boys. Model 2: Bulimic symptoms increased the likelihood of cigarette smoking. The interaction between gender and the drive for thinness had the same character as Model 1. Model 3: Being male and the drive for thinness increased the likelihood of marihuana use. The interaction effect of gender and body dissatisfaction on marihuana use has the same character as interactions in Models 1 and 2.

Conclusions: IPB increases the likelihood of EPB in early adolescents. The significant interactions suggest that a higher drive for thinness among girls places them in the group of potential alcohol users and cigarettes smokers whereas there is no effect of the drive for thinness on males. The interaction effect of body dissatisfaction and gender is similar in the case of marihuana use. The current results contribute to previous findings and might be beneficial in preventing ERB in early adolescents.

Keywords: *Externalized problem behavior, internalized problem behavior, early adolescents, drive for thinness, bulimic symptoms.*

1. Introduction

Problem behavior is commonly defined as a behavior contravening social norms and inadequate regarding the developmental level (Jessor & Jessor, 1997). Thus, it is a problem perceived from the perspective of society as well as causing serious psychosocial or physical harm to the individual behaving problematically (Nielsen, Sobotková et al., 2014). Problem behavior can take different forms of maladaptive behavior from minor offenses against discipline to aggressive and destructive behavior (Labáth, 2001). Apart from the mentioned externalized forms of problem behavior manifesting externally and associated with violations of norms and aggressive behavior, experts have also defined internalized forms (Wadsworth et al., 2001). Internalized problems are a broad class of co-occurring problems typical for internal emotional distress, such as depressive symptoms, anxiety, worry, sadness and hopelessness. On the other hand, externalized problems are related to conflict with others and social mores (Eshrat, 2016). Issues on body image, body dissatisfaction and problems with eating/ emotional eating could be considered as specific forms of internalized behaviors as they are mostly associated with depressive symptoms and inner emotional distress. Early adolescents are in a period of significant changes in psychological and social development (Oshio et al., 2003). As such, this is a typical time for problem behavior growth and body image concerns (Vágnerová, 2005). The desire to have a perfect body image

and the preoccupation with one's own body has become popular among young people also in Slovakia (Krch, 2005). Unsurprisingly, the period of early adolescence is potentially risky for body dissatisfaction and even for the outset of dysfunctional eating (Smolak, Levin, & Schermer, 1999). Problem behavior in adolescents occurs quite often and could negatively affect their education, job chances and social relationships, resulting in a reduced quality of life (Jaspers et al., 2012; Kessler, 2001). Therefore, it is essential to understand the factors associated with the development of problem behavior in early adolescence before more serious problems occur.

2. Objectives

Current research findings regarding problem behavior suggest looking at the association between externalized and internalized problem behavior (Colder, Frndak, Lengua, et al., 2018) as well as considering potential moderating variables (Scalco et al., 2014). The submitted work explores a set of internalized problem behavior as factors increasing the likelihood of specific externalized problem behaviors. The aim is to assess the impact of internalized problem behavior such as body dissatisfaction (BD), bulimic symptoms (BS), drive for thinness (DFT) on externalized problem behavior such as alcohol use, cigarettes smoking and marihuana use.

3. Methods

3.1. Research sample and procedure

The sample size consisted of 1180 pupils (50.1% girls; mean age=12.99; SD=.77) from all regions in Slovakia. The data was collected using paper-pen questionnaires from early adolescents in the seventh grade at primary schools in Slovakia in the school year 2017/2018. Prior to this, informed consent was obtained from the parents/legal representatives of all participants. 24 primary schools from all regions in Slovakia were included in the analyses in this study. In each school, pupils from all classes in the seventh grade participated in the study. The questionnaires were filled in during two school lessons in the presence of a trained research team member, without the presence of the teacher. The questionnaires were completed confidentially. The study obtained ethical approval from the university's ethics committee.

3.2. Measurements

Child's alcohol, marihuana use and smoking

The prevalence of alcohol use, smoking cigarettes and using marihuana during the past 30 days was measured on a frequency scale with the options: not at all/ once/ twice-four times/ five times or more (Hibell et al, 2012). The answers were dichotomized in order to differentiate the sample between alcohol, marihuana and cigarette users and non-users. In the case of alcohol, those who had only tried alcohol once were defined as non-users.

The drive for thinness

The Drive for Thinness Subscale of Eating Disorders Inventory (EDI, Garner et al., 1982) has seven items (e.g.: "I am terrified of gaining weight.") and indicates excessive concern with dieting, preoccupation with weight and entrenchment in the extreme pursuit of thinness. The items reflect both an ardent wish to lose weight as well as a fear of weight gain. These are the fundamental features of anorexia nervosa and considered to be indicators of disordered eating.

Bulimia symptoms

The Bulimia symptoms subscale of Eating Disorders Inventory (EDI, Garner et al., 1982) is a seven-item scale that assesses impulsive eating patterns and purgative use. The example of item is: "I have gone on eating binges where I have felt that I could not stop."

Body dissatisfaction

The Children's Body Image Scale (Truby & Paxton, 2002) consists of seven drawings of a female/male figure (for female/male participants) each increasing in size. Each child was asked to identify the body figure most like their own (perceived figure). They were then asked to nominate the body figure they would most like to have (ideal figure). The difference between the category number of their perceived and ideal figures was used as a measure of body size dissatisfaction (i.e. perceived-ideal discrepancy). In addition, an absolute discrepancy score was derived.

3.3. Statistical analyses

In order to address the aim of the research, a descriptive analysis, Chi-square test of independence and Mann-Whitney U test were performed in SPSS 21 to test the gender differences. Non-parametric tests were chosen due to the character of the variables (categorical), the abnormal distribution of the variables and the unbalanced numbers of respondents in each of the two groups.

Logistic regression was computed to test the associations between externalized and internalized problem behavior.

4. Results

Gender differences were found in all types of internalized problem behavior. Girls reported a significantly higher drive for thinness, body dissatisfaction and more bulimia symptoms in comparison to boys. On the other hand, the results on externalized forms of problem behavior did not reveal any significant association between problem behavior and gender (Table 1).

Table 1. Gender differences in examined variables.

Internalized problem behavior	Mean Rank (boys/girls)	N (boys/girls)	U	Z	p
Drive for thinness	454,73/597,77	521/532	100935	-7,64	<.001
Bulimia symptoms	509,65/581,74	548/542	128864	-3.804	<.001
Body dissatisfaction	423,32/533,74	459/502	88733,5	-6,46	<.001
Externalized problem behavior	never used	used	χ^2	df/n	p
Alcohol use	975 (82.6%)*	205 (17.4%)	1.97	1/1129	.16
Smoking	1066 (90.3%)	114 (9.7%)	2.16	1/1129	.14
Marihuana use	1088 (92.2%)	92 (7.8%)	1.47	1/1129	.23

Note. *never used or only tried once

Three separate models of logistic regression were performed to assess the impact of internalized risk behavior factors (BD, BS, DFT) on the likelihood that respondents would report externalized risk behavior: (1) alcohol use, (2) cigarette smoking, (3) marihuana use. The models containing gender- interactions were significant, (1) χ^2 (4, 1030)=53.04, $p<.001$; (2) χ^2 (4, 1030)=34.59, $p<.001$; (3) χ^2 (4,906)=20.46, $p<.001$, which indicates that the models were able to distinguish between those who reported externalized risk behavior and those who did not. Each model as a whole explained between 5% and 9% (1); 3.3% and 9% (2); 2.2% and 9.3% (3) of the variance in the respective risk behavior and correctly classified 85.7% (1); 93,7% (2); 96.9% (3) of cases. The single statistical values of each model are all reported in Table 2.

Table 2. Logistic regression predicting likelihood of externalized risk behaviour.

	B	df	Odds Ratio	p	95.0% C.I. for Odds Ratio	
					Lower	Upper
Model 1. Alcohol use						
Bulimic symptoms	.10	1	1.11	<0.001	1.07	1.14
Drive for thinness	-.001	1	1	.95	.96	1.04
Gender*	-1.34	1	.26	<0.05	.10	.67
Interaction gender-DFT	.04	1	1.05	0.55	.999	1.09
Model 2. cigarette smoking						
Bulimic symptoms	.09	1	1.10	<0.001	1.05	1.14
Drive for thinness	-.02	1	.98	.47	.92	1.04
Gender*	1.32	1	.27	.07	.07	1.10
Interaction gender-DFT	.08	1	1.08	<0.05	1.01	1.16
Model 3. marihuana use						
Body dissatisfaction	-.30	1	.74	.29	.43	1.29
Drive for thinness	.08	1	1.08	<0.05	1.02	1.13
Gender*	-2.36	1	.10	<0.05	.02	.41
Interaction gender-BD	.83	1	2.3	<0.05	1.16	4.56

Note. *girls as the reference group, df=degrees of freedom, C.I.=confidence interval, significant results are in bold, DFT- drive for thinness, BD – body dissatisfaction

Alcohol use was significantly explained by bulimic symptoms and gender while the interaction between gender and the drive for thinness was on the edge of significance. Being male and bulimic symptoms increased the likelihood of alcohol use. Moreover, the interaction effect indicated that girls who belong to the group of potential alcohol users scored higher in the drive for thinness compared to non-using alcohol girls. Boys scored similarly regardless of the group of alcohol users. Thus, it could be said that the association between alcohol use and the drive for thinness was significant among girls but not among boys (Figure 1).

Smoking was significantly explained by bulimic symptoms and the interaction between gender and the drive for thinness. Bulimic symptoms increased the likelihood of smoking. The interaction effect indicated the same trend in the association between the drive for thinness and smoking among boys and girls as in the model for alcohol use. Girls who belong to the group of potential smokers scored higher in the drive for thinness in comparison to non-smoking girls. Boys scored similarly regardless of the group of cigarettes users (Figure 2).

Marihuana use was significantly explained by the drive for thinness, gender and the interaction between gender and body dissatisfaction. Being male and the drive for thinness increased the likelihood of marihuana use. Moreover, the interaction effect indicated a significant association between body dissatisfaction and marihuana use among girls, but not among boys. Girls who belong to the group of potential marihuana users reported higher body dissatisfaction compared to non-using marihuana girls. Boys scored similarly regardless of the group of marihuana users (Figure 3).

Figure 1. Interaction graph for alcohol use.

Figure 2. Interaction graph for smoking.

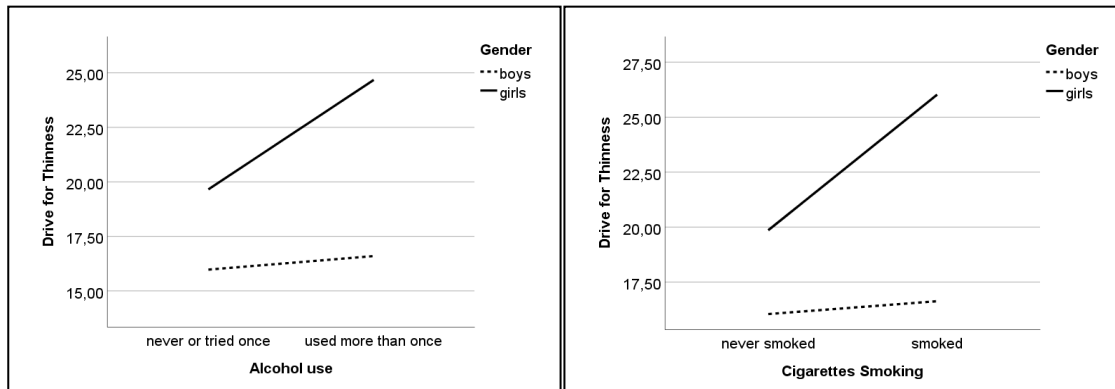
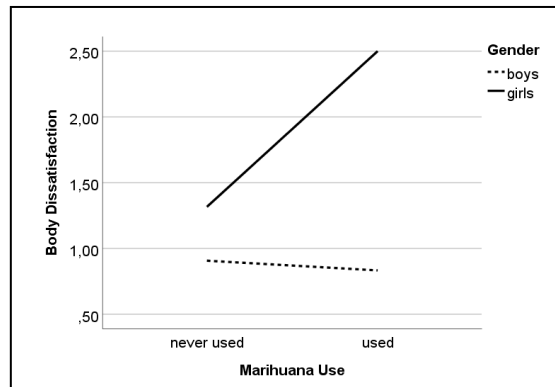


Figure 3. Interaction graph for marihuana use.



5. Discussion and conclusions

Bulimic symptoms increased the likelihood of alcohol use and smoking cigarettes. Being male significantly increased the likelihood of alcohol and marihuana use. The drive for thinness only appeared to be significant in the model of marihuana use. The significant interactions suggest that the higher drive for thinness among the girls place them in the risk group for alcohol use and smoking although there is no effect of drive for thinness on males. The interaction effect of body dissatisfaction and gender is similar in the case of marihuana use. Previous studies have shown that internalized problem behavior such as anxiety, depression or somatic complaints are negatively related to cigarette smoking in early adolescence, while in middle and late adolescence the association is positive (Aloise-Young, Zaleski, & Swaim, 2017;). The co-occurrence of other externalized symptoms increases the protective effect of internalized problem behavior on alcohol but not marihuana use (Colder, Frndak, Lengua, et al., 2018). The current study has brought different results. Internalized problem behavior such as bulimic symptoms are not only positively associated with smoking but also with alcohol use among early adolescent girls and boys. In addition, smoking marihuana was associated positively with the drive for thinness according to the current results. This inconsistency might be explained by a different type of internalized problem behavior. It seems that problems connected to dysfunctional eating indicate higher levels of externalized problem behavior. Furthermore, there is evidence of gender specificity in the context of externalized and internalized problem behavior which could also stand behind the significant gender interactions revealed

by the current findings. Girls are hypothesized to have lower rates of externalized problem behaviors during early to middle childhood when compared to boys. On the other hand, girls are theorized to have more internalized problems than boys. This could be explained by more risk factors such as gender role stereotypes, stronger interpersonal orientation or childhood anxiety which predisposes them to depressive symptoms (Eshrat, 2016). This is also consistent with the gender differences found in the current study. Girls reported more internalized but less externalized problem behavior than boys. In the context of the interaction effect of gender, girls were found to score higher on externalized problems when also reported higher internalized problems. This might also be explained by their specific social development which is influenced by social appearance standards. There could also be other factors not examined in this study which explain the explored associations. These include interpersonal and self-critical vulnerabilities, self-concept, stress and quality of relationships with parents and peers etc. The current results contradict previous findings on the associations between externalized and internalized problem behavior. They contribute to current research knowledge and urge future examination which might be also beneficial for preventing externalized problem behavior of early adolescents.

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FETAL ALCOHOL SYNDROME PREVENTION: EFFECTIVENESS STUDY

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Abstract

This study focuses on the psychological effects of brief interventions aimed at preventing Fetal Alcohol Syndrome (FAS). FAS is one of the most serious consequences of alcohol consumption by women during pregnancy. FAS is an incurable disease that manifests itself throughout the life of a person. The only way to prevent these violations is to deny a woman from drinking alcohol during pregnancy (Riley, 2004; Varavikova, Balachova, 2010).

Methods and sample. Accordingly, within the framework of the scientific project «Prevention of Fetal Alcohol Syndrome and neurodevelopmental disorders in Russian children» a prevention programme was developed. The main preventive measures of this program are: 1) Directed informing based on screening of the nature of alcohol consumption by women of childbearing age and the contraception style; 2) Dual-focused brief clinical and psychological intervention. Theoretically, the basis for developing the strategy and design of the intervention was the model of health beliefs (Rosenstock, 1974) and the model of the stages of change (DiClemente, Prochaska et al, 1991). The sample of the study consisted of 280 women of childbearing age. Respondents were recruited in 10 women's consultations in St. Petersburg and were randomly divided into experimental and control groups. All participants were screened, a basic interview and three subsequent interviews at 3, 6 and 12 months were conducted. With women of the experimental group, after a baseline interview, twice in the period from 2 weeks to one and a half months, specially trained OBGYN physicians carried out a dual-focused brief intervention. The study used methods developed by the FAS Prevention Study Group (Balachova et al, 2008).

Results. Dual-focused brief interventions and passive informing cause statistically significant positive changes in knowledge, attitudes towards alcohol consumption during pregnancy and the effect of alcohol on the fetus, as well as real amount of alcohol consumption. The dynamics of the changes in the studied groups was different: in the experimental group, under the influence of brief intervention, significant changes were detected during the first 3 months, further changes were smoother; in the control group changes took place smoothly during all 12 months. It has been revealed that the risk of an alcohol-exposed pregnancy influence is not related with individual psychological characteristics but is related with a number of socio-demographic characteristics: unemployed women with higher or secondary vocational education, unmarried or divorced are more likely to be at risk. According to the study results, brief intervention has proven effective.

Keywords: *Fetal alcohol syndrome (FAS), FASD, prevention, brief intervention, childbearing age women.*

1. Introduction

Currently, brief interventions in connection with the solution of preventive tasks are becoming increasingly important in the practice of psychologists and other professionals. However, there is clearly insufficient attention paid to the study of their effectiveness. This study focuses on the psychological effects of brief interventions aimed at preventing Fetal Alcohol Syndrome (FAS) and Fetal Alcohol Spectrum Disorders (FASD).

FAS is one of the most serious consequences of alcohol consumption by women during pregnancy. This is one of the main causes of mental retardation, behavioral disorders and problems in the learning process, as well as social disadaptation (Dikke, 2011; Balachova et al, 2012). The prevalence of FAS is from 2 to 7 per 1000 children born and exceeds the prevalence of such congenital disorders such as Down's syndrome, autism, etc. (Palchik, Legonkova, 2011). The rather high level of alcohol consumption by women, the erosion of gender differences in the degree of alcoholism and the nature of alcohol use (Shurygina, 2010; Roschina, 2012) do not only inflict damage to the physical and mental

health of women, but also have negative social consequences, increasing the number of divorces, orphans and delinquencies.

Fetal alcohol syndrome is an incurable disease that manifests itself throughout the life of a person. The only way to prevent these violations is to deny a woman from drinking alcohol during pregnancy (Riley, 2004; Varavikova, Balachova, 2010). Therefore, the development of programs aimed at preventing FAS is an important task of high social importance.

The FAS example clearly demonstrates the importance of prevention and the crucial role of psychological, behavioral factors and interventions to prevent even incurable disorders and the formation of the nation's health and mental capacity: all violations of the Fetal Alcohol Spectrum, including mental retardation, can be completely prevented if the mother does not drink alcohol while being pregnant.

2. Design, methods and sample

The methodology of preventive programs in the field of health involves conducting research aimed at identifying the problem, collecting data on problem behavior and characteristics of the specific group to which the intervention will be directed, and developing a new preventive program on this basis that is empirically tested (Varavikova, Balachova, 2010; Balachova, Volkova, Isurina, Palchik, Tsvetkova, Shapkaitz, 2012). Accordingly, within the framework of the scientific project «Prevention of Fetal Alcohol Syndrome and neurodevelopmental disorders in Russian children» a prevention program was developed. The St. Petersburg State University (Russia), the Nizhny Novgorod State Pedagogical University (Russia) and the University of Oklahoma Health Sciences Center (USA) took part in the project. The main preventive measures of this program are:

- 1) Directed informing based on screening of the nature of alcohol consumption by women of childbearing age and the contraception style.

- 2) Dual-focused brief clinical and psychological intervention.

Theoretically, the basis for developing the strategy and design of the intervention was the model of health beliefs (Rosenstock, 1974) and the model of the stages of change (DiClemente, Prochaska et al, 1991). Beliefs about personal risk and the expected consequences that determine readiness for action were considered as a mechanism for changing behavior. The results obtained at the previous stages of the study (Balachova et al, 2012) indicate the willingness of women to change their beliefs under the influence of information coming from significant sources. The most significant sources of information, according to the results of the research, are scientifically based information materials presented in an accessible form and the OBGYNs that determined the main elements of the prevention program – information brochures and brief interventions by an OBGYN physician.

The study of the effectiveness of brief interventions in the field of health requires uniformity in their implementation. Only the standard implementation of the intervention by all specialists can ensure the reliability of the results. Therefore, in this study special attention was paid to the training of physicians in the standard procedure of intervention and implementation of reliability criteria in the course of its implementation by specific physicians.

The sample of the study consisted of 280 women of childbearing age: 140 women entered the experimental group and 140 – the control group. The design of the study suggested the following selection criteria: childbearing age (18-44 years), absence of pregnancy at the time of the study beginning, the possibility of having children (absence of pathology of the reproductive function), absence of alcohol use problems, the presence of at least one unprotected sexual intercourse and the use of alcohol in any doses at least once in the last 90 days. Respondents were recruited in 10 women's consultations in St. Petersburg and were randomly divided into experimental and control groups. All participants were screened, a basic interview and three follow-up interviews at 3, 6 and 12 months were conducted. All women received information materials (a brochure) about the alcohol effects on the fetus and fetal alcohol syndrome. With women of the experimental group, after a baseline interview, twice in the period from 2 weeks to one and a half months, specially trained OBGYN physicians carried out a dual-focused brief intervention.

The study used methods developed by the FAS Prevention Study Group (Balachova et al, 2008): screening, «Audit» (WHO, 2001, adapted by Balachova, 2005), Calendar method, baseline interview, follow-up interviews at 3, 6 and 12 months.

3. Results and discussion

The results of the study showed that the majority of women of childbearing age (77%) do not have any knowledge about fetal alcohol syndrome, the causes of its occurrence and the possible consequences for the child. 89% of women believe that alcohol (especially strong) is harmful to the fetus. While only 69% of women believe that during pregnancy a woman should refrain from drinking alcohol, 28% of respondents consider it permissible to use alcohol in this period in small doses and 23% of women consider the use of red wine not only acceptable but also useful during pregnancy.

The women of the sample are characterized by a rather high level of alcohol consumption: 100% of the sample at least once in the last 90 days used alcohol at the risky level (4 or more doses at a time). On average, women use 3 standard doses at an average frequency of 1-2 times a week; 70% of women use 1-5 standard doses of alcohol at a time, 28% drink 6-10 standard doses, 3% of women have 11-15 doses. Women, who plan pregnancy, by the alcohol consumption level, do not differ from the general sample.

The level of knowledge about fetal alcohol syndrome in women of childbearing age increases at the end of the study (after 12 months since baseline interview) in both groups, however, participants who underwent a dual-focused brief intervention are more likely to correctly answer questions about the concept of FAS, the FAS-specific violations, and also about the causes of the syndrome.

Dual-focused brief interventions and passive informing cause positive changes in attitudes towards alcohol consumption during pregnancy and the effect of alcohol on the fetus: a statistically significantly larger number of women in both groups felt that alcohol consumption during pregnancy was unacceptable by the time the study ended. The dynamics of the changes in the studied groups was different: in the experimental group, under the influence of brief intervention, significant changes in the attitudes were detected during the first 3 months, further changes were smoother; in the control group changes in attitudes took place smoothly during all 12 months. In the experimental group, under the influence of intervention, there is also a more explicit rejection of the stereotype of the benefits of red wine.

The dynamics of the actual alcohol consumption by women of childbearing age under the influence of dual-focused brief intervention and passive informing indicates a significant decrease in the frequency of alcohol consumption (after 3, 6 and 12 months). While women who underwent brief interventions significantly lowered the level of alcohol use compared to women who did not undergo the procedure of intervention. A dual-focused brief intervention affects the risk of an alcohol-exposed pregnancy: initially the entire sample (100% of women) was at risk. After 3 months after brief intervention, significant differences were found between the experimental and control groups: 47% of the women in the experimental sample and 62% in the control group were at risk. After 6 months, the differences are found at the level of the statistical tendency (45% and 55%, respectively), and after 12 months no significant differences were revealed (46% and 49%, respectively), which indicates a faster effect achieved with the brief intervention method.

It has been revealed that the risk of an alcohol-exposed pregnancy is related with a number of socio-demographic characteristics: unemployed women with higher or secondary vocational education, unmarried or divorced are more likely to be at risk.

4. Conclusion

The main factor that influences the formation of attitudes for the refusal of drinking alcohol during pregnancy and the decrease in the level of real alcohol consumption is awareness of the impact of alcohol on the fetus and the health of women, which determines the main content of the prevention program: informing and brief intervention, motivating a change in attitudes and behavior.

Thus, the results of the study indicate the effectiveness of the brief intervention designed to prevent FAS and FASD.

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A JOURNEY FROM SELF-DISCOVERY TO SELF-CARING: OLDER ADULTS ENGAGING WITH CONTEMPORARY ART¹

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Abstract

Context: Museum education is seen as a means of enriching individuals, creating meaningful situations that generate purpose for visitors. From the point of view of cultural democracy and cultural democratization, museums now realize that they must constantly innovate to meet the diverse and changing needs of communities in which they are embedded, and in so doing, fulfill their social role.

Objectives: This is true when studying art museums, most specifically their contemporary art collection. Contemporary art, no longer primarily based on canonical principles of beauty, is still today considered a challenge for many individuals. In this context, the principal objective of our research program was centered around accessing and understanding the actual experiences of adults. To understand the intellectual functioning of visitors is an avenue in providing useful information for the elaboration of powerful museum programs. This is a key issue, for museum professionals since it is imperative to find ways to provide a diversity of museum experiences for all. More specifically, our paper presents effects of contemporary art exploration on older adults.

Methods: Our research was conducted at the Montreal Museum of Fine Arts. Twenty-four adult visitors aged 65 and over that visited museums more than five times per year were selected. Data was collected using the Thinking Aloud protocol. This approach is one where visitors were asked to articulate ideas, thoughts they might have as they toured the galleries. The verbal comments were recorded, transcribed and analyzed using instruments created in previous research, that is, a typology of dissonances and consonances, the identification of eight mental operations, and these results were put in relation to Pelowski and Akiba's psychological model of a transformative art experience comprising five stages with three possible outcomes to the art experience.

Results: Results indicate the importance of reaching Pelowski and Akiba's meta-cognitive Stage 4 of the aesthetic experience. Engaging with contemporary art seems to be, for the elderly visitor, an exercise in self-discovery where, with contemporary art, it is possible to find meaning. For our visitors, the aesthetic experience has the power of regenerating the self, resulting in self-caring. The museum can then be viewed as a self-care environment that provides elderly visitors with possible transformative aesthetic experiences that can help improve their well-being and quality of life. However, this would require additional research in exploring different museum experiences, considering different artistic periods, and this, as part of a longitudinal study.

Keywords: *Adult visitors, intellectual functioning, art museums, contemporary art, aesthetic experience.*

1. Rationale of the research

In the last decade, museums have actively promoted their social value as a community asset. With the aging of the population, it is clear that innovative programs must be put in place to meet the needs of the elderly.

The research project focused on contemporary art appreciation as opposed to historical art, for a number of reasons. As artworks are considered of our time, it was hoped that elderly participants would be able to relate to the representation of today's life or views of the world, presented in the artworks. Instead of focusing on the past, through the exploration of historical art, we wanted to present artworks that were contemporaneous to our elderly visitors. So, on the one hand, contemporary art may have relevance to our participants as some of the subjects being explored, reflect on the society we live in. On the other hand, the way to treat these diverse subject matters might be challenging for them as

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contemporary art is no longer primarily based on canonical principles of beauty and ask for the viewer to formulate a multitude of interpretations.

To understand the intellectual functioning of visitors during their exploration of contemporary artworks is an avenue in providing useful information for the elaboration of powerful museum programs. This paper addresses how older people understand and engage with contemporary art in a museum context and whether if engaging with contemporary art has an impact on elderly visitors' museum experience.

2. The choice of participants

Participants were of mixed gender ($n = 24$), aged 65 to 80, with different levels of education ranging from less than 12 years of education to post-secondary education.

They were frequent museum goers with more than 5 visits per year. Participants were familiar with the museum context as they were members of the Montreal Museum of Fine Arts. The study received ethical approval from the ethics committee at the Université de Montréal.

3. Procedure for collecting data

Data was collected using the *Thinking Aloud protocol* adapted to visits to museum exhibitions in the 1990s by Dufresne-Tassé and her team. This method consists of recording what the visitor says at the very time of the visit. Visitors, not having to worry about explaining or justifying their comments, have only to say aloud whatever comes to mind (Dufresne-Tassé & Lefebvre, 1995; Dufresne-Tassé et al., 1998; Ericsson and Simon, 1993). This method has been subjected to numerous tests and adjustments so as to significantly reduce its impact on the functioning of the visitor and may, thus, be employed with confidence. The artwork explorations were between 90 and 150 min' duration and were digitally recorded and transcribed. These constituted the visitor's *discourse*.

4. Treatment of data

The twenty-four transcripts were then coded using existing categories identified in previous research. The coding was first based on a typology of consonances and dissonances so that moments of harmony and conflict could be identified in the participants' discourses. Secondly, eight mental operations were also coded between consonant and dissonant moments (Émond, 2016a, 2016b, 2017). Third, once the discourses coded, results were put in relation to Pelowski and Akiba's (2011) psychological model of art experience. This model presents five different stages of the aesthetic experience: *Stage 1: Pre-expectations and self-image*; *Stage 2: Cognitive mastery and introduction of discrepancy*; *Stage 3: Secondary control and escape*; *Stage 4: Meta-cognitive re-assessment*; *Stage 5: Aesthetic outcome and new mastery*, with a total of three possible *Outcomes* to the aesthetic experience. It is recognized that the conclusion drawn cannot be generalized beyond the data set.

5. Results and discussion

5.1. Meta-cognitive re-assessment and aesthetic outcome and new mastery

Contemporary art exploration seems to create dissonances as it often challenges the way the visitor appreciates art. As mentioned by Radford (2004), the role of cognitive dissonances is unavoidable in the exploration of contemporary art, as it contains "[the] notion of tension and reconciliation, and of the creative act as speaking to something "within us" and revealing to us something about ourselves..." (p. 56). The visitor that overcomes the challenges inherent to the exploration of contemporary artworks, seems to instigate creativity. In these circumstances, the visitor appears to tolerate ambiguity and is willing to go beyond his comfort zone in his art appreciation (Minissale, 2013).

In Pelowski and Akiba's (2011) psychological model of art experience, as presented by Émond (2018; 2019), all stages have a particular role to play in the quality of visitors' museum experience particularly Stage 4: *Meta-cognitive re-assessment* as when the visitor completes Stage 4 and enters into Stage 5: *Aesthetic outcome and new mastery*, he is getting closer to an *Outcome 3*, that is, *a transformative aesthetic experience*. As discussed previously, when a visitor overcomes the challenges encountered during a contemporary artwork exploration and withholds a final judgement and pursues the artwork exploration, this allows for other ideas to emerge and in doing so prolongs the aesthetic experience (Gomez, 2007). This favors a situation where the unexpected is pursued. When this occurs during the artwork exploration, there is evidence in the visitor's discourse of metacognitive knowledge,

experiences and skills (Émond, 2019). The visitor being in a creative pursuit during Stage 4, seems to undergo moments of self-discovery. One participant reported in his discourse such an experience:

But this reminds me of a place and time in my life... Because in ruptures you have like... it's like two colors, ... that's like in illness there, look, when you're told you have cancer you're in the acute phase, ... but it's the same thing in a rupture, it's like... it's that... You don't see anything, you don't know... but you know there are lights somewhere... because, like it or not, when suffering... you know that suffering will stop...

Basically, I realize that the artworks, the artworks come to me emotionally a lot... a lot... and you see what I want, is art that is not too stuffy (MBAM BQ).

The participant sees the contemporary art exploration as an opportunity to reflect on life and realizes the challenging nature of the artwork which instigates an emotional encounter. Pursuing the exploration, the visitor engaged with another artwork and said:

So that's why I find that this... this painting here... this is what I love about it, it's like my life through it. You look at that, it's a dead tree, it's a wound, it's a scar, do you understand? Rocks represent the difficult things... do you understand, that's it. Then there are people, there are people who are doing something, you know. Now look at this, it is like... death... do you understand? I'm confronted at that, at seventy-one years of age, life expectancy is eighty-five, so I'm probably going to go to one hundred and five years of age, to bother a few more people, but, you know, in the meantime, that's it, do you understand?

And then you look at that and then you say, I regenerate myself when I look at that, see. There's like a concordance between where I'm in my life and that... (MBAM BQ).

When going through Stage 4, art becomes a vehicle to construct and understand the self (Brinck, 2007). This entails that the visitor is engaged in the exploration of the contemporary artwork in a prolonged manner to experience all different stages of the aesthetic experience. Self-discovery might occur through time and possibly through repeat encounters with artworks for the visitor to feel reinvigorated. These museum experiences could be qualified as self-care by visitors themselves.

The museum can be considered as a resource for taking care of oneself. Engaging with contemporary art, which is a product of our society, one in which our elderly visitors live in, can help promote or enhance the personal potential of older visitors and contribute to their well-being. This could be enunciated by defining self-care "as a practice of activities that individuals initiate and carry out on their own by maintaining life, health and well-being" (Hoy, Wagner & Hall, 2007, p. 457). As mentioned by Camic, Hulbert & Kimmel, (2017) work is still needed in the elaboration of a definitive theory of well-being. In an attempt to better define the concept, Ryff and Singer (2006) presents the notion of psychological well-being "as comprising six key components, personal growth, self-acceptance, autonomy, purpose in life, positive relationships, and environmental mastery (as cited in Todd, Camic, Lockyer, Thomson & Chatterjee, 2017, p. 47). Riger and Lavrakas (1981) suggested that well-being is improved when an elderly person can experience a sense of belonging to a community, to be relevant members of society.

The museum can be viewed as a self-care environment that provides elderly visitors with possible transformative aesthetic experiences that can help improve their well-being and quality of life. An elderly person living a transformational aesthetic experience through self-discovery will probably leave the museum with a vivid impression that will be prolonged in time. Being engaged with contemporary art, indicates that elderly visitors encounter challenges in which they discover interconnectedness between different ideas being put forth by artists and this in itself is important for personal change to occur. Considering Pelowski and Akiba's (2011) psychological model of art experience, we can say that for elderly people to take a personal risk in looking at a contemporary artwork that does not match their personal conception of what an artwork should be, is in itself another important first step. Then by being able to make connections with the contemporary artwork and their own prior knowledge is also an important component to consider towards a transformative aesthetic experience and an attitudinal shift. This implies changing views about the contemporary artwork being explored and in parallel a better understanding of the self and the world. Ultimately, this entails what was described in Stage 5, a transformative aesthetic experience, where, in the case of our specific research, an elderly person might seek new forms of art in a quest of altering life experiences, perceiving oneself as an active member of society. This concurs with Banz's views of museums as places that "can appeal to the very intimate needs of the self, being perceived as instruments of self-renewal" (2008, p. 44). As for Monk (2013), museums "through their interactive nature, [...] have the power to confront individuals' schemata and transform the way people view the world" (p. 63). Considering the benefits of being engaged with contemporary artworks, museums can be considered instrumental in offering programs for the elderly to improve psychological well-being and act as places where self-care is possible. Participants in this study, during the post-exploration interview, declared having experienced a worthwhile encounter with contemporary art and considered the possibility of renewing this type of experience.

6. Conclusion

A transformative aesthetic experience is a process. This process begins with a disorienting experience that does not fit within a person's current perspective and cannot be easily resolved. This prompts a person, and in the context of this study, an elderly person to work through diverse assumptions and beliefs about artworks. To pursue the exploration, the person needs to explore different avenues to solve the dilemma. This generates, most of the time, a more inclusive and accommodating outlook than what was envisioned at the beginning of the exploration of the artwork. This kind of museum experience is for the elderly an occasion to go beyond the mere learning of facts and encounter personal outcomes that implies their active role in society as being part of actual debates in acknowledging their own point of view amongst others.

Museums ought to develop their role as places of "sociating" a term used by Grimes and Minelli (2016) to propose a new kind of participation. This is to view museums not only as institutions adapting their offers to diverse publics' needs, but as social actors embedded in their communities. Exploiting "sociating" in the museum context would translate into giving diverse members within communities, like elderly people, access to their collections, while also providing a unique brand or label such as places for self-caring. In doing so, distinctive experiences would be created in a place where members of communities could meet and share their different perceptions of the world in an open dialogue with the institution and where older adults would have a voice. Museum could foster a "place to be" in the spirit of democracy and cultural democratization. The role and value of museums contributing to self-care and well-being needs further exploration as this would require additional research in exploring different artistic periods, and this, as part of a longitudinal study with healthy older adults and also those with more specific needs that already are experiencing different illnesses attributed to aging.

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THE FUNCTIONALITY PROFILE OF CHILDREN WITH AUTISTIC SPECTRUM DISORDERS (ASD) IN THE AZORES – COMMUNICATION, LEARNING AND AUTONOMY

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Abstract

Autism is a disorder of the neuro-development which is characterized by persistent difficulties in communication, speech, cognitive processes, social interaction and also by restrict interests and repetitive and stereotyped behaviours. This syndrome points to the importance of having trained and qualified staff, investing in physical and material resources, and searching for the most adequate answers to the educational needs of these children. Regarding the formal education, according to the vision of Universal Design for Learning (UDL), the educational approach should enhance not only the academic acquisitions but also the prognosis of the evolution of the clinical condition and of the functionality of children with Autistic Spectrum Disorders (ASD). Considering that UDL approach invests in flexible objectives, methods, materials and evaluation, to differentiate learning taking into account the needs of each pupil, it is important to know the perspectives of educators/teachers and parents/caretakers of children with ASD. These two groups have significant and additional information on these children potentialities. Educators/teachers and parents/caretakers of 121 children participated in this study. These children, aged 3-11 years old, live in the Autonomous Region of the Azores (ARA) and are enrolled in kindergarten and in primary schools, comprising 30 public schools, 8 private schools and 40 private institutions for social solidarity. Data were collected with a questionnaire (educators/teachers) and in an interview (parents/caretakers). Results suggest that there are different perspectives between the two groups, with educators/teachers viewing the functionality profile of these children as being more aggravated. The analysis of these different perspectives evidences the importance of the communication between these educational providers regarding the work developed by them in order to promote the functionality of children with ASD.

Keywords: *Autism, functionality, family, school.*

1. Introduction

1.1. Autism spectrum disorder

According to the American Psychiatric Association, Autism Spectrum Disorder (ASD) have as their etiology a central nervous system disorder whose manifestations affect a child's normative development. These symptoms may appear during the first 3 years of life, affecting interpersonal communication, social interaction, and interests, causing repetitive behavior and, therefore, impairing the daily functioning of children (APA, 2013). This clinical dysfunctionality is mainly reflected in resistance to common teaching methods and changes in routine. It may also involve cognitive impairment, changes in sleep patterns, difficulties in establishing eye and physical contact with others, difficulties in playing symbolic and “make-believe” games, fascination or obsession with specific subjects, hyper or hypersensitivity to auditory, visual and tactile stimuli, intense motor activity, among others (Lobo, 1998). To recognize all these characteristics is also to understand that children with ASD need differentiated educational responses and that providing the necessary support simultaneously promotes the acquisition of learning and optimizes communication and socialization skills (Pereira, 2008). In 2001, the World Health Organization made it possible to understand the ASD through a biopsychosocial and integrated model of human functionality and disability - the International Classification of Functioning, Disability and Health - Children and Youth (ICF-CY). This Classification served the purpose of standardizing the language on the subject and allowed educational, health, and rehabilitation professionals to describe the functionality profiles of children up to 18 years of age by assessing development and behavior in dimensions such as communication, learning, and autonomy (CPDEC, sd).

1.2. Communication, learning and autonomy in autism spectrum disorder

Research unanimously refers to changes in communication and language as the main factors of ASD and as having a strong impact on the quality of these individuals' social interaction and behavior (Fernandes, 1994). This communication deficit also reflects a severity spectrum that can range from the total absence of communication to fluent language (Oliveira, 2005). However, what characterizes the communication profile of individuals diagnosed with ASD, even the high functioning ones, is the existence of deficits in the level of social pragmatics and in the comprehension of language as a whole. The delay in the development of expressive language, and even its absence, is one of the main reasons for clinical referral.

The learning profile of children with ASD is related to the various cognitive abilities that these children may have, ranging from deep mental disability to higher intelligence (Abreu, 2013). Children with ASD may be more frequently impaired in four specific areas of cognition: imitation, social interaction, play and skills, and ability to develop "*theory of mind*" skills (Brown & Whiten, 2000). According to Ortiz (2005), ASD children have cognitive rigidity, that is, difficulties in adapting to new learning. Given this characteristic, and in order to facilitate learning processes, these children benefit from learning based on concrete and contextual stimuli (Mota, 2008). The resistance to change and new learning also has its origin in the children's limited imaginative capacity and symbolic play, what can have negative repercussions on the development of conceptual structures and even on the ability of these children to solve problems of a symbolic nature, such as calculus, reading and writing (Hewitt, 2006).

Autonomy is a process that begins in the early years of the individual's life and develops throughout life (Silva, 2015). This ability for an individual's personal, domestic and social performance in their environment is one of the most important achievements in attaining their social independence. Thus, it is essential to evaluate the adaptive behavior that allows characterizing this domain of the personal development of children with ASD (Oliveira, 2005). According to Oliveira (2005), results from the application of the Griffiths Mental Development Scale in children with ASD show low rates in the areas of language and practical reasoning and higher rates in the areas of achievement, global motor skills and social staff (autonomy). However, individuals with ASD have a significantly lower environmental adaptive capacity when compared with groups of other individuals without ASD (Oliveira, 2005).

1.3. The contribution of the Universal Design to Learning (UDL) in the learning of students with Autism

This methodology has been recognized as an asset in supporting the inclusion of students with special educational needs, such as students with ASD. Denning and Moody (2014) report that the principles of the UDL methodology are very valid responses in adapting the classroom environment, as these students may find it difficult to maintain attention, filter out unnecessary information and the ability to change the attentional focus. Another concern to address concerns the need to adapt the presentation of content considering the limitations that these students may feel at the level of information processing or even regarding the requirement for cognitive flexibility (Goldstein, Johnson & Mineshew, 2001). The concept of self-involvement, considered of great importance in the UDL, is also one of the main objectives to consider when including a student with ASD in the classroom, especially since routines are an important factor for the adequacy of their behavior and for the consolidation of learning (Mancil & Pearl, 2008).

According to Mcleskey and Wldron (2007), effective inclusion fits into the UDL methodology given that, as this theory predicts, support for students with special educational needs in the classroom should be discrete. That is the only way they can feel naturally belonging to a school context. According to these authors, teachers should use supports and teaching methods that are effective for all students.

Ultimately, and from the perspective of Denning and Moody (2014), the application of UDL in pupils with ASD may represent an advance in improving school achievement as this approach promotes understanding, independence and performance of these children. The same authors point out that the principles of UDL include the use of supports for routines and procedures, the preparation / anticipation of material and subjects that can assist in the selection of content that constitutes meaningful learning related to skills and previous knowledge of the students; also the use of visual clues (such as symbols or photos) and other tools that increase the forms of representation, and the use of structured tools for the analysis and expression of content; finally, as a primary advantage, to consider and value the interests of the student, with a view to enhancing their involvement and active participation.

1.4. Importance of school-family articulation

In addition to a curriculum that considers the needs of children with ASD and values their interests, the articulation between the School and the family system is equally relevant. Success in acquiring the different stages of the process of communication, learning, and autonomy of a child ASD is closely related to their skills, but also with the attitude and skills of their family members to face of this disturbance (Gomes, 2012/13). The birth and growth of a child with neurodevelopmental problems

encourage parents to accept their condition, and to seek to apply the responses that best fit their child's real needs and abilities (Gomes, 2012/13). Likewise, according to Gomes (2012/13), it is of great importance that parents share information about the child to school so that the institution meets the necessary conditions for the promotion and enhancing their skills. Similarly, it is essential that these families, as well as schools, are aware of the importance of implementing strategies that enhance the development of communication, learning, and autonomy, and where students perform domestic tasks, solve problems and are stimulated in negotiation skills as a way of promoting responsibility and self-control (Silva, 2015). A close sharing relationship between family and school is a fundamental factor for the good prognosis in the evolution of the functionality of children with neurodevelopmental disorders (Martins, Acosta & Machado, 2016).

2. Methodology

The target population comprises 172 children with a diagnosis of ASD. It was used a sample of 121 children whose parents agreed to participate in the study, mostly boys (82%), the average age of 6 and a half years old. Half of the children have mildly severe ASD, 32% a moderate degree, 4% a severe degree, and 14% did not report.

The data were collected through structured interviews, based on a literature review on autism, instruments used in the identification and characterization of autism, and the variables of the International Classification of Functioning, Disability, and Health (ICF) in the domain of communication, learning, and autonomy. The interview with caregivers was composed of five dimensions: i) personal data of the child; ii) socio-family characterization; iii) clinical history; iv) functionality and participation profile; v) impact of ASD on the family. The interview with educators comprised three dimensions: i) data from the institution; ii) student's personal data; and iii) functionality and participation profile.

This study was previously submitted to the Regional Directorate of Education and to the Ethics Committee of the University of the Azores, having been issued by both entities in favour of its realization. The Board of Directors/Coordination of each of the educational institutions was then contacted in order to obtain their cooperation. The parents of the children were also auscultated, through the respective educational institutions, who explained the nature and purpose of the study. Families who agreed to collaborate and consented to the consultation of their children's Individual Educational Programs (IEP) signed their Informed Consent. All collected data were entered into IBM SPSS Statistics, constituting a database with 121 rows, each of which refers to each case of ASD. Data were analyzed using some methods of Descriptive Statistics.

3. Presentation and analysis of results

Tables 1, 2 and 3 present a summary of the results regarding the functionality profile of children with ASD, regarding, respectively, Communication, Learning and Application of Knowledge and Autonomy (self-care), from the perspective of educators/teachers and of parents.

The observation of Table 1 indicates that educators/teachers, compared to parents, detected more difficulties in terms of items related to Communication.

Table 1. Communication: Comparison between the two perspectives.

Communication	Does not do it alone/Some kind of disability	
	“School” Perception	Family Perception
Communicate and receive oral messages	88,2	47,9
Communicate and receive nonverbal messages	87,5	57,9
Speak	82,4	52,1
Produce nonverbal messages	86,4	57,9
Conversation	92,1	63,6
Discussion	91,5	62,0
Use of communication devices and techniques	73,4	39,7

The biggest difference between both perspectives lies in the task of “Communicate and receive oral messages” and the smallest differences lie in the tasks of “Conversation” and “Produce nonverbal messages”. However, in both cases, school elements perceive greater difficulties.

The observation of Table 2 indicates that educators / teachers, compared to parents, detected more difficulties in terms of aspects related to Learning and Knowledge Application.

Table 2. Learning and Knowledge Application: Comparison between two perspectives.

Learning and Knowledge Application	Does not do it alone/Some kind of disability	
	“School” Perception	Family Perception
Observe	67,0	19,0
Listen	59,8	20,7
Imitate	75,8	22,3
Learn by Interacting with Objects	71,4	20,7
Acquire information	80,0	40,5
Acquire language	82,7	50,4
Rehearse (Repeat)	77,3	52,1
Think	89,0	33,9
Solve Problems	93,3	68,3
Make Decisions	91,4	54,5

The biggest differences between both perspectives are in the items “Think” and “Imitate” and the smallest differences are in the items “Solve Problems” and “Rehearse”. However, there is consensus between both parts concerning the most significant difficulties located in the area of problem solving and decision making.

The autonomy skills were analysed in the light of self-care. The observation in Table 3 indicates that this is the area of greatest consensus and there are items, such as “Dress up”, in which there are no divergence between school and family.

Table 3. Self-care: Comparison between both perspectives.

Self-care	Does not do it alone/Some kind of disability	
	“School” Perception	Family Perception
Take care of body parts	57,4	69,4
Care related to excretion processes	51,9	58,7
Dress up	60,5	60,3
Eat	50,0	28,9
Drink	31,7	17,5
Take care of their own health	50,0	62,0

The results of the present study prove the existence of a very different perspective about the skills of children with ASD, by caregivers and educators, mainly in the fields of Communication and Learning and Application of Knowledge. Although both perspectives identify limitations regarding the functionality of children with ASD, it is clear that caregivers have a more optimistic view of their children's skills. The average age of children in the sample, 6 years old, may partially explain these findings. It might be not easy for educators to find and implement teaching and interaction methodologies that overcome ASD's limitations

This brings us to the importance of practicing a teaching methodology such as UDL that enables these children to demonstrate their knowledge through multiple forms of expression and motivates them to achieve curriculum learning goals effectively and with significant involvement and participation. The positive results of this involvement in learning could contribute to cooperative work and closer communication between school and family, encouraging more realistic and objective expectations regarding the empowerment of children with ASD. In addition, it is important to increase training opportunities for professionals in various areas to improve their performance regarding the ASD.

4. Conclusion

The present work aimed to perform a characterization of the functionality profile of children with ASD in AAR, according to the perspectives of their educators / teachers and families. Children with ASD usually have significant difficulties in the areas of communication, socialization and behaviors. As such, it is essential to know not only the level of these limitations, but above all their areas of interest and their skills so that staff and family members can be successful in carrying out their mission. Pedagogical assessment and teaching methodologies with an emphasis on the active and motivated participation of these students can, according to current literature, contribute more efficiently to the optimization of these children as autonomous students and future youth and adults with a proactive role in society. As limitations of the study, we identify the information collection instrument itself, which is used as an evaluation instrument in school contexts, and did not allow characterizing the sample profile regarding its

areas of interest and motivations. Another weakness of this study was the failure to collect information regarding the methodology, strategies and learning support materials used by schools. Future research in this domain should improve data collection methods and contribute to optimizing the response in the areas of training, consulting and intervention within the scope of the ASD.

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IMPROVING THE HEALTH BEHAVIOURS OF COPD PATIENTS: IS HEALTH LITERACY THE ANSWER?

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Abstract

Chronic Obstructive Pulmonary Disease (COPD) is a leading cause of morbidity and mortality and contributes to substantial social and economic burden (Vogelmeier et al., 2017). There is no cure for COPD, however, medications are available which slow disease progression and control symptoms. Adherence to prescribed medications is critical for optimal management of the disease as is the proper use of the medication delivery device. O’Conor et al. (2019) found that lower health literacy was associated with both poor medication adherence and poor inhalation technique. Health literacy, according to the Process-Knowledge Model, consists of both processing capacity and knowledge (Chin et al., 2015). COPD most commonly occurs in older adults (Cazzola, Donner, & Hanania, 2007). Older adults tend to have lower processing capacity, but lower processing capacity can be mitigated by knowledge (Chin et al., 2015). The purpose of this study was to determine if health literacy was associated with medication adherence and/or inhalation technique. Fifty-seven participants (age range 55-94 years) completed a questionnaire package that included the REALM, TOFHLA, and demographic questions. Information was gathered on medication refill adherence and inhalation technique. A subset of twenty COPD patients participated in qualitative interviews. Results indicated that lower health literacy was associated with both lower medication adherence and poor inhalation technique. One of the themes expressed by the qualitative participants was the need for further information. Given that health literacy is associated with health behaviours in older adults with COPD and there is an expressed need for information, an example of how current educational materials may be reformatted to meet the lower processing capacity of older adults will be discussed. An action-oriented research project where pharmacists and COPD patients collaborate to design needed educational materials and interventions is suggested as a next step.

Keywords: *Health literacy, health behaviours, cognition, older adults.*

1. Introduction

Chronic Obstructive Pulmonary Disease (COPD) is a globally prevalent chronic disease that results in an obstruction in airflow from the lungs and varying respiratory symptoms (Vogelmeier, 2017). COPD is a leading cause of morbidity and mortality globally and contributes to substantial social and economic burden (WHO, 2010). Both medication adherence and adequate inhalation technique are essential for controlling symptoms and slowing COPD disease progression (Rodriguez-Rodin, 2005; Melani et al, 2011). Nevertheless, rates of medication adherence and adequate inhalation technique remain low (see Restrepo et al., 2008). The purpose of the current research was to determine if health literacy was associated with medication adherence and/or inhalation technique in a sample of older adults and to propose next steps for targeted educational materials and interventions.

Health literacy can be defined as “the ability to access, understand, evaluate and communicate information as a way to promote, maintain and improve health in a variety of settings across the life-course” (Rootman & Gordon-El-Bihbety, 2008, p.11). It is estimated that 55% of Canadians aged 16 to 65 have low health literacy, with approximately 88% of individuals over the age of 65 having low health literacy (Rootman & Gordon-El-Bihbety, 2008). Concerning COPD specifically, Omachi et al. (2012) found that patients with low levels of health literacy may be at increased risk for poor health outcomes. Further, health literacy, according to the Process-Knowledge Model, consists of both processing capacity and knowledge (Chin et al., 2015). Knowledge about a disease and the respective treatment is essential, but the effective delivery of knowledge may be even more important if a patient has lower processing capacity.

Processing capacity involves cognitive processes such as working memory and processing speed. According to Chin et al. (2015), knowledge and processing capacity have two different age-related trajectories with processing capacity declining with age and knowledge remaining constant or increasing with age. Recently, O'Connor et al., (2019) conducted an observational cohort study to determine if health literacy and cognitive abilities were associated with the health behaviours of COPD patients. They found that health literacy and cognitive abilities were associated with both medication adherence and inhalation technique. Further, they found that fluid abilities (e.g., processing capacity), but not crystallized abilities (e.g., knowledge), were associated with health behaviours.

Given that COPD most commonly occurs in older adults (Cazzola, Donner, & Hanania, 2007), health literacy is lowest in older adults (Rootman & Gordon-El-Bihbety, 2008), and processing capacity decreases in older adults, the current research hypothesized that lower levels of health literacy would be associated with lower levels of medication adherence and inhalation technique in older adults.

2. Methods

2.1. Participants

See Table 1 for a description of all study participants compared to the qualitative interview subsample. Participants' ages ranged from 55 to 94 years.

Table 1. Descriptive Statistics for All Participants Compared to Interview Subsample.

Variable	All (n = 57)	Interview (n = 20)
Age, M(SD)	70.84 (9.51)	67.7 (7.02)
Gender, %		
Male	36.8	35.0
Female	63.2	65.0
Education, %		
< Grade 8	24.5	5.0
< High school	21.1	20.0
High school	42.1	60.0
College/University	12.3	15.0
Current Smoker, %		
Yes	33.3	25.0
TOFHLA^a, %		
Inadequate	38.6	35.0
Adequate	56.1	65.0
REALM^b, %		
Inadequate	38.6	25.0
Adequate	59.6	75.0
MRA^c, %		
Sub-Optimal	40.4	40.0
Optimal	56.1	60.0
MIT^d, %		
Poor Technique	10.5	5.0
Good Technique	82.5	95.0

^a TOFHLA = Test of Health Literacy in Adults; ^b REALM = Rapid Estimate of Adult Literacy in Medicine; ^cMRA = Medication Refill Adherence; ^d MIT = Inhalation Technique. Note: The discrepancies in totals reflect missing values

2.2. Measures

Participant demographics. Participants completed a nine-item questionnaire that included questions regarding age, gender, income, marital status, living arrangement, employment, education, years using a primary inhaler, and smoking history.

Rapid Assessment of Literacy in Medicine (REALM; Davis et al., 1993). The REALM was used to determine the participants' ability to read health terms. The REALM is a 66-item health-related word recognition test where the words are arranged in order of easy (i.e., fat) to increasing difficulty (i.e., Osteoporosis). For this research, the REALM was collapsed into two categories: inadequate ($\leq 6^{\text{th}}$ grade) and adequate ($\geq 9^{\text{th}}$ grade). The REALM had good internal reliability ($\alpha = .98$).

Test of Functional Health Literacy in Adults (TOFHLA; Baker et al., 1999). The TOFHLA measured the participants' ability to understand health information. The TOFHLA consisted of a two-part assessment; part one provided the participant with medical information or instructions from which they answered questions to test their understanding of the information, and part two required participants to read text about medical topics and fill in the blanks of the text from a list of potential choices. For this research, TOFHLA had two categories: inadequate (0-74) and adequate (75-100). The TOFHLA had good internal reliability ($\alpha = .81$).

COPD Medication Refill Adherence (MRA). Information regarding the participant’s primary inhaler was gathered from pharmacy records. Participants were classified (see Hess, Raebel, Conner, and Malone, 2006) as having either optimal MRA (≥ 80) or sub-optimal MRA (< 80). For participants who were prescribed more than one medication for COPD, the MRA score was calculated for their primary inhaler.

COPD Medication Inhalation Technique (MIT). Inhalation checklists were used to assess MIT for individuals who were using either a metered-dose inhaler (MDI) or the HandiHaler (HH). As different steps are required for each device, different checklists were used to score inhalation technique depending on the type of device they were using. Each checklist contained five critical errors. Participants were determined to have poor technique if they did not perform all of the essential steps correctly and good technique if they performed all of the essential steps correctly. These checklists were based on arbitrary criteria related to the proper technique of using an inhalation device and were developed by Melani et al. (2011). The initial Intraclass Correlation Coefficient of the first 30 inhalation technique videos did not meet the minimum criteria of .7. Raters met to discuss areas of disagreement and completed the remaining videos. The final inter-rater reliability was 1.0.

2.3. Procedure

Ethics approval was obtained by the Horizon Research Ethics Board before recruitment. Participants were recruited by 1) using pharmacy patient records from New Brunswick pharmacy databases; and, 2) recruiting participants themselves directly to the study by advertising the study online, in newspapers, on the radio, and other public places (e.g., COPD support groups). Patients were invited to participate in the study by the pharmacist and/or pharmacist-assistant if they were at least 40 years of age, had a smoking history, a self-report diagnosis of COPD, and a targeted inhaler scheduled for daily use for at least one year. Only participants who had been prescribed a MDI or a HH were included in the study. Participants were excluded from participation if they had an asthma diagnosis, had been enrolled in a formal disease self-management program, if they had refilled their medication(s) at more than one pharmacy within the past year, or if they were prescribed three or more of the targeted inhalers for scheduled daily use. Once permission to contact and eligibility were established, a research assistant collected the measures and inhalation technique video from participants at their homes.

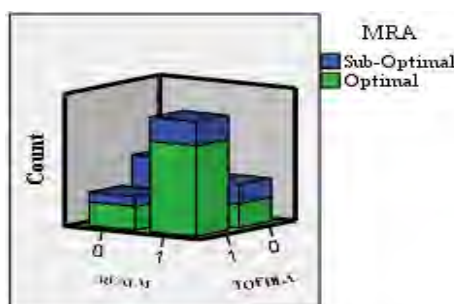
Finally, qualitative semi-structured interviews were conducted with a self-identified subsample of 20 participants. All those participants that consented (at the time of the initial questionnaire) to being contacted for an interview were then telephoned by research team members for further oral consent, upon review of the consent form (emailed or mailed to participants). The interviews were conducted, by research team members, over the telephone and were digitally recorded. The interview questions pertained to their experiences having COPD, adhering to medication, and what could facilitate adherence. The interview guide was piloted with two participants and, the questions were adjusted to gain as much information as possible, with possible lower literacy levels taken into account. The interviews were transcribed verbatim and uploaded to NVivo. Iterative thematic analysis (Braun & Clarke, 2006) was conducted on the qualitative data by three members of the research team (NH, LS, EK). Consensus of themes was reached between team members.

3. Results

3.1. Quantitative

Two 2 x 2 chi-squares were used to analyze the relationship between health literacy and MRA. There was a significant association between health literacy, as measured by TOFHLA and REALM, and MRA (see Figure 1 and Table 2). The odds of adequate REALM was 4.67 (95% CI = 1.47, 14.86) times higher for the group with optimal MRA. Similarly, the odds of adequate TOFHLA was 7.35 (95% CI = 2.15, 25.14) times higher in the optimal MRA group.

Figure 1. Bar Graph of REALM and TOFHLA by MRA.



An additional two 2 x 2 chi-squares were conducted to analyze the relationship between health literacy and MIT. There was a significant association between health literacy, as measured by TOFHLA and REALM, and MIT (see Table 2). The odds ratios for MIT and health literacy could not be calculated given that none of the COPD participants with adequate health literacy had poor MIT. In both chi-squares, 50% of the cells had expected values < 5. Even though Fisher's exact test was used, the result for MIT must be interpreted with caution. It should also be noted that, because four tests were conducted, a Bonferroni correction was applied and the significance level was set to .0125.

Table 2. Results of Chi-Square Test for Healthy Literacy, Medication Adherence, and Inhalation Technique.

	TOFHLA ^a		REALM ^b					
	X ²	Cramer's V	OR	CI	X ²	Cramer's V	OR	CI
MRA^c	11.02***	.46			7.17**	.36		
Sub-Optimal			3.02	1.48-6.15			2.33	1.23-4.43
Optimal			.41	0.22-0.78			.5	0.28-0.90
MIT^d	7.07 ^e	.38			9.25 ^f	.42		
Poor								
Good			.77	0.62-0.97			.73	0.56-0.94

^a TOFHLA= Test of Health Literacy in Adults; ^b REALM = Rapid Estimate of Adult Literacy in Medicine; ^c MRA = Medication Refill Adherence; ^d MIT = Inhalation Technique; ^e Fisher's Exact Test, $p = .012$; ^f Fisher's Exact Test, $p = .004$; * $p < .05$; ** $p < .01$; ***.001

3.2. Qualitative

One of the themes that emerged from the thematic analysis of the qualitative data was directly related to health literacy and the formulation of educational materials¹. The theme is "there needs to be more information," in which many participants (12/20) expressed that they desired more information, including at the time of diagnosis, about the disease itself, how they can impact disease progression, how to get help when needed, and the supports available. Regarding what they perceived to be the overall need for more information one participant stated, "my big concern is on the COPD end of it is the lack of information that's available to anybody that has the particular problem"(P29). When asked what information they were provided with upon diagnosis one participant stated, "Um, really nothin'. They just come in and told me I had COPD and gave these puffers and, that was it." (P42). There were also participants who specifically wanted to know what to expect as their disease progressed, "You know, what... what signs there is, like, when um, when I'm talking a lot you might notice my voice gets different and I think that must be from the COPD?...I don't know if it is, but if it is, people, they should tell you what, what to expect."(P4).

4. Discussion

Supporting the findings of O'Connor et al. (2019), we found that a lower level of health literacy was associated with lower levels of both MRA and MIT. COPD patients with low MRA and MIT are at risk for uncontrolled COPD symptoms and advancing disease progression (Rodriguez-Rodin, 2005; Melani et al, 2011). Further, one of the themes that emerged from the qualitative interviews was the need for more information about the prognosis, management, and treatment of COPD. Providing COPD information repeatedly and over the progression of the disease would address the informational needs of COPD patients as identified by our sample. Though increasing knowledge will help improve health literacy, it is only one part of health literacy. Processing capacity also needs to be considered. Indeed, it may be crucial when the primary age group of the disease is older adults. Older adults are most likely to be affected by a decline in cognitive abilities such as processing speed (e.g., O'Connor et al., 2019). Therefore, the information that is provided to older adults needs to be tailored to their needs. In other words, information on COPD needs to improve not only in quantity but also in quality.

O'Connor et al. (2019) offered some suggestions. They noted that COPD patient materials may be improved by designing informational materials for the low reading grade level and providing concrete instructions (p. 24). They also noted that multi-step behaviours, like MIT, should be 'chunked' to enhance memory (e.g., "Ready, Set, Go!", p. 24). Chin et al. (2017) noted that materials should signal key concepts and present the information in a way that reduces the demands on processing skills like search and reorganization. Also, designers of COPD patient materials may consider the importance of information delivered via the internet. Morrow and colleagues (e.g., 2016, 2017) offered many important insights into how to deliver effective electronic health information to older adults with low health literacy.

¹ The full qualitative study will be published at a later date. In addition to the major theme described in this article, the other major themes in the qualitative study included: "continuity of care", "drug costs a concern", "importance of pharmacy for information and care", "medication self-management", and "it's a lonely battle".

Finally, the most efficacious method may be an action-oriented research project where pharmacists, cognitive psychologists, and COPD patients collaborate to design needed educational materials and interventions.

Though this research is limited by the sample size and initial issues with MIT coding, other researchers (e.g., O'Connor et al., 2019) have reported similar results. Future research should focus on designing and/or re-formatting and testing COPD patient materials with a focus on the specific needs of older adult COPD patients.

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INTELLIGENCE ANALYSIS AMONG RURAL LEARNERS IN MOROCCO

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Abstract

The full scale intelligence quotient is a strong predictor of educational success. The aim of this study was to calculate the full scale intelligence quotient (FSIQ) of Moroccan rural students in the Safi region. The psychometric test Wechsler intelligence scale for children and adolescents - 5th edition WISC V was used by administering the five indexes, namely the verbal comprehension index, visuospatial index, fluid reasoning index, working memory index and processing speed index, to compare them to the average of the Wechsler tests. The study was carried on 104 students (46 girls and 58 boys) between the ages of 12 and 15 years old, 67% of the students were boarders and 33% were external students. We administered all 15 subtests of WISC V on each student participating in this study. The results of the participants in this study who are students in public schools in rural areas show a FSIQ by means, and a verbal comprehension index that is higher than the other four indexes in WISC V. In terms of correlations among the five indexes, the results show different types of relationships among the test indexes.

Keywords: *FSIQ, WISC V, intelligence, learners, rural.*

1. Introduction

Intelligence tests were first developing in France for the explicit purpose of predicting school success (Binet and Simon, 1904). Then Wechsler's three intelligence tests appeared in the United States and became the most widely used cognitive tests in the world (Camara, Nathan and Puente, 2000; Georgas, van de Vijver, Weiss and Saklofske, 2003; Lichtenberger & Kaufman, 2009). All three tests are administered individually for adults, adolescents and children. All Wechsler tests have been translated, adapted and standardized in many countries. Since the launch of the Wechsler Bellevue intelligence scale (WB), this rich history of research and clinical applications has undoubtedly contributed to the development of these three tests. From the creation of the Wechsler tests to the latest edition, they based on the g-factor of Spearman, C. (1904). He observed that children's performance on different school subjects was positively correlated.

Thus, the developers of these tests stated that they not only used the general intelligence factor but were also open to cognitive theories to guide creation. Such as use of Cattell-Horn-Carroll theory (CHC). This theory used to classify performance tests to facilitate the interpretation of academic ability and to provide a basis for organizing assessments for those suspected of having a learning disability. In 1993 by Carroll, this theory came together after several legendary analyses in psychology over the past 60 or 70 years concerning the nature, identification and structure of human cognitive abilities and is dividing into three hierarchical levels (Carroll, 1993). The third level is dominated by the general factor (g), which is a common factor among tests after factor analysis by Spearman (1927). In 1941 Raymond Cattell identified two factors of intelligence, fluid intelligence and crystallized intelligence (Gf-Gc), but in 1965 John L. Horn developed this theory from his supervisor, Cattell, through an empirical study in his PhD. Six factors in the first edition and fourteen factors by McGrew. (Quantitative knowledge (Gq), short term memory (Gsm), visual processing (Gv), long term memory (Glr), processing speed (Gs), decision/reaction time) / Speed (Gt), Reading and writing ability (Grw). Auditory Processing (Ga), Domain-specific knowledge (Gkn), Psychomotor Capacity (Gp) and Psychomotor Velocity (Gps) including tactile (Gh), kinesthetic (Gk), and olfactory (Go)) plus the two Cattell-Horn factors (Gf-Gc) that take the second level in CHC theory which are then subdividing into four, then come ten prime factors such as induction (I), language development (LD), lexical knowledge (LK). In the latest update of the CHC model by Schneider and McGrew (2012).

This study is carried by the latest version of Wechsler Intelligence Scale for Children and Adolescents - 5th edition WISC V. The WISC V is a test of children cognitive abilities and for learning outcomes. It describes the cognitive processes, the theoretical link between cognitive processes and specific academic skills and how to use performance on the WISC-V to generate hypotheses about processing deficits. That considered the score that is most representative of global intellectual functioning (g). Traditionally, FSIQ has been the first score to be considered in profile interpretation. The aim is to calculate the full scale intelligence quotient by the seven subtests of WISC V for Moroccan students in rural areas to measure FSIQ.

2. Method

2.1. Population and procedure

We sought to administer the test to a sample of families understanding the psychometric analyses of the people in this rural area with the help of the executives and teachers of the regional academy of education and training of the Marrakech-Safi region. The study carried on 104 pupils in rural areas: the participants are (46 girls and 58 boys) between the ages of 12 and 15 years old (mean = 13.11 months & 23 days with a standard deviation of 01 year, 1 month & 27 days), 67% of whom were boarders and 33% were students who commuted to and from school once a day. We administered all subtests of the Wechsler Intelligence Scale for Children and Adolescents - 5th Edition WISC V on each of the students participating in this study who are enrolling in a rural middle school commune called Khmis Naga in Safi province. We have chosen the samples according to their availability after or before classes, without forgetting students suggested by the general supervisor of the boarding school and who are all boarding students respecting the age order of WISC V. We also carried a parental questionnaire on the educational level of student's parents, uncles and aunts. Without forgetting household income, access to drinking water and electricity, transport and pre-school education.

2.2. Instrument

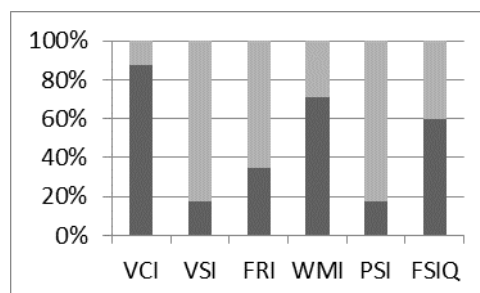
The Wechsler Intelligence Scale for Children and Adolescents - Fifth Edition (WISC - V) administered in the order of the manual. This test of cognitive ability is administered to participants aged 6 years to 16 years and 11 months. It consists of 15 subtests. Ten main sub-tests: similarities, vocabulary, block design, visual puzzles, matrix reasoning, figure weights, digit span, picture span, coding and symbol search plus five additional subtests: information, comprehension, arithmetic, letter-number sequencing, and cancellation. All subtests designed to measure five scales: verbal comprehension, visual spatial, fluid reasoning, working memory and processing speed. The score hierarchically ordered full scale intelligence quotient (FSIQ) is composed of only seven primary subtests and not ten subtests like the fourth version of WISC to measure five scales: verbal comprehension (similarities, vocabulary), visual spatial (block design), fluid reasoning (matrix reasoning, figure weights), working memory (digit span) and processing speed (coding) Wechsler, D. (2016a,b).

3. Result

The correlation between the averages of the overall grades of the two semesters of the students' class and the full scale intelligence quotient (FSIQ) for the students is 0.62. The results of the WISC V psychometric test scores for Moroccan students gave a Cronbach's alpha coefficient of 0.85 in rural areas. Not to mention that girls scored 103.26 in the FSIQ lower than the 104.26 score obtained by boys.

Table 1 presents the mean values and standard deviations of the five indexes and the full scale intelligence quotient (FSIQ) for all participants in this test. We find that the visuospatial index VSI, the fluid reasoning index FRI and the processing speed index PSI are below the mean, while the working memory index WMI is above the mean. Only the verbal comprehension index VCI is slightly above average.

Figure 1. Indexes Scores of rural pupils.



The figure show in black, the percentage of students with index scores greater than or equal to 100 and in grey, the percentage of students with index scores less than 100.

Note that the difference between the VCI and the closest index WMI is 17 points or one standard deviation. The standard deviation of the two indexes VCI and WMI is different by 7 points. The difference between mean of the WMI and the three indexes VSI, FRI and PSI is between 11 and 15 points or more than one standard deviation. To refine the point about the superiority of the mean VCI over the other mean factor indexes, we note that the figure illustrates the different percentages of children scoring high and low on all indexes and on the full scale intelligence quotient (FSIQ).

Table 1. *M=Mean, SD=Standard Deviation, VCI= Verbal Comprehension Index, FRI= Fluid Reasoning Index, CS=class scores.*

	VCI	VSI	FRI	WMI	PSI	FSIQ
M	122,67	92,21	94,52	106	91,17	104,05
SD	19,81	9,07	12,05	12,99	11,75	12,35

A large percentage of the children scored above the theoretical one hundred average in the VCI, WMI and FSIQ which is shown in the figure, whereas less than forty percent of the students scored below the theoretical one hundred average in the VSI, FRI and PSI.

Based on the results of the exploratory factor analysis, a one-factor model was tested with the sample. The two- and three-factor models did not result in saturation coefficients and communities higher than the one-factor model. The confirmatory factor analysis one-factor gave satisfactory adjustment statistics; RMSEA =, 043, CFI =, 967 and TLI =, 956.

The participants in this study compared themselves to the theoretical average 100 in the Full Scale Intelligence Quotient (FSIQ) with a rate of 13.46% average low, 56.73% average and 15.38% average high. For those participants who achieved a high Full Scale Intelligence Quotient (FSIQ), the study recorded 12.5%. As for the high Full Scale Intelligence Quotient (FSIQ), the study recorded only 1.92% very high according to the Wechsler psychometric test (the Full Scale Intelligence Quotient (FSIQ) equal to or greater than 130).

Table 2 shows the matrix of correlations between the five WISC V indexes with the strong and weak positive correlation.

Table 2. *Matrix of correlations between the five indexes for the group of children.*

	VCI	VSI	FRI	WMI
VSI	0,44			
FRI	0,5	0,51		
WMI	0,38	0,4	0,54	
PSI	0,02	0,26	0,28	0,4

It can be seen that the correlation between the four indexes VCI, FRI, WMI and VSI are between strong positive relationships and moderate positive relationships but the correlations between PSI with the three indexes are between moderate positive relationship and no or negligible positive relationship.

4. Discussion

The full scale intelligence quotient is used to solve school problems among learners. The results of our study are very satisfying because the average value of the full scale intelligence quotient is situated at the theoretical average, which is in contrast with studies already carried on the full scale intelligence quotient in Morocco, which revealed very inferior values. The studied samples showed a correlation between the general averages of the school year and the full scale intelligence quotient values. For students from rural areas there was a strong positive correlation with the reliability of administration given by alpha Cronbach. Girls scored lower in the full scale intelligence quotient which is contradictory to the difference in intelligence of gender despite the number of girls participating in this study being less than half of the entire sample. More generally, IQ is positively correlated with a wide range of life outcomes, including income (Zagorsky, 2007), mental and physical health (Der, Batty, & Deary, 2009; Gale, Hatch, Batty, & Deary, 2009), or life expectancy (Batty, Deary, & Gottfredson, 2007).

The mean of the verbal comprehension index VCI is high and the standard deviation of this index is higher than the other indexes. It is composed of two subtests similarities and vocabulary with a strong positive correlation between the two subtests. This index is used to measure crystallized intelligence related to the educational level of the child's parents and to the child's environment. However, only 5% of the sample has parents who were able to receive primary education even from their family circle, not forgetting that not all children were taught in the pre-school period and that the parents' socio-professional category environment is very low based on agriculture. This test, although very successful for children with high potential.

The Visuospatial index VSI requires the child to use his or her visuospatial intelligence. It is composed of two subtests cubes and visual puzzles with a low positive correlation between the two subtests, this index designates the quality of perception and visual organization, motor/visual coordination, the ability to analyze, synthesize, encode and manipulate physically or mentally objects and shapes to give them meaning. The absence of all mental activities and technological means such as computers in this environment with the difficulty of access to electricity does not help develop this intelligence.

The score of the fluid reasoning index (FRI) for the sample is below average so their relationship with three indexes is strong positive relationship only the relationship of this index with the processing speed index is a weak positive relationship. This index is calculated by two subtests Matrices and Balances, it measures the quality of reasoning, the ability to classify and locate in space, and also the ability to solve problems independently of one's knowledge several studies carried locally in Morocco based on tests of fluid intelligence, the studies gave very low results of IQ in Morocco below the average.

The average of the working memory index WMI is above average. This index is calculated by the two subtests Memory of Numbers and Memory of Pictures, which have a low positive correlation. The objective is to use as much information as possible, going as fast as possible. Low scores are obtained in this index which will indicate learning difficulties and more repetitions to record them. The low scores of the children in this index compared with their school performance are evidence of their low academic achievement. It is observed that the links of the processing speed index PSI with the four indexes and the lowest correlations also the score obtained by the students is the lowest compared to the other indexes. It is calculated by the two subtests Code and Symbols with high positive correlation, this index for the speed and accuracy of assimilation of information by a child. Children with low scores in this index showed a delay in processing information. We note that the full scale intelligence quotient is at the average by the WISC V which is different from the studies already carried on Moroccans by Raven's matrices with very low IQ (fluid intelligence) despite the fact that Raven's matrices calculate fluid intelligence.

5. Conclusion

The results of this study are dominated by the average for the full scale Intelligence Quotient also for the five indexes of the test, in spite of the problems that surround the life of students in rural areas due to the absence of several essential conditions caused by poverty without forgetting illiteracy in the families. We have noticed that the average of the verbal comprehension index that represents the crystallized intelligence in the study samples that is high in comparison with the other indexes followed by the index of working memory, these two indexes are related to school success. The averages of the three indexes are inferior to the theoretical average for the visuospatial index VSI, the fluid reasoning index FRI and the processing speed index PSI. The problems of education are related to several factors like disorders of communication economic and social state need to be developed by specialists. Rather, the fluid intelligence by fluid reasoning index of WISC V in rural areas for Moroccans is better according to the more than two study of IQ in Morocco by Raven test.

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HOW POSITIVE AND NEGATIVE EMOTIONS INFLUENCE COGNITIVE PERFORMANCE IN SECONDARY SCHOOLS

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Abstract

In the literature, less is known about the influence of emotions on cognitive performance at the crucial period of early- and mid-adolescence. Although the results are sometimes contradictory and contingent upon the perceived specific emotion in adulthood, the affective state is likely to influence cognition. Moreover, affective context is likely to impact deductive reasoning in youth and decision making. There is evidence that a negative affective experience will lead to poor cognitive performance. Therefore, experiencing a negative emotion (anger, anxiety, sadness...) should weaken the performance of students in cognitive tasks (e.g., reasoning or decision-making task). However, few studies have examined the impact of emotions on cognitive (not only academic) performance among adolescents and this is the objective of our research. After ethic committee agreement and parents' authorization, we asked 158 adolescents in secondary schools to respond to several questionnaires. More precisely, we proposed the French version of Differential Emotion Scale adapted for school context to measure the affective states. Syllogisms evaluated cognitive nonacademic performances. As results, we expected that negative emotions related to academic achievement would reduce performance in reasoning and positive emotions would improve it. There was only a significant effect for positive emotions on performance in reasoning. Moreover, we tested the existence of differential effect of affective state on cognitive performance according to age but it wasn't significant. The impacts of the results as well as perspectives of future research in relation with self-esteem, psychological disengagement and dropping out of school will be discussed. This research is funded by the French National Research Agency (Agence Nationale de la Recherche): ANR-18-CE28-0004-01.

Keywords: *Affective states, emotions, cognitive performances.*

1. Introduction

How emotions could play on cognitive performance in secondary schools? It is still too little known about the influence of affective states on cognitive performances at the crucial period of early- and mid-adolescence. In the literature concerning the adults the results can be contradictory and contingent upon the perceived specific emotion. The affective state is however likely to influence cognition (Blanchette & Richards, 2010). According to Tricard, Maintenant and Pennequin (2018) the deductive reasoning of young people is influenced by emotions. Tricard and her colleagues (2018) as well as Fartoukh, Chanquoy and Piolat (2014) specify that a negative affective experience will lead to a poor cognitive performance. Thus, experiencing a negative affective state should weaken the performance of students in cognitive tasks like reasoning task. However, few studies have concretely examined the impact of affective state on cognitive and not only academic performance among adolescents. The objective of our research is to bring more information about that topic.

As our first hypothesis, we made the assumption that there was a significant correlation and a significant effect of the age on the cognitive performances: the cognitive performances should increase with age (H1). Second, we expected a significant correlation and a significant effect between the emotions about school and the cognitive performances: more the emotions about school are negative the lower should be the cognitive performances (H2a); more the emotions are positive the higher should be the cognitive performances (H2b). Finally, we expected a significant interaction effect between the age and the emotions about school on the cognitive performances: more the emotions about school are negative and more the age is low the lower should be the cognitive performances (H3a); more the emotions are positive and more the age is high the higher should be the cognitive performances (H3b).

2. Methods

Participants

158 students in secondary school (83 boys and 75 girls) participated in our research. They were 12 years-old on average (11-14 years, $SD = 0.77$). The most of them were in 6th (11-12 years old) and in 5th class (12-13 years old); two participants were in 4th (13-14 years old) and two others in 3th class (14-15 years old). 92% of the participants were French native speakers and the others were speaking French since more than five years.

Procedure

We obtained an ethic committee agreement for our study. We asked first school principals a permission to realize our study in their establishment and then we sent an authorization form to the parents to obtain a permission for the participation of their children. All participants completed the questionnaires at school, in group.

Measures

Our study contains as measures two questionnaires.

To measure negative and positive affective states related to academic situations, participants completed the 36 items of the French validation of the Differential Emotion Scale (DES) proposed by Ricard-St-Aubin, Philippe, Beaulieu-Pelletier and Lecours (2010) adapted firstly to the school context by Galand and Philippot (2005). Items were rated on a 5-point Likert scale ranging from 1 (Rarely or never) to 5 (Very often).

To measure cognitive nonacademic performances, we proposed 19 syllogisms. The participants needed to choose the fine answer between four different propositions of a possible conclusion of every syllogism. Our syllogisms had neutral emotional content and they were pretested about this in Tricard (2018). In order to Blanchette & Richards (2010) the emotionality of the experiment's content has an effect on the cognitive performances and that is why we chose to include this type of syllogisms.

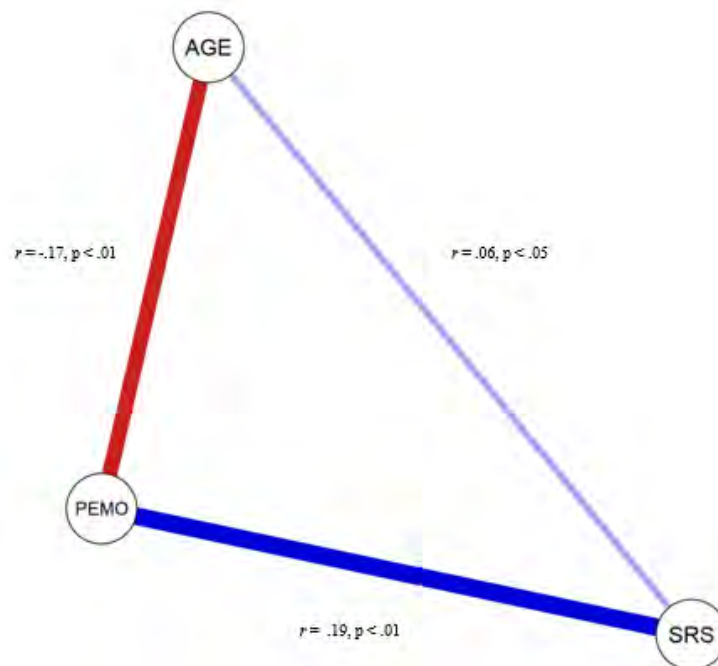
Statistical analysis

We analyzed our data within a Network (see Fonseca-Pedrero, 2018; Hevey, 2018) and SEM approaches framework. The Network analysis allowed us to explore the partial correlations and links between our different variables. The SEM analysis permitted us to test the impact of emotions on cognitive performances. Descriptive Statistics and Network analysis were done with JASP software (JASP Team, 2019) and SEM analysis was realized with AMOS software (Barnidge & Gil de Zúñiga, 2017).

3. Results

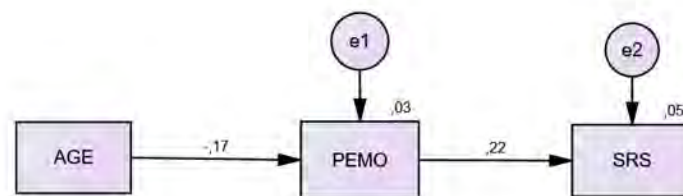
We integrated our hypotheses in a model that we tested with SEM analysis. The fit of the model was very poor ($\chi^2/df = 228$; $p = 0.000$; $CFI = 0.343$; $GFI = 0.662$; $AGFI = -0.589$; $RMSEA = 1.200$) and many of path coefficient weren't significant. We explored then the zero-order correlation matrix which indicated that there were two significant correlations between the variables of our interest: a positive relation between Positives emotions and Cognitive performances ($r = .22$, $p < .01$) as well as a negative relation between Positives emotions and Age ($r = -.17$, $p < .05$). This step orientated our next analysis. We put the three variables from these two correlations to a network analysis (Figure 1). This time three partial correlations were significant: the relation between Age and Cognitive performances (H1), between Positives emotions and Age, and, between Positives emotions and Cognitive performances (H2b). Age and Cognitive performances were also negatively connected via Positives emotions. Thus, we transposed this model in SEM framework by orienting the effects of the variables in accordance with our hypotheses (e.g. a direct effect from Positives emotions and Cognitive performances, etc.) We obtained a good model fit but the effect of Age on Cognitive performances wasn't significant. We redid the analysis by omitting this link of the tested model (Figure 2) and the fit was very good ($\chi^2/df = 0.745$; $p = 0.338$; $CFI = 1.00$; $GFI = 0.997$; $AGFI = 0.981$; $RMSEA = 0.000$). The direct effect from Age to Positive emotions was significant ($\beta = 0.22$, $p < .05$), with $R^2 = 0.03$ for Positive emotions, as well as the direct effect from Positive emotions to Cognitive performances ($\beta = -0.17$, $p < .05$), with $R^2 = 0.05$ for Cognitive performances. The indirect effect from Age to Cognitive performances was also significant ($\beta = -0.04$, $p < .05$).

Figure 1. Network analysis.



Legend: NEMO = Negative emotions; PEMO = Positive emotions; SRS = Syllogism reasoning score as a measure of Cognitive performances.

Figure 2. SEM analysis.



Legend: NEMO = Negative emotions; PEMO = Positive emotions; SRS = Syllogism reasoning score as a measure of Cognitive performances; e1 =residual variance of PEMO; e2 = residual variance of SRS.

4. Discussion

Our hypotheses were partially validated.

Concerning our first hypothesis, the age didn't directly affect the cognitive performances in our sample. The problem is that the majority of our participants was only 11-12 years old and this is not what we wished. It will be necessary to include more participants who are older (13-14 years old) for the next stage of our research. Thus, we can investigate if there is a difference, at least, between the group of 11-12 years old and the group of 13-14 years old pupils. The age had also a partial positive correlation and an indirect negative relation on the cognitive performances via the positive emotions in a network analysis. This negative indirect relation might have a suppression effect on the positive one and may explain why we didn't obtain a significant direct effect. These results give us an insight that the relationship between age and cognitive performance isn't probably unequivocal.

Concerning our second hypothesis, the positive emotions correlated with the performance on the reasoning test but not the negative ones. Consequently, only positive emotions affected the cognitive performance and in connection with our third hypothesis, this is without an interaction with the age of the participants. This is in line with the results of Radenhausen and Anker (1988) and more recently with the results of Caparos and Blanchette (2015) or Wang, Chen and Yue (2017) where positive emotions improve cognitive performances. What about negative emotions? Some researchers (e.g. Fiedler, 1990; Forgas, 1995; Royce & Diamond, 1988) explain that reasoning tests are may be less constrained by

emotions than other types of tests. It is also possible that pupils entered a state in which feelings do not influence the task performance like the state of flow (Czikszentmihalyi, Abuhamdeh, & Nakamura, 2005). This could be valuable when both positive and negative emotions don't interfere with cognitive performances but, in our case, there were still a significant relation and a significant influence from positive emotions to cognitive performances. Melton (1995) showed that negative emotions could even improve cognitive performance. In our research we investigated the emotions on a global level as positive and negatives emotions. It will be interesting to study the link and the effect of emotions on cognitive performances on a specific level. May be some specific negative emotions could improve cognitive performances but other could do the opposite. Thus, this might explain why on global level there was no relation and no effect from negative emotions to cognitive performances. Concerning our third hypothesis, age had a negative indirect effect on cognitive performances mediated by positive emotions. It wasn't in our hypotheses but age had a positive direct effect on positive emotions. These results are in line with these obtained by Galand and Philippot (2005) but on a specific positive emotion level.

Thus, in future research, we must take also in account specific emotions and not only global emotions. We could also explore the influence of affective states on academic performances. Due to the risk of a vicious cycle between psychological disengagement and academic failure, better understanding of the link of emotions about school and academic performance appear like crucial. The understanding of this phenomenon added to the impact of self-esteem (a factor related to cognitive and academic performances, e.g. Simon & Simon, 1975) on these variables would be important to investigate in order to avoid dropping out of school. It will be also interesting to explore the influence of motivation within a such a theoretical framework. As we know, the motivation is important in school learning (Nicholls & Thorikildsen, 1995). The perception of the school context by the students have an impact on their motivation (Ryan & Patrick, 2001) and emotional experience at school (Galand & Philippot, 2005). Thus, it is plausible that the emotions felt about school and motivation could influence academic performances (e.g. Valiente, Swanson & Eisenberg, 2012).

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TEACHER-PUPIL RELATIONSHIPS AND SCHOOL ADJUSTMENT THE ATTACHMENT LENS AND THE DYADIC EXPANSION OF CONSCIOUSNESS APPROACH

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Abstract

The purpose of this study was to explore the connection between the quality of the pupil-teacher relationship, assessed from the attachment perspective and different school adjustment aspects. A sample of 40 educators were invited to evaluate their attachment strategies and then assess at least 3 children from their current classes (primary school); results for a total of 121 pupils were collected. First of all, educators assessed the pupil's attachment needs using the Student-Teacher Relationship Scale (Koomen, Verschueren, van Schooten, Jak, & Pianta, 2012); then, they were asked to assess social competencies using the Social Competence Scale (Corrigan, 2014) and the Engagement versus Disaffection with Learning Scale (Skinner, Kindermann, & Furrer, 2009), as facets of school adjustment. Results show that the strength of the pupil-teacher relationship is influenced by the particularities of the attachment strategies of both parties, and, in turn, this relationship, with its 3 dimensions (closeness, conflict and dependence) impacts adjustment. Results are discussed in the light of the Dyadic Expansion of Consciousness hypothesis – in a safe relationship, both the teacher and the pupil significantly expand the learning possibilities.

Keywords: *Attachment strategies, school adjustment, dyadic expansion of consciousness.*

1. Introduction

Initially introduced by John Bowlby, the concept of attachment refers to an inherited system that is meant to insure survival in the psychological sense of the term. Bowlby (1973) unpacks the activation process of this system and suggests that interactions with significant others, particularly in moments of danger, are internalized in two specific mental models: the self-image and the image of others (the attachment models), that in turn organize cognitions, affects and social behaviors throughout our entire lives. What is the underlying mechanism? When attachment figures (primary caregivers) are perceived as available and ready to attend to the needs of the individual, in response, the child (and later in life, the adult) develops a sense of **being secure** in his/ her close relationships when perceived absent or lacking reaction, the same attachment figures can induce a terrible sense of insecurity (Mikulincer and Shaver, 2007). This experience of security/ insecurity is integrated in the internal working models of the individual, the self-image and the image of the others: if cared for and needs met, one feels worthy of love and belonging and can trust others to come when in need; as already stated above, these models influence cognitions, experiences and the capacity for emotional regulation, the expression of the need for closeness and various other behaviors, all across the life span (Collins, Guichard, Ford, and Feeney, 2004; Mikulincer, Shaver, Pereg, 2003).

The second major concept of this paper poses a challenge when to be defined; adjusting to school/ educational system has been differently measured and described in time. We consider the perspective of Ladd (1990) and Perry & Weinstein (1998) that broaden the definition to encompass the degree to which a child becomes interested, engaged, comfortable and successful in his education environment (Buyse, Verschueren, Verachtert, & Van Damme, 2009). As such, one needs to look at the reality of adjusting considering a variety of aspects, amongst which the age will be linked to the strength of the protective systems of the child. In the first years of educational exposure, the adjustment refers to the extent to which preschoolers develop positive versus negative perception in regards to education, are comfortable or not in the classrooms, get involved or not in the tasks and other activities (Buyse, Verschueren, Verachtert, & Van Damme, 2009; Ladd, 1990). Therefore, Ladd's model places a great value on relationship inbetween the child's characteristics and the support he gets from his main

connection sources, but as well the stressors coming from all context: family, educational system, community. This is why we embrace a perspective of the school adjustment as a complex process, with multiple facets, reflecting first of all (as the most traditional models were showing) the adjustment to academic requests, but adding as well the adjustment to socio-emotional tasks and other behavioral challenges, that in turn lead to the development of specific competencies that will be used and improved throughout the entire educational path (Perry & Weinstein, 1998; Magelinskaitė-Legkauskienė, Legkauskas, & Kepalaitė, 2018).

As such, our view is that when entering the educational system children bring in their backpacks their attachment system as well. Collins and Sroufe (1999) are the authors of a transactional model whereby they underline that the early attachment experiences continue to affect children's functioning and all others relationships, while children also contribute to their own development and environments by responding and engaging with others relying on the previous patterns of adaptation and expectations. As such, various children might experience safety for the very first time in the relationship with the educators as different background factors impeded their caregivers to offer them a safe upbringing environment. Adjusting to the school environment is a task of great novelty and challenge so the activation of the attachments system is a given from the very beginning. And yet researchers are not convinced that one should consider educators attachment figure as well. Verschueren (2015) believes that the teacher-pupil relationship cannot become an attachment in the true sense of the concept for all children due to the lack of exclusivity and sustainability, the differences in potential emotional investment teachers can make as compared to the parents. Unfortunately, this unanimous view translates into problems for all parties, children, caregivers and educators, especially when insecurity is the "key word". Insecurity can activate 2 different directions:

- a. anxiously seeking the proximity of an attachment figure and asking for comfort or
- b. persistent avoidance/ keeping away, both physical and mentally, as the sole solution to minimize the exposure to situations where one could feel helpless, extremely lonely or hurt.

So, what are the difference? Research shows that preschoolers who are securely attached to their mothers are more socially competent and thus adapt easier, they become leaders in peer groups, have more positive interactions with elders, are more empathetic, more popular, cooperate better, and are evaluated by educators as having a higher level of social skills (Copeland-Mitchell, Denham, & DeMuler, 1997). How about the insecure ones? Children with an avoidant attachment have poorer vocabulary, limited creativity, demonstrate hostility toward the teacher and school tasks, and deny the need for help (Geddes, 2018). Sroufe (apud Pianta, Steinberg and Rollins, 1995) argues that pupils with histories of anxious / avoided attachment make less contact with teachers, and teachers often react mostly with fury to these children. Children with an ambivalent or resistant attachment style are prone to absenteeism, tend to develop teacher addiction behaviors, have good verbal skills that can be used to dominate and manipulate the teacher's attention and experience a constant fear of losing the educator's attention (Geddes, 2018). In general, they are perceived by teachers as vulnerable and fragile (Sroufe apud Pianta, Steinberg and Rollins, 1995). Spilt and Koomen (2009), combining a qualitative and quantitative study approach delineate several interesting findings: when teachers evaluate relationships as not too close to their pupils, they evoke feelings of ineffectiveness and that they are discouraged to invest in the child or find themselves searching for new strategies to assert influence; as well, teachers expressed more anger and helplessness concerning children they assess as more disruptive in their class as compared to a nondisruptive child.

Talking about attachment in the context of teaching, Cozolino (2017, p. 65) pinpoints: "The brain has been designed to develop when stimulated. In other words, the brain lives for the sole purpose of learning. This impulse is nurtured when rewarded by persons that are fully carrying. If not properly rewarded or even punished for curiosity, the brain learns to hide, avoid risks and resume to what is familiar. Even if every child is capable to learn, some children have brains, minds and souls that have been shut down". Using Cozolino's lens we argue that teacher-pupil relationships are key factors in strengthening internal working models of the child; adding the Dyadic Expansion of Consciousness Hypothesis (Tronick et al., 1998) we consider that the process is reflecting back on the teacher as well. Relying as well on the theory of attachment, the Dyadic Expansion of Consciousness Hypothesis adds beautifully to Cozolino's view when stating that "... each individual is a self-organizing system that creates its own states of consciousness-states of brain organization—which can be expanded into more coherent and complex states in collaboration with another self-organizing system. When the collaboration of two brains is successful each fulfills the system principle of increasing their coherence and complexity (Tronick et al., 1998, p. 296)."

Integrating these lenses, it is our goal to test the impact of the teacher- pupil similarity in terms of attachment characteristics upon the different facets of school adjustment as assessed by the teacher.

2. Method

2.1. Participants

The sample consisted of 121 educator-pupil pairs. The educators' sample comprised 40 experienced, female graduate-level educators with at least 3 or more years of teaching experience (20.5 mean of teaching experience): ten 1st grade teachers, ten 2nd grade teachers, eleven 3rd grade teachers, nine 4th grade teachers. The sample of children comprised 121 pupils (mean age=9.52, SD=1.7), 30 in the first grade, 29 in the 2nd grade, 31 in 3rd, 31 in 4th, 51,2 % males and 48.7% females. The sample was recruited from schools in a mid-low-socio-economic status area in north-east Romania. Parental permission was obtained for participation.

2.2. Measures

Student-Teacher Relationship Scale (Koomen, Verschueren, van Schooten, Jak, & Pianta, 2012) as one of the most used instrument to assess the strength of the attachment relationship of teachers and pupils includes 32 items divided over three scales: Conflict (11 items), Closeness (14 items), and Dependency (7 items). Cronbach's α coefficients from .67 to .84 indicated respectable to very good reliability according to the standards for research. Next, teachers self-rated their attachment style using the Relationship Structures (ECR-RS) (Fraley, 2011). The test includes 9 items that can refer to different relationships and has a Cronbach's α coefficient .81.

Educators were asked to assess pupils' social competencies as well using the Social Competence Scale (Corrigan, 2014) and the Engagement versus Disaffection with Learning Scale (Skinner, Kindermann, & Furrer, 2009), as facets of school adjustment. Developed ever since 2003, the Social Competence Scale includes 25 items that refer to the prosocial behavior (8 items), emotional self-regulation (10 items) and the academic abilities of a child (7 items). Cronbach's α coefficients from .92 to .94 indicate very good reliability according to the standards for research. The Engagement versus Disaffection with Learning Scale is compromised out of 32 items as well divided into different subscales, such as behavioral engagement, emotional engagement, emotional lack of involvement and re-engagement. Cronbach's α coefficients are as well according to the standards for research from .80 to .94 indicated respectable to very good reliability.

3. Results

3.1. Educator-pupil attachment-like relationships: A person-centered approach

O'Connor et al. (2012) emphasized the significance of a person-centered approach to the comprehension of an educator-pupil relationship. Cluster analysis has been suggested as a useful method for classifying patterns or profiles in a sample. The silhouette measure of cohesion and separation for cluster quality is a measure of the overall goodness-of-fit of the clustering solution. It is based on the average distance between the objects, and can vary between -1 and +1. A silhouette measure of less than 0.20 indicates a poor solution quality, one between 0.20 and 0.50 a fair solution, while values of more than 0.50 indicate a good solution. In our study, Two-Step cluster analysis yielded a two-group solution. The silhouette measure of cohesion and separation for cluster quality showed fair (0.4) overall goodness-of-fit, indicating that two groups are statistically the optimal number-of-clusters solution. The two-cluster solution distribution also corresponds to the theoretical typology regarding schoolchildren's secure and insecure attachment styles.

Table 1. Cluster analysis for teacher-student attachment-like variables.

	TEACHER SELF -RATED ATTACHMENT STYLE				<i>T values</i>
	<i>Secure teacher (N=59)</i>		<i>Insecure teacher (N=62)</i>		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
STSR	55.98	9.12	52.56	9.8	1.98
CLOSENESS					
STSR	19.50	11.09	22.01	10.61	-1.27*
CONFLICT					
STSR	18.20	5.84	19.93	4.91	-1.6
DEPENDENCY					

** $p < 0.05$

The first group (n=59, 48.8%) was labeled secure educator - pupil attachment-like style. The group is characterized by higher levels of perceived closeness, lower levels of conflict and dependency. The second group (n=62, 51.2%) was labeled insecure educator - pupil attachment-like style. The group is characterized by lower levels of perceived closeness, higher levels of conflict and dependency. Conflict is the sole dimension with significant differences.

3.2. Differences between pupils having secure educator -pupil attachment-like style and those having insecure educator -pupil attachment-like style in school adjustment

T-tests analyses, conducted to assess whether pupils having secure attachment-like relationships with their educators and those having insecure attachment-like relationships with their educators differed with regard to their social competencies and learning engagement, as facets of school adjustment, were found to be significant for most of the subscales.

Table 2. T-test for the differences between the secure and the insecure educator -pupil attachment-like style groups in school adjustment variables.

	TEACHER SELF -RATED ATTACHMENT STYLE				T values
	Secure teacher (N=59)		Insecure teacher (N=62)		
	M	SD	M	SD	
PROSOCIAL BEHAVIOR	4.31	.63	3	.92	-9.06***
EMOTIONAL SELF-REGULATION	4.22	.59	2.81	.95	-9.71***
ACADEMIC ABILITIES	4.29	.79	2.68	1.08	-9.29***
SOCIAL COMPETENCE	4.27	.60	2.84	.91	-10.12***
BEHAVIORAL ENGAGEMENT	3.38	.62	2.28	.85	-8.08***
EMOTIONAL ENGAGEMENT	3.50	.65	2.48	.84	-7.48***
RE-ENGAGEMENT	3.45	.43	2.42	.60	-10.75***

*** $p < 0.000$

As shown in Table 2, children with secure attachment-like relationships with their educators showed a higher tendency towards prosocial behaviors, can easier self-regulate, have overall better academic abilities, tend to get involved behaviorally and emotionally, and can as well re-engage after a context where he or she is prone to disengage.

4. Discussion

When attuned and safe together, the educator and the pupil enter a synergy that creates the platform of development for both. The interaction between the teacher, the pupil and the learning task is a continuous dynamic where the task should be built on the teacher's awareness and understanding of the pupil, while the pupil can seek reliable support when challenged by the task. Each relates to the other in a specific way that should fosters curiosity; there is little space for learning, exploring and keeping curious if one is not helped to regulate the emotions uncertainty that can created. Paradoxically, the challenges of 'not knowing' are at the heart of all learning (Geddes 2006), while being in the very safe time the triggers of insecurity. As a stronger and wiser, self- regulated adult, the educator helps the child with the regulation and allows himself to be challenged by the brain that I still forming.

Limitations are not to be ignored especially if one considers generalizing the results; the rather small sample, the fact that there are only female teachers, the fact that educators are the only ones to assess the child and this can create biases are amongst the aspects that need to be properly controlled in a future study expanding the current one. Nevertheless, the combination of the two-explanatory lens, attachment and Dyadic Expansion of Consciousness remains the element of novelty that we believe will encourage researches in other education system to test the relationship as well.

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EVALUATION OF INTELLIGENCE SCORES AMONG STUDENTS FROM MOROCCAN URBAN AREAS

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Abstract

Our study is carried on Moroccan students from urban areas and will be the basis for calculating the full scale intelligence quotient FSIQ which positively predicts school results, for determining the psychometric profiles of the samples participating in this study, by administering the fifteen subtests of the Wechsler Intelligence Scale for Children and Adolescents - 5th Edition WISC V and for comparing the results to the average of the Wechsler tests. We have administered all subtests of WISC V, an individual general intelligence test for children aged between 6 and 16 based on the g-factor since the inception of the first Wechsler test. We ensure that every student participating in this study from the city of Safi has passed all the subtests. The participants are 101 students (59 girls and 42 boys) aged between 12 and 13 years and a few months. The results of the samples who are urban public school students show a median of full scale intelligence quotient, the average value of the verbal comprehension index is higher than the other four indexes of WISC V. In terms of correlations, the results show two types of relationships between the five indexes on the scale.

Keywords: *FSIQ, WISC V, intelligence, students, urban.*

1. Introduction

After a century of test development and theorizing, intelligence test scores remain a strong predictor of academic achievement (Deary, Strand, Smith, & Fernandes, 2007; Rohde & Thompson, 2007; Roth et al., 2015). The intelligence quotient estimates the development of intellectual capacity. However, many researchers have challenged the interpretation of the profiles with the intelligence quotient and have called for analysis at the level only (Glutting et al., 1997, 1988; McDermott et al., 1990; Watkins, 2000). The Wechsler Intelligence Scale for Children and Adolescents has emerged as a downward extension of an adult intelligence test. After the launch of the Wechsler Bellevue Intelligence Scale (WB), a rich history of research and clinical applications undoubtedly contributed to the development of WISC V. This Wechsler test is widely used for children from 6 years to 16 years and 9 months. It generally lasts between 65 and 80 minutes and produces a result reasonably typical of the standard measure of intelligence.

The developers are basing on the g-factor of Spearman, C. (1904). Thus, they stated that they were using the Cattell-Horn-Carroll Theory (CHC), which is a synthesis of earlier theories on the hierarchical structure of human cognitive abilities. The first of these two theories is the Gf-Gc theory (Raymond Cattell, 1941; Horn, 1965), and the second is Carroll's hierarchical stratified mode (1993). The development of education in France is linked to a Binet Simon mental test; several tests over a century to date have been developed to solve school problems. Discovery-based learning researchers tend to focus their research on specific areas such as mathematics/numbers, computer skills, science, problem-solving and physical / motor skills (Alfieri, Brooks, Aldrich and Tenenbaum, 2011).

The objective of our study is to calculate and interpret the full-scale intelligence quotient FSIQ among Moroccan students in the urban environment using the fifth edition of the Wechsler Intelligence Scale for Children and Adolescents. It consists of 15 sub-tests Similarities, vocabulary, information, comprehension, block design, visual puzzles, matrix reasoning, figure weights, arithmetic, digit span, picture span, letter-number sequencing, coding, symbol search and cancellation. The full scale intelligence quotient is calculated by seven primary subtests similarities, vocabulary, block design, matrix reasoning, figure weights, digit span, and coding.

2. Method

2.1. Population and procedure

Access to colleges and primary schools in the city was carried by authorizations of the regional academies of education and training in Safi also the directors of the institutions. We administered all subtests of test by respecting the age order, for each student participates from the Safi city. The participants are 101 students (59 girls and 42 boys) age 12 years and 13 years and some months (mean age 12 years 8 months 27 days standard deviation 00 years 4 months 17 days). We also carried a parental questionnaire about the household income and educational level of parents, grandparents, uncles, and aunts. The samples are students from the middle and primary schools in Safi. We chose students following the proposal of the teachers by agreement of the parents. The administration is according to their availability during the vacations school hours, on the premises of the colleges and schools. The all students are from the urban environment despite the existence of internal Students in the College we did not study its students because of the impact of the urban environment on intellectual development respecting the age order of WISC V.

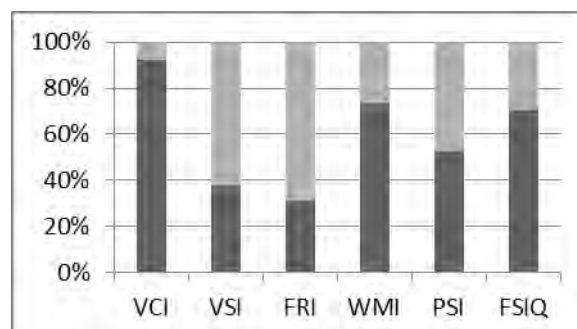
2.2. Instrument

We worked by the French version of the Wechsler intelligence scale for children WISC V, this intelligence test is used to determine whether a cognitive impairment underlies an academic difficulty, or to predict a child's ability to benefit from a special education placement. To achieve these goals, the current French version of WISC (WISC-V) distinguishes five indexes, the verbal comprehension index VCI [similarities, vocabulary, information, comprehension], visuospatial index VSI [block design, visual puzzles], fluid reasoning index FRI [matrix reasoning, figure weights, arithmetic], working memory index WMI [digit span, picture span, letter-number sequencing], and processing speed index psi [coding, symbols search, cancellation]. in addition to full scale intelligence quotient FSIQ, it's calculated by seven subtests on five areas the subtests are similarities, vocabulary, block design, matrix reasoning, figure weights, digit span and coding. also according to this test five additional indexes calculate quantitative reasoning (figure weights and arithmetic), auditory working memory (digit span and letter-number sequencing), non-verbal (block design, visual puzzles, matrix reasoning, figure weights, picture span and coding), general ability (similarities, vocabulary, block design, matrix reasoning and figure weights) and cognitive abilities (digit span, picture span, coding and symbol search). Thus, the calculation of three additional indexes from the complementary subtests the naming speed index, the symbol association index (or associative memory) and the information storage and retrieval index. The WISC V test for children aged 6 to 16 years and 9 months. Usually lasts between 60 and 80 minutes and produces a fairly typical result.

3. Result

The table 1 show the mean values and standard deviations of the five indexes and the full scale intelligence quotient FSIQ of the participants in this test. We find that the two indexes: visuospatial index VSI and fluid reasoning index FRI are slightly lower than the theoretical mean 100, the two indexes: working memory index WMI and processing speed index PSI are above the theoretical average. Only, the verbal comprehension index VCI is slightly above average.

Figure 1. Indexes Scores of urban pupils.



The black in the figure 1 present the percentage of students with index scores greater than or equal to 100 and in grey show the percentage of students with index scores less than 100.

The attracted particular attention the difference between the VCI and the index closest to the WMI is 20 points, or one standard deviation higher. The standard deviation of the two indexes VCI and WMI is different by 6 points. The WMI is different from PSI by 6 points or half a standard deviation. The difference between the PSI and the two indexes the VSI and the FRI is 7 points. Note that the figure combines the percentages of children scoring high and low on the indexes and the FSIQ.

Table 1. M=Mean, SD=Standard Deviation, VCI= Verbal Comprehension Index, VSI = Visuospatial index, FRI= Fluid Reasoning Index, WMI= Working Memory Index, PSI= Processing Speed Index, FSIQ=Full Scale Intelligence Quotient.

	VCI	VSI	FRI	WMI	PSI	FSIQ
M	127,54	94,9	93,67	107,4	101,77	107,87
SD	19,31	10,85	10,94	13,96	15,27	13,67

For the three indexes VCI, WMI, PSI and FSIQ a large percentage of children scored above the theoretical average 100, which is shown in the figure, whereas the percentage of children scored above the theoretical average 100 in the two indexes VSI and FRI does not exceed 40%. Table 2 shows the correlation matrix between the five WISC V indexes administered in the samples.

Table 2. Matrix of correlations between the five WISC V indexes for the children.

	VCI	VSI	FRI	WMI
VSI	0,47			
FRI	0,49	0,59		
WMI	0,38	0,36	0,42	
PSI	0,38	0,33	0,37	0,43

It can be seen that the correlation between the two indexes the FRI and the VSI with a low mean is a strong positive relationship. The other correlations between all five indexes are between strong positive relationship and moderate positive relationship.

The results of the scores of the WISC V psychometric test for Moroccan students are given a Cronbach alpha coefficient of 0.87 in the urban environment. Also, the correlation between the average of the class scores of the two semesters and the FSIQ for the participating students is 0.56. Not to mention that girls scored 108.64 in the FSIQ higher than the 106.79 score obtained by boys. The confirmatory factor analysis to one-factor yielded satisfactory adjustment statistics; RMSEA = .047, CFI = .965 and TLI = .954. Based on the results of the exploratory factor analysis, a one-factor model was tested with the sample. The two- and three-factor models did not yield higher saturation coefficients and communities than the one-factor model.

4. Discussion

The administration of WISC V for Moroccan schoolchildren in urban areas received a very significant Cronbach's coefficient on the administration of the test between students, so the correlation between the full scale intelligence quotient scores and the school year average scores gave a strong positive correlation. Girls scored higher on the FSIQ, which is consistent with the difference in intelligence of gender despite the number of girls participating in this study being more than half of all samples. The level of education attained was also found to be an important social factor in IQ. Gender and education are known contextual variables that predict performance on IQ tests. Test duration was an important factor in our subjects, with several students being treated in two sessions.

The average value of the full scale intelligence quotient is higher than the theoretical average. Clinicians have often argued that intelligence quotient can misrepresent an individual's level of cognitive functioning when differences between component scores are extreme (Kamphaus, 2001; Kaufman, 1994; Prifitera et al., 1998).

For the results of our studies that show a high mean of the verbal comprehension index to the theoretical mean of the samples even for girls and boys, the standard deviation of this index is also high compared to other standard deviations. This index mobilizes the knowledge acquired over the course of

life and is the best indicator of crystallized intelligence, which implies the academic performance of the participants. It can be seen that several students reach 155 in the results of this test, which is identical with the results obtained by high potential students. Most of the parents are educated without a high level of education, so all the samples are educated in the pre-school period.

The working memory index and the processing speed index are higher than the theoretical mean hundred and their standard deviation of both indexes is close to each other. The working memory index is responsible for the learning, which is well shown for the results of the children participating in this study, as well as the percentage of students with above-average scores. And concerning the processing speed index, which means the speed of information processing, the results are satisfactory for this sample of students because a little more than half of them are above one hundred.

The visuospatial index which calculates visual intelligence is below average, for this index the students with low scores could predict difficulties in mathematics at school which shows their academic performance in mathematics. The fluid reasoning index is lower than the mean and the standard deviation is close to the visuospatial index. It is a specific form of fluid intelligence (Gf) which represents the ability to solve new or abstract problems and which also involves some quantitative knowledge.

The mean values of the full scale intelligence quotient for each level for the participants show higher values for the verbal comprehension index VCI compared to the other indexes Gregoire (2009) has also shown the influence that these variables can have on IQ scores and particularly on the verbal comprehension index VCI. On the other hand, proponents of a multifactorial intelligence model assume that there is a variety of cognitive abilities and that useful intelligence tests should measure a variety of abilities rather than a single IQ (e.g., Guilford, 1967; Horn & Cattell, 1967; Thurstone, 1938).

5. Conclusion

Administration of the Wechsler Child and Adolescent Intelligence Scale for the full scale intelligence quotient in urban areas revealed the cognitive profiles of the participants in this study: we found low income per dominant household among the schoolchildren and that their parents and grandparents were illiterate. The full scale intelligence quotient of the participants in this test is on average above the theoretical average. The two indexes visuospatial index IVS and the fluid reasoning index FRI are found to be slightly below the theoretical average and the two indexes working memory WMI and processing speed PSI are above the theoretical average. Only the verbal comprehension index VCI is slightly above average. The results are very significant for the cognitive state need to develop in low scoring students also to look for other types of intelligence to process and to direct students towards specific training.

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COMPARISON OF A BRIEF TRAINING IN SYLLABIC VERSUS PHONEMIC AWARENESS IN KINDERGARTNERS' EMERGENT LITERACY SKILLS

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Abstract

Studies in Reading Cognitive Psychology area refer to phonological awareness as one of the main predictors of literacy. However, there is no scientific consensus about the size of the phonological unit (e.g., rhymes, alliterations, syllables, phonemes) that most contributes to the initial development of reading and writing skills, considering the languages' regularity degree. In view of this, the present work elaborated, applied and verified the effects of two brief training in phonological awareness, one syllabic and the other phonemic, on emerging literacy skills of Brazilian Portuguese speaking preschoolers. The 64 children that took part in this research were enrolled in the last year of Pre-school, from a public educational institution. The research followed an experimental design, which consisted of the pre-test, intervention and post-test stages, with the participation of a control group. In the pre-test and post-test stages, children were assessed through phonological awareness (PA), knowledge of letters (KL), reading and writing words tasks, as well as an intelligence test. After the pre-test, the participants were randomly divided into three groups, seeking to obtain equivalence between them in relation to the results of the pre-test. The intervention took place in 12 sessions, in the school environment, lasting 30 minutes each, twice a week. The Phonemic Group (PG; n = 21) underwent phonemic awareness training; the Syllabic Group (SG; n = 21), to syllabic awareness training and the Control Group (CG; n = 22) participated in storytelling sessions. Interventions with the PG and SG took place in parallel, in small groups (4 to 6 children) and were carried out by the researcher. At the end of the interventions, all participants went through the post-test, performing again the tests applied in the pre-test (except the intelligence test). The results showed that the children who participated in the interventions in the PG and SG had significantly higher performance than the children in the CG ($p < 0.05$) in the PA skills. In the skills of KL and word reading, the differences were marginally significant ($p < 0.10$) and in the case of writing there was no significant difference between the groups. When the intervention groups (PG x SG) are compared, the results point to the PG's superiority in most of the evaluated skills, with high effect sizes, with the exception of writing. Children will be reassessed soon, already in the 1st year of elementary school, in order to follow up the effects of the interventions.

Keywords: *Reading, writing, syllabic awareness, phonemic awareness, emergent literacy.*

1. Introduction

Before starting the formal literacy process, kindergartners can and must develop skills that will be important for reading and writing learning. These are "Emerging Literacy" skills are a set of knowledge, abilities and attitudes that favor the literacy process. Among the emerging literacy skills, knowledge of the alphabet and phonemic awareness stand out (NELP, 2008). Several studies in the area of Cognitive Psychology of Reading refer to phonological awareness, as one of the main predictors of reading and writing (Dehaene, 2012; Snowling & Hulme, 2013). Phonological awareness, defined as the ability to consciously analyze and reflect on the sound structure of oral language (Capovilla & Capovilla, 2004), involves the ability to deliberately isolate, manipulate and combine the phonological units of language (Barrera & Maluf, 2003). Therefore, phonological awareness is a metalinguistic skill, that is, it is linked to the subject's ability to distance himself from the communicative language's use to focus the attention on its linguistic properties (Gombert, 2013).

Although phonological awareness is identified as one of the most important predictors of reading and writing learning, there are controversies about the specific role of different levels of phonological awareness at the beginning of literacy. Some studies suggest that the syllabic units' awareness would be more important for the initial learning of reading and writing (Chetail & Mathey, 2009; Doignon & Zagar, 2006), while other studies claim that the phonemic awareness is the most relevant factor for literacy (Melby-Lervag et al, 2012).

This theoretical controversy, based on several empirical results, is related to the structural differences between languages, which have different spellings, according to the complexity and regularity of the relationship between letters (graphemes) and sounds (phonemes). An orthography is called "shallow" or "transparent" when it has a single written symbol (letter or set of letters) for each phoneme. But, when the relations between graphemes and phonemes are more irregular, it is said that the spelling is "deep" or "opaque" (Seymour, 2013). Brazilian Portuguese is considered a relatively transparent language with a predominance of a simple and prominent syllabic structure. Therefore, researchers have suggested that Portuguese-speaking children may benefit more from the syllable than from the phoneme in the process of learning the written language (Anthony & Francis, 2005; Melo & Correa, 2013). In contrast, there is experimental evidence to suggest that children benefit more from the analysis of phonemes than from syllables, during the literacy process (Cardoso-Martins, Mesquita & Ehri, 2011; Yçadorva et al., 2015). A meta-analysis carried out by Melby-Lervag et al (2012), including 135 studies, sought to identify the relationship between phonological skills (phonemic awareness and rhyme) and children's ability to read words. A higher correlation was found for phonemic awareness and decoding ($r = 0.57$) than for rhyme awareness and decoding ($r = 0.43$). This meta-analysis indicates that the smallest unit of phonological awareness, the phoneme, contributes more strongly to the growth of reading ability in children.

In view of this, although studies have shown that the ability to reflect on speech sounds is closely related to the reading and writing learning, there is no scientific consensus on what is the size of the phonological unit that most contributes to the initial development of these skills for Brazilian children. This study seeks to contribute to clarifying this issue.

2. Method

The experimental design of the research was composed by three phases: pre-test, intervention and post-test with the participation of a control group and aimed to compare the effects of a brief training in phonemic awareness and another in syllabic awareness, on the performances in phonological awareness, knowledge of letters, reading and writing of preschoolers.

The participants were 64 children of both sexes, students from four classes in the last year of Early Childhood Education. At the beginning of the survey, the participants were aged between 59 and 72 months ($M = 64.85$ and $SD = 3.73$). In the pre and post-test phases, children were evaluated using the following instruments: Raven's Progressive Color Matrix Test (Angelini, Alves, Custódio, Duarte & Duarte, 1999) to exclude cognitive deficits suspicious; CONFIAS - Phonological Awareness Test: Sequential Assessment (Moojen et al., 2003); Survey on the knowledge of the Alphabet, and Tasks of reading and writing words (the latter elaborated by the researchers and whose answers were scored according to Ehri's model of phases (2013).

After the pre-test, the participants were distributed in a random and balanced way, in relation to the pre-test assessment, in three groups: Phonemic Group (PG), Syllabic Group (SG) and Control Group (CG). The PG ($n = 21$) underwent phonemic awareness training, the SG ($n = 21$) underwent syllabic awareness training and the CG ($n = 22$) participated in storytelling sessions. The interventions took place in parallel, at different times, in the school environment, with small groups (4 to 6 children) and had 12 sessions of 30 minutes each, twice a week, carried out by the researcher.

The training included the analysis of phonemes (PG) or syllables (SG) and the presentation of the appropriate letters to represent the respective phonological units used in each experimental condition. The intervention activities were developed based on the works of Seabra and Capovilla (2010), Adams (2012) and the experience of the researchers. Activities were carried out to develop phonological awareness through orality, listening and writing. The materials used were images accompanied by their written names, games (e.g. letters and sound bingo), whispers (a kind of toy telephone, which amplifies the spoken sounds) and mirrors. At the end of the interventions, all participants went through the post-test, performing again the tests applied in the pre-test (except the intelligence test). Statistical analyzes were performed to assess the significance of the results obtained.

3. Objectives

- Develop, apply and compare the effects of a brief training in phonemic awareness and another in syllabic awareness for the learning of reading and writing, of Brazilian preschoolers;
- Assess the effects of training in syllabic and phonemic awareness on the phonological awareness skills and letters' knowledge of the participants.

4. Data analysis

Initially, descriptive analyzes were performed in order to summarize the performance of the groups in the different tests at the two moments of the research (pre-test and post-test). The Shapiro-Wilk test was

performed in order to test the normality hypothesis of the data and from the results obtained, parametric or non-parametric statistical analyzes were performed. Variables whose significance level was greater than 0.05 were considered as not rejecting the normality hypothesis. To compare the three groups (PG, SG and CG) in the different phases of the research, the ANOVA statistical test and the Kruskal-Wallis test were used. Then, as a post hoc, to explore possible differences between the groups, the Bonferroni test and the Dunn test were performed. Effect sizes (Cohen's d) were reported and significance levels were previously determined at $p < 0.05$. According to Cohen (1988), the values 0.2, 0.5 and 0.8 are considered small, medium and large effects, respectively. Statistical analyzes were performed using the Statistical Package for Social Sciences, version 17.0, for Windows (SPSS Inc., Chicago, IL).

5. Results

Table 1 describes, for each research group, the maximum and minimum values observed, the mean, median and standard deviation of the variables investigated in the pre-test and post-test: Raven (raw score, syllabic awareness, phonemic awareness, total phonological awareness, letters' knowledge, reading and writing. Table 1 also reports the results of the Shapiro-Wilk test, used to verify the hypothesis of normality of the data.

Table 1. Descriptive data of the dependent variables evaluated in the Pre-test and Post-test of the total sample by group.

		Pre-test						
Group		Raven (raw)	PA Syllable	PA Phoneme	PA Total	Letters	Reading	Writing (error)
PG (n=21)	Min	11	12	2	15	5	0	13
	Máx	24	26	13	39	26	62	83,4
	Average	15,71	17,57	5,52	23,1	20	12,86	35,03
	Median	15	17	5	22	23	8	34,6
	DP	2,96	3,28	2,9	5,71	6,38	18,05	14,06
	Shapiro-Wilk	0,94	0,94	0,89	0,92	0,86	0,7	0,81
	p	0,25	0,25	0,03	0,12	0	0	0
SG (n=21)	Min	10	12	1	23	9	0	16,4
	Máx	22	23	8	42	26	39	66
	Average	15,1	17,48	5	32,57	19,71	10,62	35,75
	Median	14	18	5	32	19	6	36,6
	DP	2,96	3,41	1,94	4,5	5,33	11,72	12,32
	Shapiro-Wilk	0,96	0,93	0,93	0,93	0,91	0,79	0,94
	p	0,63	0,2	0,16	0,17	0,07	0	0,32
CG (n=22)	Min	11	11	1	14	5	0	15,6
	Máx	25	27	8	35	26	47	40,4
	Average	17,05	17,23	4,32	21,55	18	10,73	32,03
	Median	17	17	4	23	19	4	33,8
	DP	3,24	4,89	1,93	6,06	6,73	13,51	6,99
	Shapiro-Wilk	0,95	0,93	0,95	0,92	0,92	0,72	0,86
	p	0,46	0,17	0,43	0,08	0,07	0	0
		Post-test						
Group		PA Syllable	PA Phoneme	PA Total	Letters	Reading	Writing (error)	
PG (n=21)	Min	18	5	23	11	0	3,4	
	Máx	34	19	50	26	66	53,8	
	Average	26,57	11,95	38,24	22,19	27,38	27,72	
	Median	26	12	38	24	23	27,6	
	DP	4,17	4,03	7,5	5,13	23,15	13,66	
	Shapiro-Wilk	0,95	0,93	0,96	0,73	0,86	0,94	
	p	0,41	0,19	0,67	0	0	0,23	
SG (n=21)	Min	18	5	23	11	0	3,4	
	Máx	32	12	42	26	65	46,2	
	Average	24,81	7,76	32,57	20,95	26,33	25	
	Median	24	8	32	22	19	25,8	
	DP	3,2	2,23	4,5	4,79	25,05	10,52	
	Shapiro-Wilk	0,97	0,9	0,98	0,89	0,83	0,94	
	p	0,81	0,03	0,94	0,02	0	0,31	
CG (n=22)	Min	11	2	14	5	0	3,4	
	Máx	29	10	39	26	72	61,6	
	Average	20	5,64	25,64	19,23	15,23	30,09	
	Median	19	6	24,5	20	4,5	32,7	
	DP	5,34	2,36	6,95	5,63	20,88	12,94	
	Shapiro-Wilk	0,96	0,94	0,96	0,9	0,74	0,94	
	p	0,48	0,22	0,51	0,04	0	0,21	

Before the interventions, according to the results of the pre-test, statistical tests were carried out to guarantee the equivalence of the groups. Adopting a significance level of 5% ($p < 0.05$), the tests results (Anova and Kruskal-Wallis) indicated that no significant differences were observed between the Phonemic, Syllabic and Control Groups for any of the skills assessed. However, after the interventions, according to the results of the post-test, the analyzes revealed significant differences for the following skills: syllable PA ($F(2; 61) = 13.21, p < 0.001$), phoneme PA ($X^2 = 24.76, p < 0.001$) and total PA ($F(2; 61) = 20.54, p < 0.001$). Although the analyzes did not show a significant effect for the variables knowledge of letters ($X^2 = 5.12, p = 0.08$) and reading ($X^2 = 5.30, p = 0.07$), the p values were shown close to the stipulated value ($p < 0.05$). It is noteworthy that in the evaluation of writing, no significant differences were found between the groups after the intervention ($F(2; 61) = 0.89, p = 0.41$).

Post hoc tests were performed to explore the differences between the groups and the effect size (Cohen's d) of the observed differences was also calculated.

When compared to the Control Group, Phonemic Group showed a significant difference, favorable to phonemic intervention, for the variables: syllable PA ($p < 0.001, d = 1.37$), phoneme PA ($p < 0.001, d = 1.84$) and total PA ($p < 0.001, d = 1.74$). The comparison between the Syllabic Group and the Control Group also showed significant differences in favor of children who participated in the syllabic intervention for syllable PA ($p = 0.002, d = 1.09$), phoneme PA ($p = 0.030, d = 0.86$) and total PA ($p = 0.002, d = 1.18$). When we compared the Phonemic and Syllabic Groups, the results show that the children who participated in the intervention with phonemes presented significant higher scores for phoneme PA ($p = 0.003, d = 1.20$) and total PA ($p = 0.020, d = 0.92$).

6. Discussion

Data analysis showed that there were no significant differences between groups in the pre-test measures. However, the analysis of the results of the Post-test, which compared the children of the PG, SG and CG after the intervention, revealed significant differences for the following skills: syllable PA, phoneme PA and total PA. Although there were no significant differences in letters' knowledge and reading skills, the raw data obtained and the p values close to the stipulated suggest favorable effects of the interventions for these skills as well. No significant difference was found for writing performance. This may indicate that this skill would be more complex, requiring more time to be developed, showing more significant evolution in the more advanced stages of schooling. Frith (1985) describes in his model of reading and writing learning, possible differences between the strategies used in reading and writing in each postulated phase. Thus, it is possible to assume that the phonological awareness skills developed during the intervention are still not being used adequately to favor the use of phonological writing strategies. On the other hand, the knowledge of letters acquired with the interventions (which proved to be marginally significant) may be supporting the use of more effective reading strategies (higher frequency of partially alphabetical reading responses, according to Ehri, 2013).

Regarding the *post hoc* analysis, the results showed that the PG, when compared to the CG, showed a significant difference, favorable to phonemic intervention, for the variables: syllable PA, phoneme PA and total PA, indicating the effectiveness of the intervention with phonemes to improve the phonological awareness skills of these children. Large effect sizes ($d > 0.8$) are also observed in phonological awareness tasks. The comparison made between SG and CG also showed that the children who participated in the syllabic intervention showed significant differences in favor of the SG for the variables: syllable PA, phoneme PA and total PA. The effect sizes obtained with the syllabic intervention on the PA skills can also be considered large ($d > 0.8$), although slightly smaller than those obtained by the PG compared to the CG. It is important to point out that, although the PG and SG have presented significant differences in relation to the CG only in the case of phonological awareness skills, the results of these groups (PG and SG) were systematically superior to that of the CG in the other evaluated skills: knowledge of letters, reading and writing (Table 1), which also suggests positive effects of phonemic and syllabic interventions for these skills.

When comparing the PG and SG, the results show significant differences in favor of the PG participants for the variables: phoneme PA and total PA, with effect sizes ($d > 0.8$). Although only the skills of phoneme PA and total PA showed statistical significance, the results of the PG were better than those of the SG in all other skills evaluated, except for the results in writing (Table 1). This means that the phoneme intervention was the one that most enhanced the phonological awareness, letter knowledge and reading skills of the children participating in the research. Therefore, the results suggest the superiority of phonemic interventions when compared to syllabic interventions. This result is in line with the study by Ehri (2014), which showed that graphophonemic mapping is more efficient than graphosyllabic mapping at the beginning of reading and writing learning. Studies carried out with Brazilian children also showed that, for Brazilian Portuguese, despite the syllables having a more prominent structure, the teaching of orthographic mapping of phonemes is more effective than the orthographic mapping of syllables at the beginning of literacy (Cardoso-Martins & Batista, 2005; Sargiani & Maluf, 2018).

7. Conclusion

The results obtained so far suggest that the intervention in phonological awareness, especially in phonemic awareness, when performed with preschoolers, can contribute to the development of fundamental skills and knowledge for the initial learning of reading and writing. New data will be collected in the first semester of 2020, when the participants are attending the first year of elementary school. This follow up will allow us to analyze the effects of this intervention in the long term, in order to better specify their possible contributions to reading and writing learning.

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PREDICTIVE VALUE OF LABORATORY PERFORMANCE TO INTERNSHIP COMPETENCIES

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Abstract

As the subject courses Experimental Psychology and Psychological Assessment are focal contributors in the theoretical aspect of the students' performance in the three internship settings in Psychology it is of vital importance to assess the effectiveness of the Psychology Laboratory where the aforementioned courses are being held. The study served as an efficacy evaluation of the department's laboratory. It established the predictive value of the students' laboratory performance on their internship performance. The main source of data came primarily from all the third year Psychology Students who are taking Psychological Assessment, and Experimental Psychology (Internship) and are enrolled for the Second Semester, Academic Year 2018-2019 at World Citi Colleges, Quezon City. Purposive sampling was used in the conduct of study. It involved collection, analysis, and an interpretation of quantitative data extracted from the grade repository of the institution. The data were taken from the grades in Psychological Assessment and Experimental Psychology as well as grades in Practicum in Psychology. The data were subjected to Multiple Regression to test whether the Experimental Psychology grades and the Psychological Assessment grades have the significant predictive value relevant to the Practicum Grades of the psychology students. Findings showed that the Experimental Psychology grades and Psychological Assessment were not statistically significant when it comes to predicting the practicum grades of the students, $F(2, 21) = 2.630, p > 0.05, R^2 = .448$. Neither of the regressors was statistically significant as well when it comes to predicting the practicum grades of the students. This means that the regressors used were not a good fit for the prediction model intended to measure the practicum grades of the students. It can therefore be concluded that the Experimental Psychology and Psychological Assessment grades were not sufficient to forecast the outcome of the Practicum grades of the psychology students in educational, clinical, and industrial settings.

Keywords: *Experimental psychology, psychological assessment, practicum, predictor, multiple regression.*

1. Introduction

Predictive values are used to elucidate the results of a test by studying the exact grouping of individuals based the test. This measure is significant because whether a person is really a case or non-case is challenging to determine, however, what is established is a positive or negative result of a test. The courses which are Experimental Psychology and Psychological Assessment are focal contributors in the theoretical aspect of the students' performance in the three internship settings in Psychology specifically, Clinical, Industrial/Organizational, and Educational. The predictive value of the grades acquired by the students have been examined vis- a vis their grades in the three settings of Practicum/Internship. In so doing, it is therefore imperative to assess the effectiveness of the Psychology Laboratory where the aforesaid courses are being held.

This study focused on how laboratory-assisted academic courses impact on the internship competencies of students in the areas of clinical psychology, industrial-organizational psychology and educational psychology. The desired outcome for the professional curriculum specifies that the department's laboratory should enable students to practice their skills and demonstrate their exit competencies, hence an investigation on the link between laboratory performance and internship performance of students was conducted. The grades of the WCC-QC students Batch 2018 in Psychological Assessment and Experimental Psychology was used to operationally define laboratory performance since both subjects involved extensive use of the psychology laboratory.

Practicum/Internship Competence

The concept of competence has become the driving force in the education and training of professional psychologists. In fact, competence has evolved into increasingly sophisticated forms, now perhaps best represented by the cube model, which integrates foundational, functional, and developmental variables into professional training. One component of professional training is scientific knowledge, and it is argued that knowledge competence should occur before a student is certified as internship ready (Burke & Prieto, 2019).

Most psychology programs require students to complete a practicum or internship to prepare them to work with real patients upon graduation. Supervised, hands-on experiences allow psychology students to better serve their patients and help them to be more successful early on. Internship also benefit their careers by providing them with a network with current professionals who may offer a job upon graduation since most employers offering internships do so with the intention of hiring the intern. Internships offer practical experience for psychology students that help them learn the ins and outs of working in the field, including what it's like to apply theories they learn in class to real people in crisis (psychology.org, 2020)

Not only do psychologists need to understand theory, diagnosis criteria, and treatment options, but they must also know how to build trusting relationships with each client. Because professional interpersonal skills are difficult to teach in a classroom setting, students are given the opportunity to hone them in internships and practicums which help to smooth the transition from school work to a professional role.

This study recognizes the importance of internship and would like to assess how the school resources can more effectively prepare the students for this endeavor. Specifically, this research aimed to find out whether specific laboratory-assisted academic subjects effectively prepare undergraduate psychology students for their internship performance and then, recommend ways on how to improve this connection.

Laboratory Performance

The first experimental psychology laboratory was opened by Wilhelm Wundt at the University of Leipzig in 1879. In the nearly 150 years since, psychologists have been researching human behavior in these controlled settings with great success, garnering much insight into human behavior. But beyond “studying human behavior,” psychology is a widely varied field, so depending on the research under study, psychology labs might have different looks (Online Psychology, 2020). For example, research on cognition and brain functioning may have a psychology lab equipped with a functional MRI machine that allows psychological researchers to measure and record a subject’s brain activities. On the other side of the spectrum may be a psychology lab built to simply observe what the subject or subjects are doing such as those set up with a two-way mirror to observe the playmaking activities of toddlers in a social setting. Many labs have small interview rooms in which a researcher can meet with a subject in a one-on-one setting for things like interviews or for administering a questionnaire or a test of some kind, like an IQ test. There are even virtual psychology labs today where psychology students can engage in learning about classic psychology research, see how to design and carry out experiments, and learn about the science of investigation.

This study underlines how the laboratory for psychology students is an essential part of the curriculum to provide training in the competencies they need for internship and future career performance. In a study by Heesacker and Elimelech (2015), it was emphasized that the undergraduate laboratory training can be a valuable method of enhancing science-practice integration. It was proven that students with extensive science–practice integration experience at the undergraduate level become better thinkers and more careful consumers of information who are able to compete effectively for coveted positions in applied psychology and applied psychological science training programs. Laboratory training emphasis should be on strengthening the students scientifically, on helping them rediscover their own creative intellectual abilities and intrinsic motivations for conducting science, and on teaching them empirically supported methods to enhance their success in achieving their most-valued objectives and goals (Heesacker & Elimelech, 2015).

In this study, the role of the laboratory is highlighted in the correlation of students’ grades in laboratory-assisted subjects with their internship performance ratings in the clinical, educational and industrial settings.

2. Methods

2.1. Research design

The quantitative-correlational research design was used to statistically measure the strength of the relationships between the variables “laboratory performance” and “internship competency”.

Laboratory performance was measured through the students’ numerical grades in laboratory- assisted academic subjects namely Experimental Psychology and Psychological Assessment, while Internship Competency was measured by the students’ internship ratings earned outside school, in the Clinical, Industrial and Educational settings.

2.2. Population and sampling

The researchers targeted sample representative of only the psychology students who took the specified academic subjects required. Purposive Sampling was used. This sampling technique is a non- probability technique that involves the conscious selection by the researcher of certain people to include in a study. Participants are selected because they have particular characteristics that are of interest to the researchers.

2.3. Respondents of the study

The participants of the study are the third year Psychology students of World Citi Colleges, Quezon Citi Campus, Batch 2018, who took Experimental Psychology, Psychological Assessment and Practicum in Psychology (Internship).

2.4. Research instrument

The researchers used the grades of the students on the two psychology laboratory courses and the practicum ratings. Rubrics were used to measure the competencies of the students.

2.5. Data analysis

With the general intention to improve the school undergraduate psychology laboratory, this research aimed to find out whether laboratory use effectively and significantly prepared students for graduate exit competencies

The descriptions were analyzed using the descriptive statistics of frequency, weighted mean and percentage to describe the predictive value of the laboratory performances of the students.

To test for the correlation of the laboratory performances of the students on internship competencies Multiple Regression Analysis was used wherein adjusted R^2 was determined. Inasmuch as the criteria of having two independent variables as the regressor and one dependent variable for the regress were met, among other criteria, this statistical method was then considered.

3. Results and discussion

Based on the analysis made, it was found out that Psychological Assessment course is the most suitable indicator of students’ performance during the Practicum/Internship. This is due to the usage of the Psychology laboratory which familiarized students with the various assessment tools that psychologists use to measure and evaluate as well as observe behavior. It accurately trained students to gauge behavior significantly and arrive at a more realistic diagnosis and guide treatment.

The findings indicated that the Experimental Psychology grades and Psychological Assessment were not statistically significant when it comes to predicting the practicum/internship grades of the students, $F(2, 21) = 2.630, p > 0.05, R^2 = .448$. Neither of the regressors was statistically significant as well when it comes to predicting the practicum grades of the students. This means that the regressors used were not a good fit for the prediction model intended to measure the practicum grades of the students. It can therefore be concluded that the Experimental Psychology and Psychological Assessment grades were not sufficient to forecast the outcome of the Practicum grades of the psychology students.

A psychology laboratory is used for teaching, consultancy and research activities. The psychology laboratories are purposively built rooms that allow psychology students to carry out cognitive and psycho-physiological investigations. The lab usually includes a covert observation room and specified spaces for interview and audiovisual functions. Collecting a wide range of data using laboratory resources give students the opportunity to enhance their psychological methods and analysis as well as experience complex psychological research.

4. Recommendation

Based on this study, there is an emphatic need for the enhancement of the WCC psychology laboratory to provide effective preparation for the undergrad students' professional competencies. Hence, the following recommendations are strongly suggested.

1. A more spacious area should be provided to locate specified adjacent spaces (cubicles) for observation, experiments, testing, group work and related experiential learning.

2. Acquisition and provision for additional laboratory instruments such as computers with data analysis applications and other pertinent psychological tools.

3. Additional psychological testing materials such as cognitive, psychosocial, behavioral and projective assessment tools should be made available for hands-on training and practice.

4. A review and update of the laboratory-assisted academic subject's syllabi content and pedagogy in view of their relevance to the evolved needs and demands of the industry should be conducted.

5. Revise the practicum/internship rating criteria to align with the updated professional competencies required from the students should be considered.

6. Collaborative communication and consultation with the practicum/internship supervisors should be implemented to ensure that objectives are aligned and satisfied.

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YOUR BEST VIRTUAL SELF-IMPROVEMENT. THE USE OF VIRTUAL REALITY IN STRESS MANAGEMENT TRAINING

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Abstract

Virtual reality can be used as a tool for enhancing psychological interventions in organizations, increasing their efficacy and efficiency, thus making psychology more compelling and competitive.

Stress management is a fundamental skill for managers, forced to deal on a daily basis with complex, fast and demanding environments and tasks. Managers are not only entitled to increase company revenues; their psychological well-being and ability to cope with stress reflects directly on workers' psychological health. Organizational psychology developed many techniques in order to help managers deal with stress, especially through specific training activities.

The aim of the present study is to explore the effects of a specific training on stress management, conducted on managers with the aid of a virtual reality device.

A sample of managers was trained in imagining their best possible self, and in using this thought to increase positive future expectancies. This training was conducted in three consequent virtual reality environments. The first environment, a relaxing open space of choice (e.g. a lake side), was used in the opening part of the training, in order to help managers find a relaxed state of mind for thinking about their possible self. The second environment, a happy place (a real place relevant in the manager's life), was used in order to help managers imagine their stress-management skills and understand how to use them in difficult situations. The third environment, a place not yet visited but desired, was used in the closing part of the training for linking the training to a desirable future.

Interviews and questionnaires on the managers' environment and stressors in their job, estimated stress-management skills, and self-efficacy were carried out before and after the training. A follow up interview on the same topics was conducted three weeks after the training. Satisfaction for the training was also investigated.

The data obtained were examined through both qualitative and quantitative analyses. The managers reported a high level of satisfaction for the training, specifically related with the use of virtual environments. The training was perceived as effective in increasing stress-management skills, both just after its completion and after three weeks. The managers felt a higher degree of self-efficacy regarding their ability to cope with stress in complex situations.

Virtual reality is an effective tool not just for improving psychological intervention, but also for making it more appealing. Therefore, it is a technology that should be further studied and introduced in professional practice.

Keywords: *Virtual reality, training, stress-management, organizational well-being, self-improvement.*

1. Introduction

1.1. Stress and health

The current socio-economic context leads to new challenges and opportunities for organizations. The aim of new working practices is to improve quality and productivity (Colombo & Gallego, 2012). Health and well-being have become a key variable in organizational psychology, including behavioral, affective and cognitive components, such as ability, autonomy and positive and negative affectivity. The latter, paired with optimism, is relevant because of its relationships with various constructs related to work, such as job satisfaction, work-related stress, job burnout and work-family conflict (Russell & Daniels, 2018).

1.2. Virtual reality and psychology

Virtual reality (VR) applied to psychology is now enjoying a good reception by scholars and the professional community, especially in the clinical setting for phobias (Botella, Hofman, & Moscovitch, 2004), general stress from chemotherapy (Schneider, Kisby, & Flint, 2011), pain perception (Espinoza et

al., 2012) including burn patients who underwent VR sessions to distract them from pain and anxiety during burn treatment (Eccleston & Crombez, 1999), normally patients who experience severe burns and who undergo physical therapy spend 75% of the duration of the therapy focusing on pain, when the same patients undergoing VR therapy spend only 25% of it (Hoffman et al., 2001), anxiety and depression levels in cancer patients (Chirico et al., 2015) post-traumatic stress disorder (Beidel et al., 2019).

Interventions based on the use of immersive audiovisual technologies have the ability to emotionally engage the person, capture their attention and direct them towards new stimuli (Nichols & Patel 2002; Gamberini et al., 2015). The potential also lies in the fact that these technologies are particularly suitable for situations of poor mobility or attention span. The immersive and interactive virtual environments can be used to expose the patient to stressful situations, exactly like an expositive therapy, but in total safety.

1.3. Virtual reality and stress in organizations

The most advanced systems available also extend their applications to the world of work, with innovative technical features developed specifically for professional use (compared to the widespread use of adapted generalist devices). Some authors have investigated the influence and application of virtual reality in organizations for work well-being. Some of these studies highlight how this technology can be considered a valid tool for relaxation techniques. The outcomes show a decrease of work stress due to immersion in beautiful natural scenarios, body scan, deep breathing and psychoeducation using virtual reality (Anderson, Mayer, Fellows, Cowan, Hegel, & Buckey, 2017). However, the use of virtual reality is very extensive and also embraces the world of training. For example, using programs for stress management has increased in various fields, like the military, whose activities, often complex and stressful, require a high cognitive and emotional effort. The aim is to improve resilience and provide a primary stress prevention. In recent years, several studies have evaluated the effectiveness of these trainings that use VR as a tool for their accomplishment and the results show that this technology allows to reduce the perception of stress and negative affectivity in military personnel (Pallavicini, Argenton, Toniazzi, Aceti, & Mantovani, 2016). Gradual exposure using virtual environments can improve allostasis and develop calmer and resilient behavior (Finseth, Keren, Dorneich, Franke, Anderson, & Shelley, 2018). Another area of intervention refers to training on health and safety in the workplace. The goal is to better understand the potential danger of the job activities and any prevention options. In this area, simulating the working context in a virtual environment and interacting with it allows users to fully immerse themselves and have greater benefits from training. In addition, employees perceive VR training as more efficient, less expensive, more attractive and more optimized than classic training without VR (Janak, Cmorej, Vysocky, Kocisko, & Teliskova, 2016). Furthermore, virtual reality has been used to increase empathy, resilience and the ability to make decisions in moral dilemma situations. Simulating moral dilemma situations in virtual environments helps both understand the actions and behaviors of professionals, and help them through specific training at a later stage (Francis, Gummerum, Ganis, Howard, & Terbeck, 2017).

1.4. The best possible self

The best possible self (BPS) activity, from his outset in 2001, has been the focus of studies which have proven it to be a feasible intervention to enhance optimism, positive affectivity, health and well-being. The BPS intervention can be effective when administered in-person or on-line and repeating the activity appears to enhance efficacy (Meevissen, Peters, & Alberts 2011; Loveday, Lovell, Jones, 2016). Investigating the literature, Loveday et al. (2016), found that BPS represents an extremely effectual intervention. In addition, it is flexible with regards to the delivery method (on-line or face to face) without costs in terms of efficacy. Furthermore, as it is recommended that psychological stress-management interventions should include multiple techniques as rather than a single one (Wang, Smith, Ashley, & Hyland, 2019), the BPS can be recommended as one in a portfolio of interventions and, when used and repeated over time, can lead to a significant increase in well-being, which can persist over time.

2. Method

A group of 9 managers active in the field of public and private services was trained in imagining their best possible self, and in using this thought to increase positive future expectancies. This training was conducted in one session and was divided in three phases, paired with the use of three different virtual reality environments, administered using a dedicated visor.

The first environment, a relaxing open space of choice (e.g. a lake side), was used in the opening part of the training, in order to help managers find a relaxed state of mind for thinking about their possible self. The second environment, a happy place of choice (a real place relevant in the manager's life), was used in order to help managers imagine their stress-management skills and understand how to use them in difficult situations. Examples of environments used in this phase: managers' home, managers' company

building, airport. The third environment, a place not yet visited but desired, was used in the closing part of the training for linking the training to a desirable future. Examples of environments used in this phase: Times' Square in New York, Beach in Maldives, Petra's ruins.

The first environment was embedded in the virtual reality system, the two real places of managers' choice were found using a function of the VR kit named "teleporting", which is linked to Google Street View.

The study was conducted in 4 steps:

1) Interview on manager's thoughts about stress and on their stress management skills (e.g. try to describe a stressful situation typical of your job through an image or a metaphor; How much do you feel able to manage this stress?; Critical Incident Technique) and questionnaire about their perceived levels of stress and stress management skills with answers on a scale from 1 to 10. The managers were also asked to locate a place that they perceived as happy for themselves as well as a place they wished to visit.

2) Application of a 55 minutes training based on the Best Possible Self technique and the exposure to the three consequential virtual environments aimed at facilitating the progression of thoughts from the different possible selves to the best possible self.

3) Interview on satisfaction for the training (e.g. How satisfied are you with the training just received? What is the aspect of VR training that you appreciate most? How much do you think the training received can help you learn to manage stress?).

4) Telephone follow-up interview on one's perception of stress management skills (e.g. In the period of time that has passed, how much did you feel able to manage stress?) and satisfaction for the training.

Qualitative content analysis was applied to the interviews, and relevant sentences were isolated in order to create a set of phrases that could be useful to understand the different thoughts of the participants on the topics object of investigation.

Mean and standard deviation of the answers to the questionnaires have been recorded due to the size of the sample.

3. Results

3.1. Pre-training interview and questionnaire

Managers pictured stress as a strong concern for their health and for their activities, describing it as "fear of running out of power and losing control"; "path on the ash, where the sun shines very rarely, but above all a path in which you travel alone", "entering a cloud and not seeing the horizon, as in the mountains in bad weather", an "assembly line and a boulder that sits right on your chest", a "responsibility", a "green lawn with people waiting for something to happen [...] but they just wait, as if they lacked the assumption of responsibility". 7 out of 9 managers expressed a seriously worried attitude towards stress.

The participants also described their stress management tools: Management of emotions, "using adequate, controlled language and tones of voice"; "Try to convey my calmness to the other"; taking "a point of view unrelated to mine, so that I can see myself from outside, as if I were looking at my behavior through the collaborator's eyes"; "High rate of creativity. We must always find innovative, non-mechanical solutions. I also use a lot the sharing with the collaborators of the processes that lead me to make the final decision; without of course this meaning sharing responsibility"; "Go into detail: what's the problem? Why did the process stop, why didn't that particular answer come? I often use my authority, but very little my authority". The whole group of managers expressed the perception of having a certain degree of skill in managing stress, 7 out of 9 of them wanted to improve their skills and abilities in this area.

The perceived organizational stress and stress management capabilities, investigated through a questionnaire are summarized in Table 1.

Table 1. Perceived organizational stress and stress management capabilities.

	Mean	SD
<i>In stressful situations, on a scale of 1 to 10, how much do you feel capable of handling this stress?</i>	7.00	1.79
<i>How good you perceive your stress-management skills are?</i>	7.40	1.40

3.2. Post-training interview and questionnaire

Participants described the perceived relevance for organizations of the training they received: "I think it is useful for companies, but always accompanied by a professional, for example by combining it with an interview, as on this occasion. This is because the interview helped me to focus on some aspects of my management skills and habits that otherwise I would not have brought to awareness";

“Undoubtedly a useful tool, but I would combine it with something else. For example, first I would understand the levels of stress and the problems that the worker is facing”; “It seems to me especially useful for involving, attracting and starting people to carry out these practices”; “It is especially useful for bringing people together. I, for example, traditionally would not do relaxation exercises; with this tool yes”; “It can help you experiment with new ways of concentration, even with yourself, which is useful for people with particular relaxation difficulties”; “I would see it useful in a perspective of enhancement. The important thing is to explicitly link this activity to the resulting benefit”; “I think that with a little training these techniques can also help increase performance”; “I would recommend it especially for the most critical areas, after having investigated and recognized them as such. It can also be an experiment that starts from the small one and then involves the whole organization in cascade”; “I would use it for non-top managers, such as middle managers, but not for the top roles. Practically for the figures who experience the most interpersonal stress. Also, because usually these figures are a target that for age, education and history could be more intrigued”.

The satisfaction for the training and its usefulness, investigated through a questionnaire are summarized in Table 2.

Table 2. Satisfaction for the training and its usefulness.

	Mean	SD
On a scale of 1 to 10, how satisfied are you with the training just received?	8.80	.90
How much do you think the training you received can help you learn to manage stress?	8.10	1.28

3.3. Follow up interview

In the telephone interview conducted two weeks after the training, managers declare to have maintained the levels of efficacy perceived at the end of the training. “I feel like I’ve learnt techniques that are here to stay”; “I found myself thinking often to what I’ve learnt and how to apply it everyday”; “It happened to me to find myself applying the thoughts of the training”; “Whenever I start being less positive about myself or the future, I go back to the training and the feeling starts changing”. They also declared a perception of better stress management skills. “The exercise helped me managing my stress levels”; “Thinking about my best possible self helps me finding focus and peace when things are quite stressful”.

4. Discussion

The study shows how a training based on the Best Possible Self technique paired with the exposure to virtual reality can be a useful tool for enhancing optimism and helping workers in managing stress. While literature is strong in the effectiveness of traditional training, the pairing between it and virtual reality is a new development that can have a widespread diffusion. The effects of virtual reality in enhancing the effects of training, as well as counseling and intervention, are to be expected in the Best Possible Self based training as well. The group of managers that took part to this exploratory study expressed many thoughts that are useful for directing further studies as well as for understanding more deeply the feelings that the use of VR causes while paired to traditional training.

Limits: The study is preliminary and exploratory. There is need of investigating bigger sample, of using control groups, and to apply deeper quantitative analyses on bigger data sets in order to obtain generalizable results. A vaster range of different virtual environments tested is also needed.

Innovation: The use of VR, with its intrinsic innovative technical characteristics, stands promisingly among the applications of psychology in the organizational context. It will allow: Greater effectiveness in interventions, greater penetration and engagement, increased possibilities for professional action. There is the need of developing more VR based intervention protocols as well as methodologies for studying their effectiveness as well as their likeability and attractiveness within working environments.

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INFORMATION AND TRANSIT SPACES AS THE MAIN CHALLENGES OF THE MODERN WORLD

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Abstract

Space and time in the modern world are changing rapidly. These changes affect people's lives in several temporal and spatial dimensions. In recent decades, a new sphere has emerged, the sphere of virtuality, which a person constructs himself and for himself. We can say that for modernity - both real and virtual, the continuity of the process of changes that occur simultaneously in the network and in reality, and always with an uncertain outcome is typical. Phenomenologically, one can speak about many similar features uniting real and virtual spaces. The objective space and the life time of people in the transitive world are connected with the subjective construct of space and time that a person constructs in the virtual world. We can also assume the similarity of different types of transitivity (crisis and fluid) with different types of work in virtuality (on-line and off-line). Therefore, it is important to understand the styles of behavior, the emotions of people in a situation of different changes, different types of transitivity and different types of Internet communication.

These questions became the base of the empirical study which was carried out in 2018-2019 years and consisted of two stages. The study involved young people (N = 140, age 18-21), students of Moscow universities. They were asked to answer questions of the K. Riff method "Scale of psychological well-being" in different versions - on-line and off-line. After that, they were offered two series of stimuli - words related to positive and negative events occurring in the real and virtual world with the fixation of RAG. The obtained results showed that in general in the on-line situation the overall level of psychological well-being is lower than in an off-line situation. It is disturbingly, that self-acceptance is higher off the net. That is, the constant "transparency" of communication and the openness of one's life to others, possibly stimulate personal development, but reduce self-esteem and self-acceptance. The incapacity to manage the environment, including positive contacts with others, the inability to quickly navigate information and the harshness of the situation negatively affect attitude to one-self, reducing self-esteem and intention to self-development, which generally reduces the subjective feeling of emotional comfort and well-being. The similarities in the profiles obtained by presenting positive and negative words showed the similarity in emotional responses to crisis situations in the real and virtual world. In this case, a steady increase in excitation from stimulus to stimulus occurs. Thus, we can say that the constant situation on-line becomes a difficult life situation for many young people. The phubbing and "transparency" of the network most negatively affects people who assess the situation as rigid transitivity.

Keywords: *Virtual, transitive space, emotional well-being.*

1. Introduction

The space and time in the modern world are rapidly changing. These changes affect people's lives in several temporal and spatial dimensions. Life passes in parallel in the social (objective) and personal (subjective) space and time. In recent decades, a new sphere has emerged, covering precisely personal space and time, the sphere of virtuality, which a person builds himself and for him-self. The appearance of a virtual parameter gives greater freedom for self-realization and, at the same time, enhances disharmony of different spheres of life. We can say that modernity, both real and virtual, is characterized by the continuity of changes that occur in parallel in the network and in reality, and always with an uncertain outcome. At the same time, many options and contexts, many possible choices feed the transitivity, which is constantly changing from fluid, to crisis and vice versa.

Currently, the influence of transitivity is increasing significantly, affecting all areas of everyday life. The role of the information space is also growing because information sets not only the trajectory of socialization, but also patterns of behavior, identification standards for a large group of people (Barker, Bornstein, 2010; Chan Hoong, Soon, 2011). The fact that broadcast media samples are constantly changing in accordance with the variability and multiplicity of social contexts of the environment helps people, especially children and adolescents, to cope with uncertainty (DePaulo, Morris, 2005). Changing and therefore remaining relevant information enables people to preserve themselves, their individuality and integrity in the ever-changing circumstances of everyday life (Grishina, 2017; Borkenau, Mauer, 2006).

The connection between network and transitive spaces appears, first of all, in the uncertainty and multiplicity of contexts, groups, languages, and variants of identity. The uncertainty of these spaces is closely related to variability. The criteria by which people evaluate and present themselves to others are constantly changing. It's "likes" and reposts, social status or the number of citations (h-index). At the same time, the number of socialization groups is an important indicator both in a transitive real society and in a networked, virtual space.

It is possible to distinguish two interconnected phases - hard, crisis and fluid, soft transitivity. But uncertainty, multiplicity and variability remain dominants of the general direction of development of society, changing the degree of their cardinality (Martsinkovskaya, 2018, 2019; Astrid, Bernd, Machilek, 2006).

From a psychological point of view, we can say that crisis hard transitivity is a specific shock situation for people, with high demands on their vitality and emotional stability. But psychologically, fluid transitivity becomes much more severe. Changes occur, varying lives, values, communication, information streams and the technological environment of people. And the confidence is arising that these changes are inevitable and unstoppable (Osman, 2018).

In recent years, the phases of crisis and fluid transitivity coexist with each other, and, most importantly, their relationship is closely connected with the information flow. At the same time, constant inclusion in the information flow reduces uncertainty, making variability a familiar component of the world. Therefore, the new generation connects the real and network spaces into a single whole, which actualizes the problem of studying the determinations of mental development simultaneously in two spaces.

Along with different types of transitivity, we can talk about different forms of virtuality - on-line and off-line. We can also see the relationship between crisis and on-line situations. These situations are similar because in both cases it is difficult to change something and a quick reaction to the situation is needed. There is also a certain similarity between fluid transitivity and off-line in virtual space. Here you can slightly change the reaction, evaluation, standards. Therefore, these situations are reversible within certain limits.

Therefore, it is important to understand the styles of behavior, the emotions of people in a situation of different changes, different types of transitivity and different types of Internet communication.

2. Problem

Theoretical and empirical works show that the emergence of a new technological space, the Internet, social networks and gadgets poses several questions that are closely related to each other and with an analysis of the impact of information socialization on the mental development and emotional well-being of children, adolescents and youth. At the same time, the question arises of how on-line and off-line options for using gadgets affect the psychological well-being of young people and what factors help to overcome the psychological, emotional discomfort and tension associated with the constant positioning of young people simultaneously in network and real spaces.

3. Design, methods, study participants

Based on the posed questions, an empirical study was carried out. The study involved young people (N = 140, age 18-21), students of Moscow universities. At the first stage, students were asked to answer questions of the C.D. Riff "Scale of psychological well-being" in different versions - on-line and off-line (Lepeshinskiy, 2007). After that, they were offered two series of stimuli - words related to positive and negative events occurring in the real and virtual world with the fixation of RAG.

All study participants were aware of its objectives and agreed to participate in the work.

4. Results

At the first stage, when students were asked to answer the C.D. Riff scale questions, the on-line option was proposed, and after three days the off-line option. Thus, re-testing was carried out in an obviously more favorable variant for the participants. The answers are presented in table 1.

Table 1.

Scales						
Positive relations	Environmental management	Self-acceptance	Personal growth	Autonomy	Life goals	Overall level of psychological well-being
67	64	58	64	52	68	373
58	56	64	59	58	60	365
66	51	63	63	50	65	358
65	66	57	60	59	63	370

The results of the correlation analysis of the components of psychological well-being by groups according to the Spearman criterion showed statistically significant differences on the scales: “Positive relations” ($p = 0.042$), “Environmental management” ($p = 0.001$), “Self-acceptance” ($p = 0.016$), “Psychological well-being” ($P = 0,038$), “Life goals” ($p = 0,015$).

At the second stage, the general background of the skin-galvanic reaction was measured, and then stimulus blocks of words were presented with a break of 2 seconds between words and 5 seconds between blocks. In total, five blocks of stimulus words were used: positive; neutral; negative; transitive; virtual. Blocks were formed on the basis of the most frequent assessment of the word as bearing the positive / neutral / negative meaning by the expert group of psychologists.

Processing of the obtained data was carried out using the statistical software package STATISTICA 12.0.

It can be seen a decrease in activity upon presentation of positive stimuli compared to recording the background activity. When neutral stimuli are presented, the activity is equal to the initial background. A noticeable surge in RAG activity is observed upon presentation of negative stimuli and increases significantly upon presentation of special blocks reflecting network and real transitivity. As expected, negatively charged stimuli cause a more emotionally vivid reaction than positive ones.

It can be seen that obtained data is equal both in the left and right channels (see figure 1 and 2).

Figure 1. Data from the left channel.

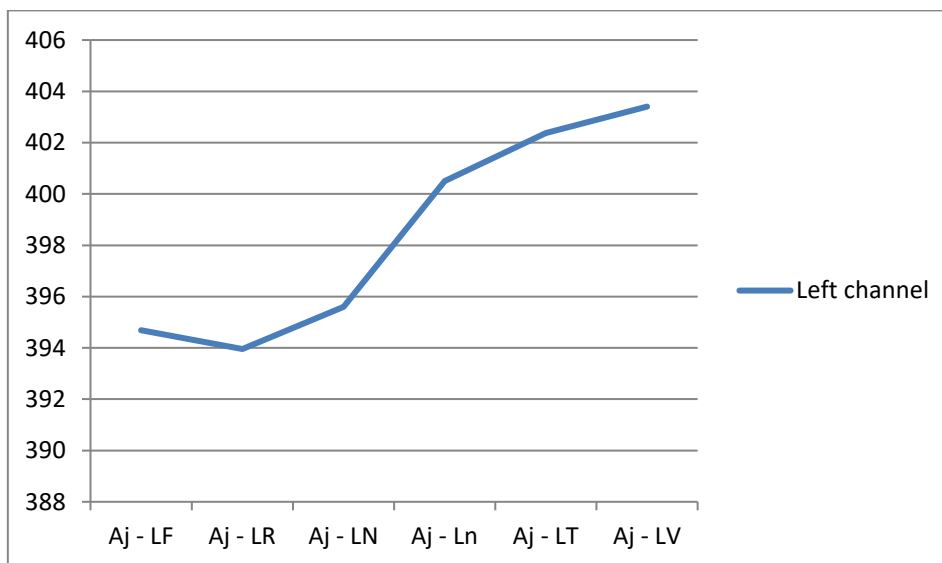
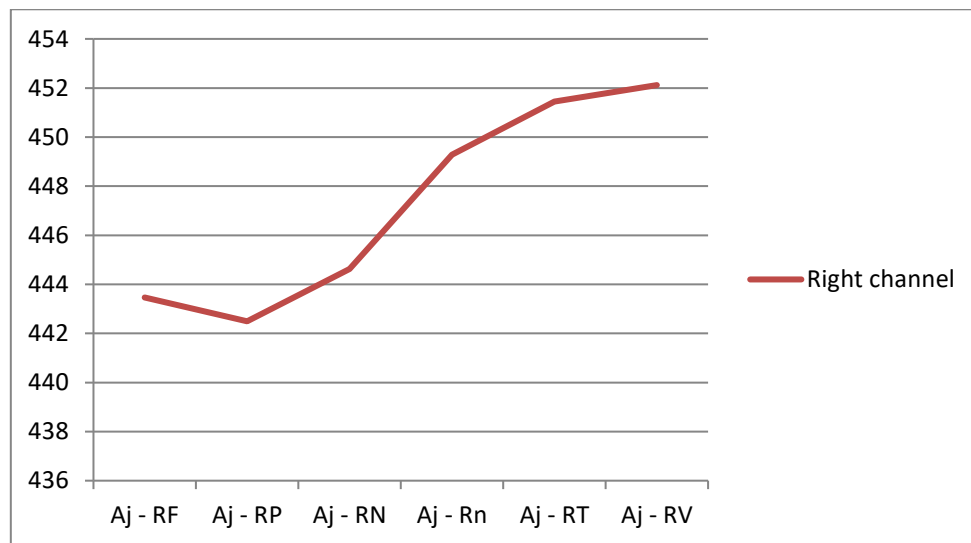


Figure 2. Data from the right channel.



5. Discussion

We can see that in the on-line situation the overall level of psychological well-being is slightly higher than in the off-line situation. Of particular interest are indicators on separate scales. In the on-line situation are higher indicators: Environmental management; Personal growth; Positive relationship; Life goals. Considering that a permanent stay in the network is a common situation for most students, these data show that the online situation stimulates their desire for personal growth and self-realization, as well as to establish empathic relationships with others.

As can be predicted in offline situation the level of autonomy is higher. However, it is troubling that self-acceptance is also higher outside the network. That is, the constant “transparency” of communication and the openness to others, possibly stimulates personal development, but reduces self-esteem and self-acceptance.

Based on this, we can conclude that for young people on-line is a familiar, natural environment in which they are constantly open to new experiences and can evaluate their actions with others. Therefore, such “transparency” is somewhat annoying for users. No less interesting is the analysis of differences in the responses assessing the “environmental management” parameter. If in the first variant they must manage situation quickly, since it can radically change, then in the second, on the contrary, the focus on the long-term fixation of changes that do not need to be forced becomes obvious.

Apparently, the situation of constant changes exhausts some students and leads to a decrease in the indicators Environmental Management and Life goals. Thus, we can assume that the situation of transitivity in the network and in reality, becomes a difficult life situation, reducing subjective well-being.

The data of the skin-galvanic reaction confirmed a positive reaction to the words of the network transitivity block as reflecting the daily activity of students. Young people noted that in the network space they not only chat with friends, but also find very quickly the necessary information. Words reflecting the transitivity of time-space also caused a high skin-galvanic reaction. This reaction was caused by the individual attitude of students to the words of the block, which are important for them.

6. Conclusion

The incapacity to manage the environment, including positive contacts with others, the inability to quickly navigate information and the harshness of the situation negatively affect attitude to one-self, reducing self-esteem and intention to self-development, which generally reduces the subjective feeling of emotional comfort and well-being.

The similarities in the profiles obtained by presenting positive and negative words showed the similarity in emotional responses to crisis situations in the real and virtual world. In this case, a steady increase in excitation from stimulus to stimulus occurs. Thus, we can say that the constant situation on-line becomes a difficult life situation for many young people.

The phubbing and “transparency” of the network most negatively affects people who assess the situation as rigid transitivity.

The mixture of network and real situations is constant for most students. This becomes the reason for the close connection of the virtual and transitive worlds.

The problems arising from the active spread of the digital information space are associated not only with difficulties in the intergenerational transmission, but also with the fact that the constant on-line situation, phubbing and “transparency” of the network become a difficult life situation for many young people.

The prospects associated with the expansion of digital information socialization, in many respects become the flip side of the problems. Expanding the world-image, obtaining new experience leads to the development of intellectual and social activity and helps to understand the world. This fact reduces the fear of uncertainty and increase the willingness to change.

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POSITIVE MOTHERHOOD AT WORK: THE ROLE OF SUPERVISOR SUPPORT IN RETURN TO WORK AFTER MATERNITY LEAVE

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Abstract

Cognitive factors can strongly influence mothers' well-being. Maternal beliefs about societal expectations, role identity, maternal confidence, and concern about being a good or bad parent threaten maternal well-being, especially if these beliefs are irrational, inflexible, and strict. Moreover, they can negatively influence the critical time of returning to work after maternity leave. As stated by the conservation of resources theory, people may become more irrational when their resources are exhausted, with detrimental effects on individual well-being. To protect and enhance well-being, working mothers should draw upon additional resources, including their organizational contexts. In this regard, a key figure is the supervisor, whose positive behaviours and stable support can improve working mothers' well-being and facilitate their effective return to work after maternity leave.

This study aims at examining the relation between the rigidity of maternal beliefs and well-being (namely, general health, job satisfaction, and job performance), hypothesizing the mediation effect of perceived supervisor support during return to work after maternity leave.

The Rigidity of Maternal Beliefs Scale, the measure for Supervisors to Support Return to Work, and the General Health Questionnaire were used together with a two-item measure for examining job performance and a single-item measure for measuring job satisfaction.

The questionnaire was completed by 216 mothers. We tested the hypotheses by means of structural equation models with latent variables, using the Lisrel 8.80 software.

Findings show that rigidity of maternal beliefs is associated with perceived supervisor support during return to work, which, in turn, is associated with working mothers' general health, job satisfaction, and job performance. Consequently, perceived supervisor support during return to work totally mediates the relations between the rigidity of maternal beliefs and the outcomes considered.

Results underline the centrality of supervisor perceived negative behaviors in sustaining working mothers after the long-term leave, when irrational beliefs regarding motherhood threaten their well-being.

Practical implications for HR management are discussed.

Keywords: *Return to work, working mothers, irrational beliefs, supervisor support, well-being.*

1. Introduction

New mothers form beliefs about the maternal role on both personal and contextual factors. Social and cultural norms often present maternity as associated with a sort of perfectionism. Also thanks to the contribution of mass media and families, motherhood tends to become an ideology, a stereotype, a set of unrealistic expectations that women have to confront themselves with. Women focus on what society believes good mothers should do, how happy they should be of being parents, how intensive their caregiving should be. If these cognitive factors associated with motherhood become inflexible, they negatively affect mothers' psychological well-being (Smith et al., 2019; Thomason, Flynn, Himle, & Volling, 2015), in the same way as any other form of perfectionism and irrational beliefs does (Girardi, Falco, De Carlo, Dal Corso, & Benevene, 2018).

Irrational beliefs also depend on the resources available. As noted by the conservation of resources (COR) theory (Hobfoll, 1989), the fewer resources an individual has at his/her disposal, the more irrational he/she becomes (Hobfoll, Halbesleben, Neveu, & Westman, 2018). COR theory claims that people are motivated to gain, maintain, and protect their resources. Resources are "objects, personal characteristics, conditions, or energies that are valued by the individual or that serve as a means for

attainment” (Hobfoll, 1989, p. 516). When resources are threatened, lost, or inadequate in relation to the investments made, people experience stress. Loss of resources threatens individual well-being. Moreover, the primacy of loss principle states that the loss of resources carries more weight than their gain: it not only has a stronger impact on the individual, but it also affects him/her more quickly (Hobfoll et al., 2018). In order to protect against loss of resources, working mothers should try to acquire additional resources.

The work environment can be a valuable and significant source from which to draw new resources. In particular, supervisors – individuals in charge of a team who are responsible for tasks and towards other people’s (De Carlo, Dal Corso, Falco, Girardi, & Piccirelli, 2016) – play a crucial role in affecting employees’ well-being (Deshpande & Gupta, in press; He, Morrison, & Zhang, 2019; Ng, 2017). They can influence work-related stress levels in various ways: by causing – or preventing – stress through their behaviours, by influencing the impact of work environment, and by supporting the implementation of training activities (Donaldson-Feilder, Yarker, & Lewis, 2011). Moreover, they influence employees’ performance (De Carlo et al., 2016; Rana and Javed, 2019) and job satisfaction (Byza, Dörr, Schuh, & Maier, 2019; Gahlawat, Phogat, & Kundu, 2019). Examples of supervisors’ supportive behaviours in the return to work process are: communicating regularly with returning employees, discussing the possible changes to their tasks, encouraging collaboration and sense of community within the team, managing emotions, being personally accessible and empathetic, and recognizing employees’ contributions to organizational objectives (Munir, Yarker, Hicks, & Donaldson-Feilder, 2012). Supervisors’ behaviours have significant practical implications: behaviours are observable and adjustable, and organizations could design interventions to improve supervisors’ skills in promoting well-being. We focus on unsupportive supervisors’ behaviours for their relevance in affecting employees’ well-being, as stated by the above-mentioned primacy of loss principle.

The study aims at examining the relationship between rigidity of maternal beliefs and well-being in working mothers who have returned to work after maternity leave. In particular, drawing from COR theory, we hypothesize that rigidity of maternal beliefs is positively associated with psychological distress and negatively associated with performance and job satisfaction. Furthermore, we hypothesize that all these relationships are mediated by unsupportive supervisor behaviours during return to work.

2. Methods

2.1. Participants and procedure

The questionnaire was completed by 216 Italian working mothers. Most of the participants were between 31 and 40 years old (61.5%), 26.8% were over 40, 11.7% were up to 30. The levels of education considered are university degree (66.8%), high school diploma (26.4%), middle school diploma (3.4%), and other (3.4%). 83.8% were employees, 11% were self-employed workers, 2.9% were unemployed, 2.4% other. 84.7% of participants had an open-ended contract, 11.6% a fixed-term contract, and 3.7% other types of contracts. 51.8% of working mothers worked part-time. All participants gave their written informed consent before the administration of the questionnaire, in accordance with the Declaration of Helsinki. The study was carried out under the AIP (Associazione Italiana di Psicologia – Italian Association of Psychology) regulations, according to which there was no need for previous ethics approval, because it would not deal with animals or vulnerable groups, would not involve any risk to the participants’ well-being, use biomedical devices, or invasive investigation tools. Our study was conducted following the recommendations of the Ethic Committee of Psychology Research of the University of Padua.

2.2. Measure

Rigidity of maternal beliefs was assessed with 24 items (Thomason et al., 2015). The scale measured four dimensions: perceptions and societal expectations of mothers (e.g. “I should not feel frustrated with my baby when my baby is difficult”), role identity (e.g. “I would feel guilty if I did not enjoy being a mother”), maternal confidence (e.g. “I feel confident in my ability to raise a happy and healthy baby”), maternal dichotomy (e.g. “If my baby does not sleep well, it is a sign that I am not doing a good job as a mother”). The 7-point response scale ranged from 1 (strongly disagree) to 7 (strongly agree). The Cronbach’s alpha for the scale is .76.

Measure for Supervisors to Support Return to Work – Negative Behaviours were assessed through 5 items (Munir et al., 2012), such as “My supervisor lost patience with me when things became difficult”. The items were rated on a 5-point Likert scale (1 = strongly disagree; 5 = strongly agree). The Cronbach’s alpha for the scale is .82.

Psychological distress was measured through the Italian version of the General Health Questionnaire-12 (Fraccaroli, Depolo, & Sarchielli, 1991). A sample item is “I lost much sleep over

worry". The items were rated on a 4-point scale (0 = not at all; 3 = much more/less than usual). The Cronbach's alpha for the scale is .88.

Performance was assessed with two items rated on a 10-point Likert scale (from 10% to 100%). Specifically, participants were asked to evaluate their performance and rate the work objectives achieved in the previous year. A sample item is: "We would kindly ask you to specify, using a percentage, how successful you were in achieving your work goals last year". The Cronbach's alpha for the scale is .73.

Job satisfaction was assessed by asking "How satisfied are you with your working life?". The item was taken from the Qu-Bo test (De Carlo et al., 2008-2011) and was on a 6-point Likert scale (1 = very dissatisfied; 6 = very satisfied).

2.3. Statistical analyses

We tested the hypotheses by means of structural equation models (SEM) with latent variables, using the Lisrel 8.80 software (Jöreskog, & Sörbom, 2006).

We assessed the model fit, starting with the chi-square test (χ^2). A model shows a good fit to the data if χ^2 is non-significant. Given that χ^2 is sensitive to sample size, we considered additional fit indices, in particular the normed fit index (NFI), the standardized root mean residual (SRMR), and the root mean square error of approximation (RMSEA). Values close to or greater than .90 for NFI, values close to or smaller than .10 for SRMR, and values close to or smaller than .08 for RMSEA indicate an acceptable fit (Schermelleh-Engel, Moosbrugger, & Müller, 2003).

We considered 95% asymmetric confidence intervals based on the distribution of the multiplication term, to verify the significance of the indirect effects. The purpose was to manage the non-normality derived from the *path a * path b* multiplication, as recommended by MacKinnon's procedure (PRODCLIN; MacKinnon, Fritz, Williams, & Lockwood, 2007). If the confidence interval does not contain zero, the indirect effect is significant (MacKinnon, Cheong, & Pirlott, 2012).

Before testing the model, we excluded participants with missing values. Therefore, the final sample consisted of 188 participants.

3. Results

Table 1 presents means, standard deviations, and correlations. The latter provide initial evidence that all variables may be positively associated to each other.

We estimated the hypothesized structural model that shows a good fit to the data, considering $\chi^2(3) = 4.64, p = .20$; NFI = .95; SRMR = .04; RMSEA = .05 (*Figure 1*). In the model, rigidity of maternal beliefs is positively associated with supervisor negative behaviours in return to work ($\gamma = .16, p < .05$). Furthermore, supervisor negative behaviours in return to work are positively associated with psychological distress ($\beta = .30, p < .001$) and negatively associated with performance ($\beta = -.22, p < .001$) and job satisfaction ($\beta = -.31, p < .001$). We then verified the significance of the indirect effects. The asymmetric confidence intervals for the relationships between rigidity of maternal beliefs and the outcomes, through supervisor negative behaviours in return to work, do not contain zero. Consequently, the mediation effects are significant. In particular, the unconventional estimate is 0.89, 95% CI [.05877, 1.68523] for the relationship between rigidity of maternal beliefs and psychological distress. The unconventional estimate is -.92, 95% CI [-2.35323, -.01018] for the relationship between rigidity of maternal beliefs and performance. The unconventional estimate is -.08, 95% CI [-.17451, -.00946] for the relationship between rigidity of maternal beliefs and job satisfaction. Given that direct relationships between rigidity of maternal beliefs and psychological distress, performance, and job satisfaction are not significant, we conclude that supervisor negative behaviours in return to work totally mediate the relationship between rigidity of maternal beliefs and the outcomes.

4. Discussion

The study aims at examining the relationship between rigidity of maternal beliefs and well-being (namely, psychological distress, performance, and job satisfaction), hypothesizing the mediation effect of perceived supervisor support during return to work after maternity leave.

Perceptions of societal expectations of mothers (do their beliefs reflect the societal and cultural pressure on women as mothers?), role identity (what are their perceived expectations regarding the maternal role?), maternal confidence (do they feel confident that they can manage maternal responsibilities?), and maternal dichotomy (are they good or bad mothers?) are maternal beliefs that, if rigid, may decrease working mothers' well-being.

Our results highlight the importance of the perception of supervisor supportive behaviours in return to work after maternity leave. Rigid maternal beliefs increase psychological distress and decrease

performance and job satisfaction, but these effects are due to the mediation of supervisor negative behaviours. Supervisor behaviours in return to work totally mediate the relationships between rigidity of maternal beliefs and well-being. The supervisor behaviours considered are all negative (e.g. losing patience, displaying aggressive reactions, going against mothers' requests for adjustment) because of the salience of these conducts. Therefore, supervisor behaviours connect working mothers' irrational beliefs about maternity on the one hand, and vocational (performance and job satisfaction) and non-vocational (psychological distress) outcomes on the other. Our results confirm the central role of supervisors, whose behaviours are the key to work-related stress or organizational well-being. The practical fallout is that a supervisor who seeks to limit negative behaviours can as a consequence increase working mothers' well-being as well, at the same time limiting the negative effects of the rigidity of maternal beliefs.

Based on our results, training activities would be advisable to strengthen both the personal resources that working mothers use when returning to work and the skills that supervisors and HR managers should apply in supporting the returned employees. The interventions directed to working mothers may focus on resilience, self-efficacy, and negotiation skills (Dal Corso, De Carlo, Carluccio, Girardi, & Falco, 2019). Trainings for supervisors and HR managers may comprise time and emotion management, communication and positive managerial skills. HR managers should consider setting up external psychological counselling services for both working mothers and supervisors: the former may turn their rigid beliefs into more flexible ones; the latter may adopt a more realistic perspective of the role of the working mother.

The study has some limitations. First, its cross-sectional nature does not allow us to determine the direction and the causality of the relations. Even if strong evidences support our results, future research may choose to conduct longitudinal studies. Second, given that we used only one data-gathering method, future research could take into account different kinds of evaluations such as supervisors' perspectives. Moreover, considering that we only examine supervisors' unsupportive negative behaviours, future research could examine positive inclusive and supportive behaviours, such as planning a phased return to work, explaining any changes to the role, or encouraging a team spirit toward the returned employees. Finally, future research could take into account other sources of support considered important by working mothers, such as colleagues, family, and friends.

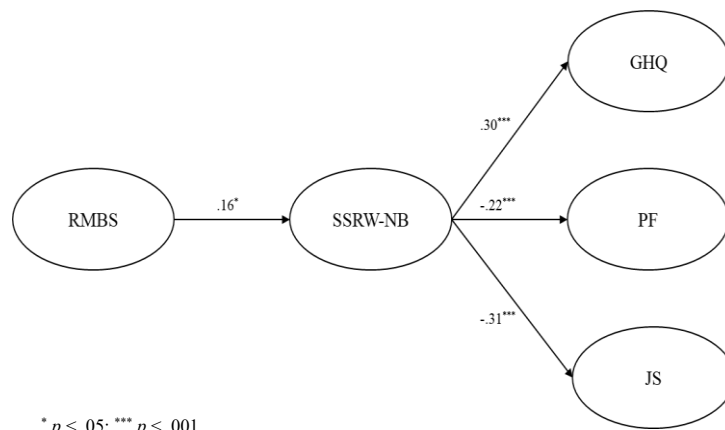
Table 1. Means, standard deviations, and correlations among variables.

	<i>M</i>	<i>sd</i>	RMBS	SSRW-NB	GHQ	JP	JS
RMBS	3.71	.65	1				
SSRW-NB	1.71	.82	.16*	1			
GHQ	9.40	5.88	.13	.30**	1		
PF	7.35	1.62	0.08	-.23**	-.54**	1	
JS	4.55	1.10	-.10	-.29**	-.23**	-.06	1

RMBS = rigidity of maternal beliefs; SSRW-NB = supervisor support in return to work – negative behaviours; GHQ = psychological distress; PF = performance; JS = job satisfaction.

* $p < .05$
 ** $p < .01$

Figure 1. The estimated model.



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IS NARCISSISM ASSOCIATED WITH WORKAHOLISM? THE MODERATING ROLE OF WORKLOAD

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Abstract

Workaholism, or the tendency to work excessively hard on a compulsive basis, is a form of heavy work investment that is mostly associated with negative consequences for both the individual and the organization. According to the biopsychosocial model, workaholism has a multifactorial genesis. From this standpoint, it may stem from a complex interaction between individual (e.g., personality traits) and situational (e.g., organizational) factors. Among individual factors, narcissism may play a central role. Narcissism can be seen as a set of personality traits that imply a grandiose but fragile sense of self and entitlement, preoccupation with success as well as demands for admiration. Individuals with high levels of narcissism may dedicate considerable time and effort to their work, given that they pursue power, status, social recognition, and rewards in the workplace. For these reasons, we expect narcissism to be positively associated with workaholism. With respect to organizational factors, workload signals what the norms are in an organization (i.e., to work exceedingly hard). Hence, high workload may encourage workaholism in individuals with strong narcissistic components, who may feel compelled to work hard to achieve social recognition and rewards, as well as to attain ego enhancement, by meeting these extremely demanding external standards. In this study, we hypothesized that narcissism is positively associated with workaholism (Hypothesis 1), and that workload may exacerbate this association, which is expected to be stronger when workload is high (Hypothesis 2). The study was carried out on a sample of 217 workers who completed a self-report questionnaire aimed at determining narcissism, workload, and workaholism, in terms of working excessively (WE) and working compulsively (WC). Data were analyzed using moderated multiple regression. Results showed that narcissism was not associated with either workaholism (overall score) or its components, namely WE and WC (Hypothesis 1 not supported). Furthermore, workload moderated the association between narcissism and workaholism (overall score as well as WE/WC), which was significant only when workload was high (Hypothesis 2 supported). Overall, in line with the biopsychosocial model's prediction, this study suggests that workaholism may result from an interaction between individual predispositions, such as narcissism, and organizational factors that encourage employees to work hard (e.g., high workload). Finally, from a practical standpoint, this study recommends that organizations should target narcissism, especially in managers. Indeed, narcissistic leaders, who necessarily face high job demands in their work, are particularly at risk of workaholism and may also encourage workaholism in their subordinates.

Keywords: *Workaholism, narcissism, workload, moderation.*

1. Introduction

Narcissism has received growing attention in organizational contexts, especially with respect to issues such as leadership, perceptions of organizational justice, and job performance (Campbell, Hoffman, Campbell, & Marchisio, 2011). Quite surprisingly, although with some exceptions (Andreassen, Ursin, Eriksen, & Pallesen, 2012; Clark, Lelchhook, & Taylor, 2010), little research has investigated the relationship between narcissism and heavy work investment (HWI), a concept that implies an elevated investment of both time and effort in one's work (Snir & Harpaz, 2012). To contribute to fill this gap in the literature, in this study we focused on the association between narcissism and workaholism, a "bad" form of HWI (Schaufeli, 2016) that is mostly associated with negative consequences for both the individual and the organization, such as reduced job and life satisfaction, physical and psychological symptoms, sickness absences, and reduced job performance (Clark, Michel, Zhdanova, Pui, & Baltes, 2016; Falco et al., 2013). More specifically, given that individuals with strong

narcissistic components pursue power, status, social recognition, and rewards in the workplace, they may dedicate an excessive amount of time and effort to their work, at the expense of other life activities. Accordingly, we hypothesized narcissism to be positively associated with workaholism. Furthermore, building on the biopsychosocial model (McMillan & O'Driscoll, 2008), we also hypothesized that workload, an aspect of the job that pushes employees to work hard (i.e., a situational factor), may moderate the association between narcissism (i.e., an individual factor) and workaholism, which is expected to be stronger when workload is high.

1.1. Workaholism and the biopsychosocial model

Workaholism may be defined as "the tendency to work excessively hard in a compulsive way" (Schaufeli, Taris, & Bakker, 2008, p. 10). Working excessively (WE) and working compulsively (WC) are the two core dimensions of the construct, and workaholism is characterized by high levels of both. According to the biopsychosocial model (McMillan & O'Driscoll, 2008), workaholism has a multifactorial genesis. From this standpoint, it may stem from a complex interaction between personal dispositions (e.g., personality traits), cognitive and emotional processes (e.g., rigid beliefs, such as performance-based self-esteem), behaviors learned by the individuals (e.g., in the family, at work), and the social systems (e.g., the work context) in which they are embedded (see Andreassen, 2014, for a review). Hence, in line with the biopsychosocial model, personality traits such as narcissism may predispose individuals to workaholism, which is triggered by work-related factors (e.g., workload) and then maintained by cognitive and behavioral dysfunctional patterns.

1.2. Narcissism, workaholism, and the moderating role of workload

Among the individual factors that may give rise to workaholism, narcissism could play a central role. Narcissism can be conceived "as an important complex of personality traits and processes that involve a grandiose yet fragile sense of self and entitlement as well as a preoccupation with success and demands for admiration" (Ames, Rose, & Anderson, 2006, p.440). A possible mechanism that explains the association between narcissism and workaholism could involve work motivation. For example, drawing on the Self-Determination Theory (SDT; Ryan & Deci, 2000), van Beek, Taris, and Schaufeli (2011) found that workaholic employees were mostly driven by controlled motivation, in terms of external and introjected regulation. This implies that workaholics mainly perform their work for its instrumental value. More specifically, workaholics work extremely hard to attain social rewards or to avoid punishment, such as social recognition or disapproval by others in the workplace, respectively (i.e., external regulation). They also work hard to meet internalized external standards of self-worth and social approval, in order to enhance feelings of worth and self-esteem as well as to avoid negative emotions related with failure (i.e., introjected regulation).

Interestingly, previous research suggested narcissism to be positively associated with controlled motivation (Sedikides, Ntoumanis, & Sheldon, 2019). Individuals with strong narcissistic components are characterized by a chronic need to attain validation for their overly positive yet fragile self-image (Morf, Weir, & Davidov, 2000). Hence, narcissists may work extremely hard to acquire external rewards and appreciation from others (e.g., social recognition, from colleagues or supervisor), as well as to avoid disapproval (i.e., external regulation). Moreover, individuals with strong narcissistic components may find themselves in a persistent state of ego-involvement, in which their self-esteem is contingent on their performance (Morf et al., 2000). These individuals may, therefore, feel pushed to work exceedingly hard, to enhance feelings of self-worth and to avoid negative emotions related with failure, such as anxiety and guilt (i.e., introjected regulation). Overall, based on the arguments previously described and the results of previous research (Clark et al., 2010), we hypothesized that narcissism is positively associated with workaholism as well as its dimensions of WE and WC.

Hypothesis 1a: Narcissism is positively associated with workaholism;

Hypothesis 1b: Narcissism is positively associated with WE;

Hypothesis 1c: Narcissism is positively associated with WC.

Based on the biopsychosocial model, we expect workload to moderate the above-mentioned association between narcissism and workaholism. Indeed, workload may signal what the norms are in an organization or in a work team, that is, to work extremely hard (Andreassen et al., 2017). Hence, high workload may encourage workaholism in employees with strong narcissistic components, who may feel pushed to work hard to achieve social recognition and rewards, as well as to attain ego enhancement, by meeting these extremely demanding external standards. Overall, based on these arguments and given the assumptions of the biopsychosocial model, we hypothesized that workload moderates the association between narcissism and workaholism as well as its dimensions (i.e., WE and WC), with this association being stronger for workers with higher workload.

Hypothesis 2a: Workload moderates the association between narcissism and workaholism;
Hypothesis 2b: Workload moderates the association between narcissism and WE;
Hypothesis 2c: Workload moderates the association between narcissism and WC.

2. Methods

The study was conducted among workers from different organizations in Italy ($N = 217$). The sample consisted of 121 women and 95 men (one missing value), with a mean age of 45 years ($SD = 12$). Participants completed a self-report questionnaire (paper and pencil) aimed at determining narcissism, workaholism, and workload. The questionnaire was administered anonymously, and participants took part in the study voluntarily.

2.1. Measures

The following self-report measures were administered.

Narcissism was assessed using an Italian adaptation (13 items) of the short form of the Narcissistic Personality Inventory (NPI-16; Ames et al., 2006). Narcissism-consistent responses were coded as 1 whereas narcissism-inconsistent responses were coded as 0, and then an overall narcissism score was computed.

Workaholism was assessed using the Italian adaptation (Kravina, Falco, Girardi, & De Carlo, 2010) of the Dutch Work Addiction Scale (DUWAS; Schaufeli et al., 2008). The scale includes ten items aimed at determining the two dimensions of working excessively (six items) and working compulsively (four items). The response scale ranged from 1 (*strongly disagree*) to 6 (*strongly agree*).

Workload was assessed using three items taken from the Q_v-Bo test, an instrument standardized for the Italian context (De Carlo, Falco, & Capozza, 2008). The response scale ranged from 1 (*strongly disagree*) to 6 (*strongly agree*).

2.2. Data analysis

The hypothesized relationships were tested using moderated multiple regressions analyses (Aiken & West, 1991). Overall, three different models were estimated. In Model 1 (M1), workaholism was the dependent variable, whereas narcissism and workload were the independent and the moderating variables, respectively. Model 2 (M2) and Model 3 (M3) were similar to M1, except that working excessively (M2) or working compulsively (M3) were the dependent variables. If a significant interaction was found, then a simple slope analysis was conducted, to determine whether narcissism is associated with workaholism at high (+1SD) and low (-1SD) levels of workload. The analyses were conducted using the software R (R Core Team, 2019).

3. Results

Results showed that narcissism was not associated with either workaholism (overall score, M1) or its dimensions, namely WE and WC (M2 and M3, respectively). Our first hypothesis was not supported. Furthermore, workload moderated the association between narcissism and the overall workaholism score in M1 ($b = .07, p < .001$). Similarly, workload moderated the association between narcissism and WE ($b = .05, p < .05$) as well as the association between narcissism and WC ($b = .08, p < .001$). The interaction between narcissism and workload accounted for an additional 4.3% of the variance in workaholism (M1), 2.1% in WE (M2), and 5.3% in WC (M3). Simple slope analysis revealed that the relationship between narcissism and workaholism (overall score, M1) was positive and significant only when workload was high ($b = .12, p < .001$). In a similar way, the relationship between narcissism and WE ($b = .11, p < .01$) as well as that between narcissism and WC ($b = .14, p < .001$) were positive and significant only when workload was high. Overall, our second hypothesis was supported.

4. Discussion

This study investigated the association between narcissism and workaholism. Building on the biopsychosocial model (McMillan & O'Driscoll, 2008), it was hypothesized that narcissism is positively associated with workaholism, with workload moderating this relationship, which is expected to be stronger when workload is high. Results partially supported our predictions. In fact, narcissism was positively associated with workaholism only in individuals facing high workload. Accordingly, our results suggest that narcissism per se may not give rise to workaholism. However, narcissism may be a risk factor for workaholism in the presence of a demanding work environment.

A possible explanation for this pattern of association is that in a work environment characterized by low or moderate levels of stress (e.g., when workload is low or moderate) individuals with strong narcissistic components may inherently approach and enjoy their work, in which they can satisfy their need of power and admiration as well as their strong desire of demonstrating superiority over others (e.g., colleagues; Clark et al., 2010). In other words, in these situations, narcissism may be associated with work engagement (a "good" form of heavy work investment), not workaholism (a "bad" form of heavy work investment; Schaufeli, 2016). This is consistent with a previous study by Andreassen et al. (2012), who found narcissism to be positively associated with enjoyment of work and work engagement, but unrelated to drive, a core characteristic of workaholism that is especially associated with negative outcomes for the individual (e.g., emotional exhaustion; Van den Broeck et al., 2011).

However, in a stressful work environment (e.g., when workload is high) narcissism may lead to the onset of workaholism. In these situations, individuals with strong narcissistic components, who are characterized by a chronic need to attain validation for their overly positive yet fragile self-image (Morf et al., 2000), may feel pushed to work exceedingly hard to achieve social recognition and rewards, as well as to attain ego enhancement, by meeting the extremely demanding external standards (e.g., elevated expectations in terms of productivity and performance). In other words, when workload is high narcissism may play a role in the development of an obsessive inner drive to work hard. Interestingly, previous research on the relationship between perfectionism and workaholism has shown similar results. For example, Falco et al. (in press) found in a longitudinal study that self-oriented perfectionism predicted an increase in workaholism over time only in workers facing high workload. Taken together, these results are in line with the predictions of the biopsychosocial model (McMillan & O'Driscoll, 2008), according to which workaholism can be conceived as the product of a complex interaction between individual (e.g., personality traits) and situational (e.g., organizational) factors.

Finally, from a practical standpoint, this study suggests that organizations should target narcissism, especially in managers, who necessarily face high job demands in their job. Narcissistic leaders are particularly at risk of workaholism and may also encourage workaholism in their subordinates. When dealing with narcissism in organizational contexts, preventive measures are suggested to be much more effective than curative ones (Fuller, Galvin, & Ashforth, 2018). In general terms, interventions aiming at reducing the negative consequences of individuals' narcissistic traits and characteristics should foster the development of an organization's culture that stigmatizes self-serving and narcissistic behaviors and promotes calm collaboration among managers and co-workers (Fuller et al., 2018).

5. Conclusion

Overall, this study suggests that individuals with strong narcissistic components can be at risk of workaholism when workload is high. From a theoretical perspective, this is consistent with the idea that workaholism may stem from a complex interaction between individual and situational factors. From a practical standpoint, interventions aimed at preventing workaholism should target narcissism in workers who face high levels of workload, such as managers.

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ORGANIZATIONAL PRACTICES OF CAREER MANAGEMENT AND THRIVING AT WORK: A MEDIATIONAL ROLE OF PSYCHOLOGICAL CAPITAL

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Abstract

In the 1980s, globalization and business competition led to an instability in work organizations which were no longer able to ensure stable and predictable careers. Responsibility of career management was transferred to workers. Consequently, research on the role of individuals in their career management became popular, while work investigating the role of organizations gradually declined. However, some studies have indicated that it remains beneficial for organizations to invest in practices of career management (PCM) for their employees through a supportive approach due to the link with positive outcomes for both employees and organizations. PCM refer to programs, processes, and other forms of assistance provided by organizations to support and enhance their employees' career success (Ng, Eby, Sorensen and Feldman, 2005) such as career planning, training and skills development programs, promotion, coaching, mentoring, annual appraisal interviews, retirement preparation programs or outplacements. At an individual level, the conservation of resources theory (Hobfoll, 2011) and the job demand resource model (Demerouti, Bakker, Nachreiner & Schaufeli, 2001) postulate that resources of the professional environment, such as PCM, promote the preservation and development of personal resources and the employees' psychological health. While some studies have shown a link between PCM and indicators of hedonic well-being such as job satisfaction (e.g., Kooij, Ansen, Dikkers & De Lange, 2010), work examining the links with indicators of eudemonic well-being, such as thriving at work, remains scarce. Moreover, previous studies have paid little attention to the psychological mechanism linking PCM to well-being at work. To fill this gap, our study focused on the synergy of psychological resources (i.e., self-efficacy, hope, optimism and resilience) defined as a core construct, known as PsyCap (Luthans, Avolio, Avey & Norman, 2007). The sample consisted of 652 French people working in nonprofit, private and public organizations. Structural equation modeling suggested indirect effects of PCM on thriving at work through PsyCap (partial mediation) and this was confirmed with a bootstrapping procedure. Limitations of the study are discussed.

Keywords: *Organizational practices of career management, thriving at work, psychological capital.*

1. Introduction

In the 1970s, the traditional career concept was characterized by stability, job security, and structural and vertical advancement in organizations. Ten years later, the emergence of competition brought instability into the environment of organizations which had to downsize and restructure. As a consequence, organizations were no longer able to provide structured careers with a clear and predictable linear upward trajectory and transferred responsibility for career management to workers (De vos, Dewettinck & Buyens, 2008). The study of the role of the individual in the management of his/her own career thus grew significantly (e.g., boundaryless careers and protean careers) to the detriment of the role of the organization (De vos & Cambré, 2017). However, presently research is beginning to reconsider these practices because they are essential organizational resources for workers (e.g., Clarke, 2013). Studies have demonstrated that they are positively associated with workers' psychological health (De vos & al., 2009) and with objective (e.g., salary and promotion) and subjective career success (e.g., career satisfaction) (Ng et al., 2005). Practices of career management (PCM) also promote individual performance such as sales (Yahya, Othman & Meruda, 2012). The implementation and effectiveness of these practices therefore involve substantial issues for both workers and organizations.

2. Background

The field of study of PCM presents several challenges. First, there is a lack of coherence in the terms used to define them (e.g., organizational support for career development, organizational career management, traditional career management, perceived investment in worker development, prospects of

career growth or development opportunities, Baruch, Szűcs & Gunz, 2015). Secondly, although several typologies of practices have been developed, none are consensual (e.g., Bagdalli & Gianecchini, 2018; Baruch & Peiperl, 2000). Consequently, defining PCM is not easy. However, the most frequently used definition is that proposed by Ng et al. (2005) who specified these practices as programs, processes, and other forms of assistance provided by organizations to support and enhance their employees' career success. These authors quote practices as diverse as training and skills development programs inside and outside the organization, skills management programs, career counseling, formal mentoring and coaching programs, individualized feedback, promotion, job rotation, outplacements, international assignments and retirement preparation programs (Ng et al., 2005).

PCM can be considered as the caravan passageways of Hobfoll's Conservation of resources theory (2011), providing the environmental conditions that support, promote, enrich and protect the resources of individuals. These organizational resources generate the development of personal resources through a positive spiral. For example, Rego and Cunha (2009) found that these practices were positively associated with indicators of psychological health such as emotional well-being, happiness and work-family balance. Other studies have also observed positive relationships with a set of attitudes such as job satisfaction and affective engagement (Kooij et al., 2010), or positive behaviors such as organizational citizenship behaviors (Okurame, 2012). Finally, these practices have positive effects on subjective and objective indicators of career success, such as career satisfaction, promotion or wage progression (Ng & al., 2005). However, few studies have investigated the relationship between PCM and heudemonic indicators of well-being. Nevertheless, several of these indicators are attracting growing interest among the scientific community, such as thriving at work (e.g., Kleine, Rudolph & Zacher, 2019).

Spreitzer et al. (2005) defined thriving at work as "the psychological state in which individuals experience both a sense of vitality and a sense of learning at work" (p.538). This definition covers two basic elements. First, the authors point out that thriving at work is a temporary state and not a durable disposition that is therefore malleable. Then, they emphasize that this state comes from the combined psychological experience of vitality and learning. On the one hand, vitality refers to the feeling of having available energy and feeling alive at work. This occurs when workers feel enthusiasm for their work and are passionate about what they do. On the other hand, learning is "the acquisition and application of knowledge and skills" and is observed when workers feel that they are continuously improving in their professional activity (Porath et al., 2012). Thriving at work is considered as a key resource for workers as it is an indicator of personal growth (Porath & al., 2012; Spreitzer et al., 2005).

For Spreitzer et al. (2005) the central premise behind their model was that "when individuals are situated in particular work contexts, they are more likely to thrive" (P.539). Research has emphasized the need to identify the influence of organizational factors on this psychological state (e.g., Walumbwa, Muchiri, Misati, Wu & Meiliani, 2018). In this context, while some factors such as HPWSs have already demonstrated positive links with thriving at work (Zhang, Xu, Jin & Ford, 2018), no study has focused specifically on the influence of PCM. However, PMC are essential for workers because they allow them to broaden their skills and knowledge, to apply them to new situations, provide them with challenges and help them develop their full potential (Armstrong-Stassen & Stassen, 2013). We therefore hypothesized that PCM would have a positive relationship with thriving at work (**hypothesis 1**).

The second aim of this study was to understand the mechanism underlying this relation. According to Ten Brummelhuis et Bakker (2012), organizational resources can also promote key resources, a specific kind of personal resources, which refer to management resources that facilitate the development of other resources. PsyCap can be considered in this way. Luthans and Youssef (2007) defined the latter as: *an individual's positive psychological state of development that is characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success* (Luthans & Youssef, 2007, p. 334). Luthans and al. (2007) postulated that in theory the combination of these four personal resources generated a synergistic effect and formed the second-order factor of PsyCap. An individual with a strong sense of these four personal resources would expect good things to happen to them, make ambitious choices, perceive goals as challenges, plan more decisively for relevant plans of action, persevere in achieving goals despite difficulties and perceive failures as opportunities for growth (Luthans, 2002). Consequently, these persons would be more resistant faced with adversity and have the ability to maintain a stable equilibrium when they were exposed to significant threat, risk or harm (Luthans & Youssef, 2007).

Several literature reviews and meta-analyzes show that there is little knowledge about the organizational antecedents of PsyCap due to the lack of studies on the subject (Avey, Reichard, Luthans & Mhatre, 2011; Avey, 2014; Newman, Ucbasaran, Zhu & Hirst, 2014). However, Luthans (2002) explained that a professional environment that challenged workers and helped them to achieve their professional and personal goals would be favorable to the development of their PsyCap. In addition, PsyCap should be developed through mastery experiences and social persuasion like positive feed-back

on work (Luthans, 2002). PCM represent organizational support and allow workers to plan their career, develop their skills and knowledge and advance in the hierarchy, therefore we postulated that they would promote the development of PsyCap.

Regarding the consequences of PsyCap on the individual, Youssef-morgan and Luthans (2014) explain that these resources foster well-being because the latter is shaped by our cognitive and affective assessments. However, PsyCap is formed by positive evaluations of past, present and future events that are based on external expectations and positive internal capacities. The availability of PsyCap resources serves as an indicator of an overall appraisal of well-being. Numerous studies have thus demonstrated the link between PsyCap and health indicators such as job satisfaction or psychological well-being (e.g., Avey & al., 2011). Finally, Kleine and al (2019) conducted a meta-analysis in which they revealed that for a panel of 13 studies PsyCap was positively correlated with thriving at work (i.e., .40).

Although several studies have already identified the mediating role of PsyCap between organizational resources and dimensions of well-being (e.g., Mazzeti, Guglielmi, Chiesa & Mariani, 2016), to our knowledge its role linking PCM and thriving has never been tested. We therefore hypothesized that PsyCap mediated a positive relation between PCM and thriving at work (**hypothesis 2**).

3. Objectives

The aim of this study was to test a mediation model.

4. Method

4.1. Procedure

Questionnaires were distributed in several French companies with both online and paper versions. A cover letter informed potential participants that this study was confidential and voluntary. The data was collected over approximately six weeks.

4.2. Participants

The sample consisted of 652 French workers of which 524 were female (80.4%) and 128 male (19.6%). Their average age was 41.84 years old ($SD = 11.01$; range 15 to 69 years) and with an average job tenure of 9.26 years ($SD = 9.18$). 473 participants lived with a partner and 179 were single. Regarding contracts, 82.8% were permanent and 16.8% temporary. Full-time and part-time work represented 79% and 21% respectively. There were 298 people who worked in nonprofit organizations (45.7%), 214 in private organizations (32.8 %) and 136 in public organizations (20.9%). Finally, 79.1% were non-managerial employees, 13.5% were middle managers and 6.9 % were senior managers.

4.3. Measure

Participants completed a self-report questionnaire using a five-point Likert scale (1 = totally disagree, 5 = totally agree).

Practices of career management were assessed using a new scale (in progress; Aubouin-Bonnaventure, Fouquereau & Chevalier) composed of 10-items. Results indicated an acceptable reliability ($\alpha .71$).

Thriving at work was assessed using the 10-item scale of Porath and al. (2012) assessing the extent to which workers experience both a sense of vitality and a sense of learning at work. More precisely, learning and vitality were assessed with five items each. Like Porath and al. (2012), we computed a composite score for these two dimensions. Results indicated an acceptable reliability ($\alpha .89$).

PsyCap was assessed with the short version (PCQ-12) of the Psychological Capital Questionnaire (PCQ-24) (Luthans, Youssef et al., 2007). More precisely, hope was assessed with four items, self-efficacy with three items, resilience with three items and optimism with two items. Results indicated an acceptable reliability for hope ($\alpha =.70$) and self-efficacy ($\alpha =.83$), and a relative reliability for resilience ($\alpha =.50$) and optimism ($\alpha =.42$).

5. Statistical analysis and results

First, preliminary analyzes demonstrated (*Table 1*) that PCM was positively related to thriving at work ($r = .45$, $p < .05$) and to PsyCap ($r = .36$, $p < .05$), and that PsyCap was positively related to thriving at work ($r = .58$, $p < .05$).

Table 1. Means, standard deviations and correlations among the study variables.

	Mean	SD	1	2	3	4	5	6	7	8	9
1 PGC	3.59	0.72	–	.36	.18	.33	.41	.18	.45	.44	.39
2 PsyCap	3.71	0.48		–	.69	.83	.79	.76	.58	.49	.60
3 Self-efficacy	3.87	0.66			–	.47	.28	.37	.34	.27	.38
4 Hope	3.72	0.54				–	.60	.55	.59	.51	.58
5 Optimism	3.50	0.73					–	.48	.51	.44	.51
6 Resilience	3.75	0.57						–	.36	.28	.39
7 Thriving at work	3.75	0.61							–	.94	.92
8 Vitality	3.78	0.71								–	.72
9 Learning	3.71	0.60									–

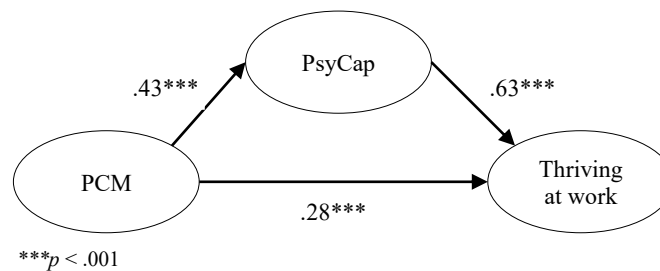
All correlations are significant to $p < .05$

Then, we performed structural equation modeling using AMOS Version 25. The model tested consisted of three latent variables and 25 observed variables.

The SEM estimates were generated with the maximum-likelihood estimation method. The goodness of fit indices for our model were acceptable: $\chi^2 = 824.49$ (263), $p < .001$, CFI = .92, SRMR = .05, RMSEA = .06.

As shown in Figure 1, the results of structural equation modeling indicated that PCM was positively related to PsyCap ($\beta = .43$; $p < .001$), which was positively linked to thriving at work ($\beta = .63$; $p < .001$). The results also revealed that PCM had a direct significant positive effect on thriving at work ($\beta = .28$; $p < .001$). These results suggested an indirect effect of PCM on thriving at work through PsyCap (partial mediation). In order to assess the magnitude and significance of this indirect effect, we then adopted a bootstrap procedure. A confidence interval (95%) was calculated using 5,000 generated samples. The results confirmed the indirect effect of PCM on thriving at work through PsyCap ($\beta = .27$, SE = .05, 95% CI = [.19 to .38]).

Figure 1. The mediation model.



6. Discussion and limits

The results validated our hypothesis. PCM was positively associated with thriving at work (hypothesis 1) and this relationship was mediated by PsyCap (hypothesis 2). More precisely, the analyses demonstrated a partial mediation.

This study presents two major limitations. First, participants were essentially female and several studies have demonstrated differences in PCM perception according to gender (e.g., De Vos, Dewettinck & Buyens, 2009). Therefore, we recommend repeating this study with a more balanced sample. Second, analyses revealed weaknesses in the reliability of two sub-dimensions of the PsyCap (i.e., resilience and optimism).

7. Conclusion

The results of this study demonstrate that psychological health issues were associated with PCM for workers, organizations should therefore consider these practices (e.g., training and skills development programs, career counseling or mentoring) as one strategic axis of company policy for psychological health promotion and prevention.

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WORK ENGAGEMENT: ORGANIZATIONAL CULTURE POINT OF VIEW

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Abstract

Introduction. Currently, the problem of employee work engagement is one of the most urgent in the field of employee management. A high degree of work engagement of employees directly affects the efficiency of organizations and labor productivity. The study attempted to consider the value determinants of work engagement of employees, such as the value correspondence of employees and organizations, aspiration index (internal, external). We assumed that the level and indicators of work engagement (vigor, dedication, absorption) are directly related to the index of the realization of employee's value expectations in the organization and their internal aspiration index.

Employees with a high level of engagement have a positive impact on the quality of their organization's products (Schaufeli, Salanova, 2011). The results of our study allow us contribute to understanding the value aspects of employees work engagement, creating and supporting the «We-concept» of organizations to increase their effectiveness.

Method. Research sample consist the employees of three various organizations and their direct heads. 90 people, 57 women and 73 men aged from 20 up to 60 years participated in the study. The following techniques were used: "Utrecht work engagement scale" (UWES) (Schaufeli, Bakker, 2003), "Organizational Culture Assessment Instrument" (OCAI) by K. Cameron and R. Quinn, "Aspiration index" (Desi, Ryan, 2017) или (Kasser, Ryan, 1996). The data was processed by descriptive statistics, correlation and multiple regression analysis.

The result of the work is to assess the contribution of the evaluations ratio of preferred and present organizational culture and aspiration index to the work engagement.

Keywords: *Work engagement, value expectations, aspiration index, organizational culture.*

1. Introduction

The problem of employee's work engagement has become increasingly interested for heads of organizations and business owners. Leaders try to measure and manage the quantitative and qualitative characteristics of engagement. A HR.com study report on the status of work engagement in 2019 indicates that more than 90% of respondents link work engagement and performance, customer service and productivity (The State of Employee Engagement in 2019). This, first of all, indicates the popularity of work engagement concept. At the same time, there are many evidences of relationship between work engagement and performance. For example, the same study showed that "highly engaged organizations are more than twice as likely to report being top financial performers in their industries" (ibid., p. 5). Another example is a study of Czech workers in assisting professions, in which it was found that only work engagement is related to performance, but not job satisfaction. "Engaged people perform better than their less engaged peers" (Kasparkova et al., 2018, p. 53). A lot of research shows the relationship between the desired results of a company and its employee engagement, for example, high-quality customer service, retaining talented people, team performance, labor productivity, unit productivity, and even financial indicators at the enterprise level (e.g. Motyka, 2018; Wake, Green, 2019; Munish, Agarwal, 2017, etc.).

In this regard, the question arises of determining the factors of employee engagement. In our work, we suggested that the employees work engagement is significantly affected by the value correspondence of employees and organizations, expressed in the ratio of preferred and real organizational culture. By organizational culture we understand a three-level dynamic system of interaction between the organization and employees (values - attitudes - behavior, action), which

(interaction system) is expressed in a certain style, organization philosophy, business processes, features of external adaptation and internal integration and ensures the effectiveness of the organization (Rodionova, 2010).

2. Methods

Objective: to explore the relationship between organizational culture assessments and employee's work engagement.

Object of study. Research sample consist the employees of three various organizations and their direct heads. 90 people, 57 women and 73 men aged from 20 up to 60 years participated in the study. The study took place in St. Petersburg.

The following techniques were used: "Utrecht work engagement scale" (UWES) (Schaufeli, Bakker, 2003), "Organizational Culture Assessment Instrument" (OCAI) by K. Cameron and R. Quinn, "Aspiration index" (Desi, Ryan, 2017) или (Kasser, Ryan, 1996). The data was processed by descriptive statistics, correlation and multiple regression analysis.

3. Results

During the analysis of data obtained during the study, we identified three groups according to the level of work engagement:

- Low level of engagement (7.5% of employees);
- Average level of engagement (85% of employees);
- High level of involvement (7.5% of employees).

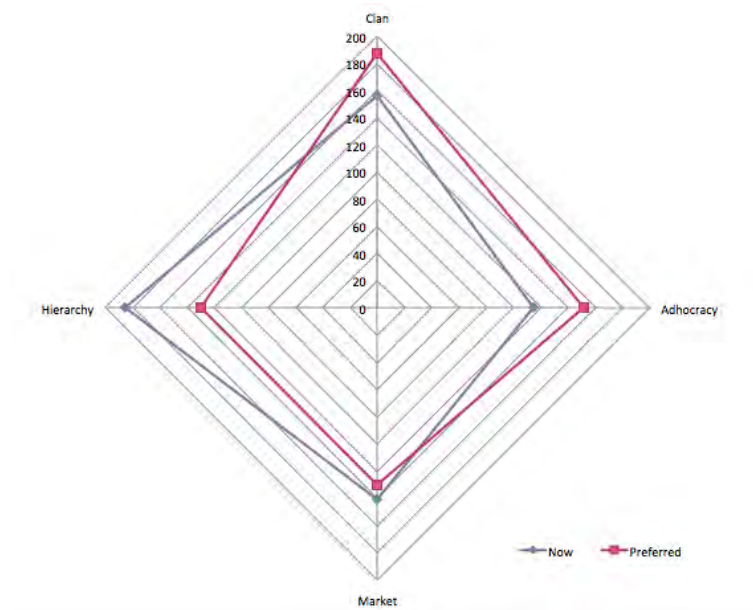
For employees with a low level of engagement, the minimization of additional efforts in relation to the company is characteristic. They cope with the tasks at an acceptable level, but, as a rule, they are limited by what is regulated by their position, rarely do something beyond the time limit. Often, low levels of engagement are employees recently working in the company, being in training or in the adaptation process.

Employees with an average level of engagement are characterized by the fact that they are not only motivated to work beyond the prescribed position, but also transmit their interest in developing the organization to other employees. These are, as a rule, employees with extensive experience in this organization.

A high level of engagement characterizes the participation of employees not only in the working life of the organization, but also in activities related to the organization and the team outside working hours. They are not only deeply involved themselves, but also influence colleagues, transmitting to them their attitude to work and organization.

Based on the results obtained, a general organizational profile of the present and preferred organizational culture for the sample was constructed (Figure 1).

Figure 1. Comparison of real and preferred profiles of organizational culture for the sample.



Analyzing the resulting profile, we can conclude that at present, according to employees, the company is dominated by a hierarchical type of culture. The company is committed to formal rules and official policies. The concern of the organization is to ensure the stability of indicators and the long-term employment of employees.

To a lesser extent, but nevertheless, at a significant level, employees note the “clannishness” inherent in organizational culture. This can be explained by the specifics of building a work process: as a rule, several employees are allocated to work on a project, depending on the project, the composition of the working group may change. This contributes to the development of relations between employees, increasing cohesion, complicity, individuality and a sense of organization as “we”, a friendly atmosphere is formed, often many employees have common interests. The head of the project team - team lead - is perceived as a mentor with great experience and knowledge, and not as an administrator with administrative powers. Statistically significant differences were obtained between estimates of the real and preferred types of culture, in particular, for hierarchical, adhocratic, and clan cultures. That is, employees are focused on greater independence, freedom in tactical decisions, delegation of authority and building partnerships.

For a more informative presentation of the real desired organizational culture, profiles of its six separate attributes were constructed, which were distinguished by K. Kameron and R. Quinn:

- the most important characteristics of the organization;
- general leadership style;
- management of employees in the company;
- the connecting essence of the organization;
- strategic goals;
- key success criteria.

The largest discrepancies (statistically significant) are observed in the sphere of managing hired workers (I want more independence and less formalization of the process and results) and the “connecting essence of the organization”. According to the opinion of employees, the essence of the company should be the balance of attributes of a clan and adhocratic culture. This implies a combination of the attitude towards the employee as the company's capital (emphasis on the long-term benefits of personal development, a high degree of team cohesion and a favorable moral climate), as well as a dedication to experimentation and innovation. In the context of the innovative company, we are talking about attracting new, sometimes risky projects, development of innovations, and the use of non-standard solutions.

We got mixed results of relationships of work engagement indicators with implementation index of employee's value expectations in the organization. We received the contribution of the implementation index of employee's value expectations, committed to certain types of organizational culture, with the indicator of work engagement in general (R-square = 0,25). In addition, work engagement relationship with the internal aspiration index was obtained (R-square = 0,53). This allowed us to build a value space model of the organization, which contributes to an increase in the level of employee engagement.

4. Conclusions

In both science and business, work engagement has been and continues to be seen as a favorable factor for the development and success of an organization. Organizational factors such as relate to the formation of engagement include: attitude to the organization's leadership and immediate supervisor; the opportunity to participate in management, influence decision-making, as well as awareness of events and plans; confidence that employees are important to the organization adoption by employees of organizational goals and values; satisfaction with work organization and work. In this case, we are talking about the role of organizational culture as a factor in shaping employee engagement. The correspondence of employees value and values of organization can, at least by a quarter, contribute to the formation of a high level of employee engagement. In addition, a study of the relationship between employee engagement and organizational culture indicators can allow company leaders and HR professionals to maintain a stable competitive advantage for the organization in the market by optimizing the characteristics of the organizational culture of the company and hiring employees that match the organization's value characteristics.

At the same time, we understand that not only organizational, but also personal and social factors (for example, age, length of service, relationships in a team, etc.) influence the work engagement. Employee engagement cannot exist on its own, out of touch with the internal environment of the company or in isolation from key business processes.

The data obtained by us can be demanded when working with the personnel of the company under study to create an environment conducive to increasing employee work engagement, as well as developing a system of employee motivation in order to increase the effectiveness of the organization and create a positive image of the employer among the staff.

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CAN ORGANIZATIONAL CULTURE BE DESIGNED?

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Abstract

This paper explores a theoretical approach to intentionally designing a culture that is unique to the company and needed for a new organization to succeed. This approach includes outlining cultural elements beyond a values statement, the support and process of living into them so that company culture could be aligned to its strategy. It also makes an argument for and articulates the process of a specific sequence of determining purpose, mission, vision, strategy, and culture that makes for an aligned organization. The practical approach to designing organizational culture includes steps and stages of cultural development from the early stages when the founding leaders are incepting the new business, to building the first team, to growth and sustaining culture. This paper then articulates the role of the leader and practical actions that leaders can and should be taking on a regular basis to sustain or shift the culture of their organization to be supporting the strategy. It further demonstrates how interpersonal relationships at all levels further stabilize the young culture and what needs to be done to ensure it sustains and doesn't get eroded when an organization rapidly grows in the number of employees.

Keywords: *Organizational culture, design, strategy, alignment.*

1. Introduction

It has been established and broadly understood that organizational culture is a powerful force in achieving organizational success, delivering results against strategy, as well as creating a community (Schaine, 2004, 2015; Cooke, 2015; Katzenbach, 2012). While it is rather well understood in the literature how organizational culture gets formed and sets in, an approach to intentionally forming organizational culture from the beginning of the new organization, does not seem to be well developed. In practice, many entrepreneurs focus primarily on establishing the process of the business to deliver results: best business models, standard processes and products, digital processes, talented and dedicated team, as well as ensuring financial stability of the new enterprise. They can often leave culture outside of their focus, and culture forms on its own, as an afterthought or an accident. It has become clear that creating value statements does not create culture: those typically remain “the words on the wall”. That afterthought or accident can potentially do more harm than good if the culture does not support business strategy (Tararukhina, 2019, b). Therefore, there is an advantage to be gained for newer companies and startups if their founders intentionally design the culture from the beginning and practice it so that it could take hold and sustain itself.

This paper presents an original approach to intentionally designing organizational culture: starting with the prerequisites to determining what the culture is going to create, articulating the role of the leader and interpersonal relationships.

This approach is developed based on our theoretical and empirical research, as well as practitioner consultant work.

2. State of the art

Most theoretical and practical views on organizational culture approach it either as a stand alone phenomenon, or as a phenomenon based on the definitions of culture that we demonstrated earlier were incomplete (Tararukhina, 2019, b), such as employee value proposition, or reputation. These elements are part of the organization but they are not its culture.

Most cultural theories and research are done in mature organizations, and there is little empirical evidence about designing organizational culture intentionally from the first day of business life. Given that, we don't always know if leaders made mistakes and whether they were aware of them, which makes startups different from mature organizations from the standpoint of organizational culture.

Following E. Schein's definition of culture: how work gets done around here (Schein, 2004; Schein, 2015), any work on organizational culture should also follow the organization's strategy and be done within its context. Strategy depends on company's vision, purpose, and identity. In other words, we propose that there are several prerequisites of identifying the culture that a newly established organization needs, and we suggest that they should be identified in a specific sequence, described in the next paragraph.

New businesses and companies are typically organized either from scratch by new entrepreneurs (whether they have business education and management experience or not), or they are spun off by existing companies as a subsidiary or a new business, or by a serial entrepreneur who has experience in striating up companies. In the former situation, new entrepreneurs are often focused on the financial and marketing aspect of their new organization. This is a understandable approach, however if the culture that is being designed, does not help the business, they might not see that they need to pivot and where; designing culture intentionally from the beginning may seem like a daunting task, however it will be easier in the long run: there will be less need to change and shift culture when the organization may be vulnerable. We argue that the inception of the company is an important moment to be intentional about creating company's culture.

The latter two scenarios are more likely to look at intentionally building a new culture. The organization's strategy and mission may be different from the parent company. Serial entrepreneurs may have noticed what was effective and what was not, in their previous endeavors. If they haven't, the risks are higher to create the same culture expecting different results from the new business. For example, if the parent company is a hierarchical bank with a long history of celebrating individual achievement while its new business is about developing new investment products which would require the new business to be creative and innovative, it may be difficult to make that a reality under hierarchy and individualism when the new organization needs, for example, team work and interdependence with autonomy given to those teams to explore, experiment, and test products before offering them to the client.

Founding leaders (founders who also lead the company) get to make those decisions, which make their role crucial in defining, designing, maintaining, and shifting organizational culture. Lastly, interpersonal relationships play a key role in maintaining the organizational culture, making it real, as we have demonstrated before (Tatarukhina, 2019, a); here we will elaborate on what sustains the young culture in the short and longer run, when the organization grows and new employees may be coming in numbers outnumbering the original group.

3. New perspectives / contributions

Some of the key differences between a mature organization and a startup from the perspective of organizational culture remain in the experience that a mature company has in the market and in the industry; it may also be quite established and difficult to pivot, while a startup can be nimble and flexible. As we have previously demonstrated (Tatarukhina, 2019, b) the relationship between strategy and culture can be strong or weak, as well as culture itself can be intense or loose; in a startup however these relationships barely exist, there may be a potential for it. Culture develops naturally through a shared social experience, which can be overlooked by the founding leaders. That is why intentional design of the organizational culture can give an organization an edge in its business and mission.

3.1. Prerequisites to organizational culture

We already mentioned that what comes before culture is strategy. But what comes before strategy? And how can one create a culture aligned to the strategy? Before the newly formed entity or a business that is only being conceived, could effectively determine what culture it needs and how to go about establishing it, it needs to identify the following elements if its unique identity:

1. *Purpose* is the answer to the question: *Why does this company we exist?* This answer articulates organization's specific impact on the lives of its customers, which would be missing if the organization didn't exist.
2. *Mission* is a declaration of organization's general intention to accomplish something. It provides a direction to the company both in the present and projecting into the future.
3. *Vision* describes the organization as it would appear in a future successful state, as a result of the pursuit of its mission, having achieved or accomplished all its strategic goals.
4. *Strategy* explains how the organization will move forward, how it will advance its interests. The structure of strategy contains 3 elements: a diagnosis, a guiding policy, and coherent action. The guiding policy specifies the approach to dealing with the obstacles called out in the diagnosis.

Coherent actions are feasible coordinated policies, resource commitments, and actions designed to carry out the guiding policy (Rumelt, 2011). Strategy explains how the company will become its vision and achieve its mission.

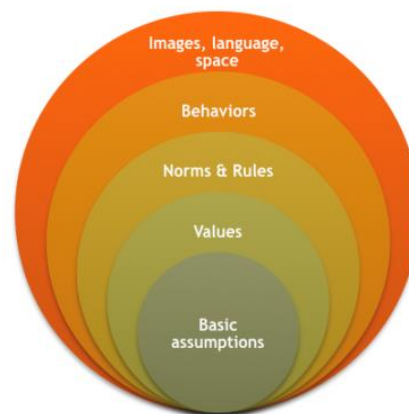
5. *Culture* is a shared way of how the work gets done around here to deliver on the strategy.

This list is organized in this specific sequence because each following element builds on the previous one: one cannot determine how the organization will move forward (strategy) if it is not clear where it is going (mission and vision). In this perspective, these elements must be aligned for an organization to be clear how to it will be successful and what may be in the way of its success. We suggest that this is the sequence to determine the organization’s identity. The next paragraph outlines an approach and a process of designing an organizational culture for a new organization. This process is agnostic of the founding leaders’ prior experience or new organization’s ownership status.

3.2. Original approach to designing organizational culture

After clarifying and aligning all prerequisites to defining culture, the question becomes what is the process of designing culture. As articulated by E. Schein (Schein, 2004), culture establishes based on a natural repeated social experiences that a group shares together, which then are interpreted into creating rules and norms that subsequently are attached a meaning, becoming the actual, real values that the organization lives by (not the declared ones). Eventually they become undiscussable, undoubted beliefs of what is true in this given organization. This is how culture happens when it is not intentionally designed: a lot of variables are left to happen as they will include sometimes not the best influence from the company founders (e.g. inconsistency, or consistency/prevalence of the opposite of what the strategy/mission needs). Figure 1 demonstrates our model of organizational culture as articulated earlier (Tararukhina, 2019, a) with five layers that go from more visible and experiential to those that are invisible and typically not talked about.

Figure 1. “Onion” model of the five layers of organizational culture.



“In this model, the layers represent:

- Images / language / space: observable, tangible materials and objects;
- Behaviors: observable actions people take in interactions and in doing their work;
- Norms: shared understanding of the distinction between what’s right and wrong, what’s acceptable and what’s not; Rules: dos and don’ts as well as knowing or the ability to forecast their consequences;
- Values: what is held important when members of the organization take action;
- Basic assumptions: beliefs that we assume to be true and do not question or typically even discuss.” (Tararukhina, 2019, b)

An intentional approach that we are proposing here, starts from determining the norms as the core of organizational culture (layer 3, in the middle of the model in Fig. 1). It would require leaders to adhere to these norms and influence the rest of the organization to practice them. Behaviors as well as values will ensue from well articulated norms. Behaviors will align with the norms to demonstrate living into these norms, and values will be created by attaching meaning to the norms when articulating why these norms are important in this organization, demonstrating what is the impact of practicing them, and how the organization as a whole and its individual members benefit. That articulation can happen through the organizational dialogue in formal and informal settings, such as town halls, team stand up meetings, and everything in between, including dedicated sessions.

As we postulated before, culture that helps organization's success, meets several criteria at the same time: it needs to be aligned with purpose, vision, mission and strategy that it need to help execute, and foster belonging, make it clear how to belong here (Tararukhina, 2019, b). They need to be the context in which the norms are being defined by the founding leaders and their first teams. These norms should answer two questions:

- What will help us achieve our mission?
- What will hinder us achieving our mission?

And the answers to the first question should be retained as norms. Initially determined norms may eventually evolve and multiply as organization grows in complexity, but the beginning needs not to be complex.

3.3. Role of a founder/senior leader in designing organizational culture

Founding leaders' role is significant in establishing and developing organizational culture (Schein, 2004). Their role extends from modeling the norms, as well as behaviors and articulating values, to helping others practice them. Helping others practice the norms can happen in both formal and informal settings by influencing, such as reinforcing, encouraging, supporting examples of effectively living into the norms, redirecting where needed by asking leading questions or by reconnecting back to the norms and values. Culture develops as a social process, social learning, and its development even intentional should apply the same rules.

When the organizational culture is intentionally designed from the inception of the organization (e.g. when founders define their norms before they even enter a partnership agreement), their professional relationships get moulded by the norms they want their organization to have. Those norms may simple or complex, but leaders need to take them seriously and demonstrate their commitment to other members of the organization.

Therefore, it is instrumental that senior leaders adhere to the organizational norms in their relationships with their direct reports: modeling, supporting, reinforcing, reconnecting as needed. This should be happening in all forums: formal, informal, team and organizational meetings as well as one on one meetings.

3.4. Role of interpersonal relationships in designing organizational culture

Interpersonal relationships between leaders are not the only interpersonal relationships that the organizational culture is based. Culture evolves through socialization and social learning. Consequently, culture lives in interpersonal relationships as much as in group meetings, it *gets transmitted and transformed through the vehicle of interpersonal workplace relationships*: they are an important carrier of organizational culture (Tararukhina, 2019, a).

The new organization's culture needs to be strong not to get eroded, which means that it needs to have norms that are strongly held by organizational members, values that support its strategy and mission. When newcomers will be coming to the organization, especially if they outnumber the incumbents, incumbents need to be able to effectively enculturate newcomers to avoid culture erosion: teach them the way things are done around here and help them practice the norms first, just the founding leaders did at the very beginning. This applies to both intentionally designed and naturally occurring cultures: they can get eroded by newcomers who don't know it. What is potentially dangerous about culture erosion is that culture would become looser and therefore less effective at supporting the strategy and achievement of the mission, which may make the company vulnerable.

4. Practical implications

We believe that this approach can be helpful to entrepreneurs and leaders of mature companies who set up affiliates. This approach is aimed to make it simple enough to follow, and be able to reduce the abstraction and nebulosity that accompany the concept of organizational culture. It is quite possible to determine those norms in a short period of time and simple to practice, which should increase the likelihood of that practice. Making it fun and simple may also be helpful to help culture stick, as well as to help entrepreneurs who have so many things to take care of when starting up a company, focus on what's most important. Described approach provides simple and actionable steps that help organizational leaders take ownership of their companies' culture and create it intentionally. This would help organizational clarity and ease of getting alignment, reduce time lost on misunderstandings and misalignment, focus on fulfilling the organization's purpose.

5. Originality and value

This approach and theory puts responsibility and ownership of culture of their organization on the leaders, where it belongs and not on any consultant or a designated person in the organization. It attempts to bring simplicity and clarity to the concept of culture and practice of working with it. It provides a framework of culture design that respects each company's uniqueness, agnostic of industries, and provides a roadmap of progressively shifting the culture in an evolutionary way.

6. Questions for future research

For the future empirical and theoretical research, it appears interesting to investigate how much time and effort this intentional approach saves founders and leaders on starting the new organization intentionally, making it happen has opposed to letting it happen naturally.

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CROSS-CULTURAL ASPECT OF INTERPERSONAL RELATIONSHIPS IN THE WORKPLACE IN THE PERIOD OF REORGANIZATION

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Abstract

In the conditions of fragility of building interethnic relations, turning to the problem of development of interpersonal relations in mono-cultural and multi-cultural teams of employees of an enterprise in the period of reorganization is extremely relevant. In order to improve the efficiency of organizations great attention is paid to the role of cross-cultural management in forming the effective intercultural interaction and reducing intercultural conflicts. The article presents the results of the empirical research conducted by the authors; the conclusions made after processing data using the methods of mathematical statistics. The analysis of the obtained empirical data shows that in the period of reorganization the factor of cross-cultural composition of the teams of employees under study actively manifests itself in interpersonal relations. Differences were found in the level of certain characteristics of employees in different types of ethnic environments. In general, more statistically significant connections between personal and behavioral characteristics were found in the sample of employees in a multi-ethnic environment compared to the employees in a mono-ethnic environment. The development of interpersonal interaction in a team of employees in a multi-ethnic environment in the period of reorganization should be based on the development of the most significant characteristics of their personality and behavior: positive ethnic identity, empathy, interpersonal trust and skills and abilities of building interpersonal interaction.

Keywords: *Russia, interpersonal relationships, cross-cultural communication, multi-ethnic environment, quality of relationships at work, labor collectives, interethnic relations.*

1. Introduction

At present the issues of cross-cultural management and intercultural communications are becoming more and more relevant: business and intercultural relations are expanding, multinational teams are being formed. Among the theories that describe the essence of cultural differences and explain their impact on organizational behavior, the following concepts are distinguished: Values Orientation Theory (Kluckhohn & Strodtbeck, 1961); Context of Culture (Hall & Hall, 1990); Cultural Dimensions Theory (Hofstede, Hofstede, & Minkov, 2010; Konstantinov, 2017). Differences between cultures in the attitude to the world were empirically confirmed. There are individualistic (competitive relations and each worker's values are at the heart of management) and collectivist (hierarchically built models of management, values of the team are more important) cultures (Bono & Yoon, 2012; Ryzhova, Konstantinov, Gritsenko, & Khukhlaev, 2018; Khukhlaev et al., 2019; Konstantinov & Kovaleva, 2013).

At first, in the 1970s the world smaller countries (Finland, Denmark, Sweden, and the Netherlands) started to study the problems of cross-cultural differences in international business. Later these countries were joined by the leading world powers (Germany, Great Britain, the USA), and later on by Italy, Spain, and France.

R. Lewis emphasizes the fact that in the context of globalization modern business requires both great knowledge and good relationships, it is necessary to take into account cross-cultural aspects (Lewis, 2000). At the same time, problems in intercultural communication arise not because of the difficulties of communication, but because of the differences of individuals.

The quality of interpersonal relationships determines the way employees behave both at work and in personal life (Allen & Eby, 2012; Dutton, 2014). Typically, high-quality relationships lead, among other things, to their commitment, productivity, motivation, innovation, error detection, favorable employee behavior, teamwork, helping others, effective internal and external organizational communication, avoiding conflicts, and resistance to negative events. Conversely, poor employee relationships have a detrimental impact on these aspects of the organization (Bono & Yoon, 2012; Ryzhova et al., 2018; Khukhlaev et al., 2019; Konstantinov & Kovaleva, 2013). The level of efficiency

and development of an organization is largely determined by the ability of employees to interact and cooperate with each other, which can be traced in a cross-cultural context.

The impact of the ethno-cultural factor, which leads to the formation of a special environment for building interpersonal relations, was studied by a number of domestic and foreign psychologists. But the data on the influence of ethnic characteristics of individuals on their interpersonal relationships are insufficient to build a holistic view of this process (Berry, Galyapina, Lebedeva, Lepshokova, & Ryabichenko, 2019; Grigoryev, van de Vijver, & Batkhina, 2018; Khukhlaev, Kuznetsov, & Chibisova, 2013; Raman, Sambasivan, & Kumar, 2016).

Interpersonal relationships are subjectively experienced relationships between people, mutually influencing each other in the process of cooperation and communication. They differ in a number of parameters: their origin, stability, duration, openness of the parties, etc. The process of initiation, maintaining and termination of interpersonal relationships is determined by a number of factors. These include individual psychological and typological features of the interpersonal interaction, as well as the conditions for this interpersonal interaction.

The ethnic factor is an important factor for maintaining efficient interpersonal relations. Researchers note that the ethnic environment includes many modifications of the surrounding reality, accumulated by members of the ethnic community in the course of its historical development. The ethnic factor sets the context for interpersonal relations, determines the behavioral patterns of their individuals and the readiness to maintain relations with a member of another ethnic group. At the personal level, ethnicity is manifested in the level of the person's ethnic identity, ethnic self-consciousness, the ability to acquire ethnic attitudes, stereotypes, prejudices, etc.

2. Selection, techniques and methods of the research

426 employees (from 18 to 56 years of age) of enterprises of the Penza region and the Republic of Mordovia participated in our empirical study. We assumed that interpersonal relationships of employees in the period of reorganization are a complex phenomenon determined by the ethnotype of the working environment and characterized by a number of features that influence their qualitative and quantitative parameters.

Verification of the proposed hypotheses was carried out by solving a number of theoretical, methodological and empirical problems. The empirical study aimed to compare the distribution of status positions among members in mono- and multi-ethnic groups, to identify the level of conflict in their relations, to study the examples of the phenomena of empathy and trust in mono- and multi-ethnic environment, to establish the type of the relationship between ethnic identity and response/feedback strategies in conflict situations (compromise, cooperation).

In the course of the study, the following methods and techniques were used: "The Interpersonal Trust Scale" by J. B. Rotter, "The technique of empathic abilities diagnosis" by V. V. Boyko, "Types of ethnic identity" by G. U. Soldatova, "The level of conflict" by A. M. Ganeev and L. S. Tronova, "The features of handling conflict styles" by C. Thomas. To process the results of the study, mathematical procedures of indicators and statistical data reliability assessment were used (Raygorodsky, 2017; Tatarko & Lebedeva, 2011).

3. Results of the research, their discussion

In the course of the empirical study, it was found that employees of mono-ethnic professional environments are much more likely ($p < 0.01$) to come into contact with each other than workers of multi-ethnic professional environments. Contacts of people belonging to different ethnic groups are usually limited to issues connected with business or job responsibilities.

Workers in mono-ethnic environments maintain interpersonal contacts for a longer period than workers in multi-ethnic environments ($p < 0.05$). Interpersonal relations of workers in mono-ethnic groups are more dynamic by nature and prolonged in time. Considerable length of interpersonal contacts in mono-ethnic environments is caused by numerous reasons and grounds to establish and maintain such relationships, by greater interest in each other, their desire to communicate, and their openness to interaction.

There is a difference in the modality of interpersonal relationships between the workers of the two samples (at a statistically reliable level of $p < 0.01$). Workers from a mono-ethnic professional environment show more enthusiasm than workers in multi-ethnic environments. These observations indicate that in multi-ethnic environments there is certain tension and reticence in contacts and interpersonal relations between employees of different ethnic groups. At the same time, they are more sensitive to issues concerning ethnicity and ethnic background, so they are more likely to engage in conflict with each other.

The percentage of workers with the average status in mono- and multi-ethnic environments is approximately the same (75.9% and 70.4%, respectively). Differences were found in the percentage of

workers with high and low sociometric status depending on the environment they belong to. The percentage of high status workers in mono- and multi-ethnic professional environments was 19.1% and 11.7% respectively ($p < 0.05$). More fundamental differences were found in the subsamples of workers with low sociometric status in mono- and multi-ethnic environments (5.0% and 17.9% respectively). The percentage difference is characterized by statistical significance ($p < 0.01$), i.e. in multi-ethnic environments the proportion/ percentage of workers with low sociometric status is much higher than in mono-ethnic environments.

In mono-ethnic groups the number of workers with a low level of conflict exceeds (18.1%) the proportion of such workers in multi-ethnic environments (13.1 %). The same trend is observed with the percentage of workers who are characterized by an average level of conflict: there are slightly more of them in mono-ethnic groups (68.2%) than in multi-ethnic groups (61.9%). The level of statistical significance $p < 0.05$, indicating certain differences between the compared samples, does not allow us to note their stability.

According to the results, workers in multi-ethnic professional environments show a higher level of conflict than workers in mono-ethnic environments. The reason is that the multi-ethnic environment requires that workers meet additional challenges, e.g. choosing life priorities. In contrast to workers from mono-ethnic environments, who are faced only with the task of personal self-assertion, professional and life choices, workers from multi-ethnic environments need to self-identify in their own ethnic environment, to correlate their personal, professional, and life priorities with ethnic attitudes, norms, and customs. At the same time, they have to interact with representatives of other ethnic groups, with an ethnically different culture, attitudes and customs. The complexity and diversity of the tasks, workers from multi-ethnic environments are faced with, create tension; make them more aggressive and contentious in interpersonal interaction. To the greatest extent, it is this kind of behavior that is used with people belonging to other ethnic groups.

Workers from mono-and multi-ethnic environments have statistically significant differences ($p < 0.01$) in the degree of manifestation of the high and low levels of interpersonal trust. In the sub-samples of workers, there was a significant excess of the number of employees with a high level of interpersonal trust (the average value is 27.0 %) over the number of employees with a low level of interpersonal trust (14.0 %). In sub-samples of workers in multi-ethnic environments, a statistically significant excess of the number of employees with a low level of interpersonal trust (27.6 %) over the number of employees with a high level of interpersonal trust (13.3%) was found. In a sample of workers working in a mono-ethnic environment, the average value of interpersonal trust is 6.5 units, in a sample of workers in a multi-ethnic environment it is 4.3 units. The obtained discrepancy in the quantity of manifestation of the trait indicates statistically significant differences in its manifestation in workers, depending on what environment (mono- or multi-ethnic) the employee belongs to. In a multi-ethnic environment, interpersonal trust between workers is much less manifested than among workers working in a mono-ethnic environment.

In the sample of workers from a multi-ethnic environment, there tends to be more workers with a low level of empathy. However, the differences in the level of empathy were somewhat more smoothed, not so vividly manifested. This can be explained by the specific functioning of the phenomena under consideration. It is obvious that empathy has more opportunities for its development, regardless of the ethnic and national characteristics of the people around. Trust is based on knowledge of a wider range of background information that characterizes the subject of potential interaction. Accordingly, it may be easier for a person to show empathy than interpersonal trust. At the same time, it is interpersonal trust that has the greatest influence on the quality and intensity of building interpersonal relationships in the environment.

In multi-ethnic environments in all sub-samples tested by the "Types of ethnic identity" by G. U. Soldatova, the proportion of workers characterized by ethno-egoism, which can be expressed either in a harmless form or by a very aggressive behavior, predominates. In the first case, the perception of the surrounding world through the semantic prism of "my people" comes first. In the second case, employees demonstrate sufficient tension/aggression in interpersonal relationships with people belonging to other ethnic groups. It can be supposed the high level of conflict and low levels of empathy and interpersonal trust in multi-ethnic environments is caused the dominance of this type of ethnic identity.

Studying the types of response to a conflict situation allowed us to find out that in the samples of workers in mono-ethnic environments, cooperation is the most widely-used strategy of behavior in conflict situations (27.5 %). This type of behavior manifests itself in adopting the decision that fully satisfies the interests of both parties to the conflict. Trying to achieve a compromise is another type of widespread behavior in a conflict of employees in a mono-ethnic environment (23.6 %). The behavior of employees who follow this pattern of behavior is manifested in the establishment of an agreement between the parties to the conflict. Competition/rivalry is another form of behavior in a conflict situation (22.2 %). This type of behavior in a conflict situation is manifested in the desire of workers to forward their own interests at the expense of the interests of the partners in interpersonal interaction. In the samples of workers under study adaptation (14.4 %) and avoidance behavior (12.3%) come next. These

strategies of behavior in a conflict situation are chosen by approximately 10% of the entire sample of employees in a mono-ethnic environment.

In a sample of workers in multi-ethnic environments other behavioral preferences in conflict situations were detected. However, we note that the preferred behavioral patterns in the sample of employees were distributed more evenly in this group. The evident type of behavior in the sample of workers in a multi-ethnic environment was avoidance behavior (23.8 %). Accordingly, we can say that approximately 25% of the employees, in this case, are focused on avoiding a conflict situation. At the same time, they do not demonstrate the desire to ensure cooperation with the subject of interaction and are not focused on achieving any of their own goals in a conflict situation. Approximately the same percentage of employees in the sample of employees in a multi-ethnic environment was focused on the strategy of competition in a conflict situation (23.1 %). This type of behavior, associated with the desire to achieve the satisfaction of their interests at the expense of the interests of the partner in interpersonal relations, was demonstrated by about a quarter of all employees in a multi-ethnic environment. In a multi-ethnic environment the strategy of adaptation to the current situation was mostly expressed. This type of behavior was chosen by 21.6 % of workers, i.e. about 1/5 of the entire sample. This type of behavior is characterized by sacrificing one's own interests for the sake of the interaction partner. This behavior is the opposite of rivalry/competition in a conflict situation, which is the second most commonly demonstrated behavioral pattern in this sample. The cooperation strategy (20.6%) turned out to be significant for employees in a multi-ethnic environment. This type of behavior in a conflict situation was a priority for about 1/5 of the workers in the sample. This suggests that a fairly large proportion of workers in a multi-ethnic environment are ready to accept an alternative that would fully satisfy the interests of both sides in interpersonal relations.

The most evident differences between workers in mono- and multi-ethnic environments were revealed in the two types of behavior in a conflict situation – trying to achieve a compromise and avoidance behavior. Workers who study in a mono-ethnic environment are more inclined to use the first type, while workers in a multi-ethnic environment tend to follow the second behavioral pattern. A difference in the propensity to use adaptation strategy and to cooperate was revealed only as a trend. The first type of behavior (adaptation) is characteristic of workers in a multi-ethnic environment, while the second (cooperation) characterizes workers in a mono-ethnic environment.

The analysis of the obtained empirical data shows that the factor of cross-cultural composition of the groups has a great impact on interpersonal relationships in their teams under study in the period of reorganization. The method of correlation analysis made it possible to establish differences in the level of intensity of interconnection of employees belonging to different types of ethnic environments. In mono-ethnic environments several trends characterizing their interpersonal relationships are observed: trust goes with a tendency to compromise ($p < 0.001$); ethnic nihilism is directly combined with conflict, on the one hand, and with a tendency to compromise, on the other hand, ($p < 0.01$); ethnic nihilism goes with ethnic fanaticism (feedback) ($p < 0.01$); ethnic indifference is combined with a tendency to cooperate (feedback) ($p < 0.05$); avoidance behavior is not compatible with the tendency of an individual to compete in a conflict situation of interpersonal interaction ($p < 0.01$).

In the multi-ethnic environment the following relationships were observed: those between a positive ethnic identity and a tendency to cooperate (direct link) ($p < 0.01$), as well as tendency to ethnic isolationism and conflict (feedback) ($p < 0.001$); empathy and a person's desire to cooperate (direct link) and ethnic isolationism (feedback) ($p < 0.01$); interpersonal trust and inclination to adapt (direct link) ($p < 0.01$); a tendency to compromise and avoidance behavior (feedback) ($p < 0.05$). The development of interpersonal interaction in a multi-ethnic environment in a team of employees in the period of reorganization should be based on the development of the most significant characteristics of their personality and behavior: positive ethnic identity, empathy, interpersonal trust and skills and abilities of building interpersonal interaction.

4. Conclusions

In the sample of employees of a multi-ethnic environment, the positive ethnic identity of an individual was the most informative. The great number of statistically significant connections of personality traits and types of behavior was found out. Such characteristics of employees' personality as empathy and ethnic isolation (two correlations) were also quite informative. On the whole, there are more statistically significant correlations between personal and behavioral characteristics in the sample of employees in a multi-ethnic environment than in a mono-ethnic environment. The development of interpersonal interaction in a multi-ethnic environment in teams of employees in the period of reorganization should be based on the development of the most significant characteristics of their personality and behavior: the positive ethnic identity, empathy, interpersonal trust and skills of building interpersonal interaction.

The greatest problems in intercultural communication among team members and conflicts are caused by cultural differences. The solution to these problems depends on the use of cross-cultural

management strategies. In order to form an effective management system of a multinational company, the following points should be taken into account: the type of multinational company, the influence of corporate and national cultures, the dominant position of one national culture in the team over others, the necessity to acculturate new members of the organization, training managers of multinational companies to work within a different national culture, being aware of a communication code of this foreign culture (the language, customs and rules of behavior, psychology and mentality, etc.).

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The study was conducted according to the American Psychological Association's (APA) ethical principles of psychologists and code of conduct.

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THE FACTORS SUPPORTING THE SLOVAK TEACHERS' TURNOVER ACCORDING THE TYPE OF SCHOOL

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Abstract

When it comes to the teaching profession, Slovak teachers report a number of problematic issues that lead to many negative consequences in well-being, physical and mental health, and subsequently to considerable turnover rate. According the research studies, there are numerous factors related to teacher turnover, but we assume that turnover are closely linked to the situation in the country, economic conditions etc. Our aim was to find, which of research factors are important among Slovak teachers according the type of school, in which they teach. The research sample consisted of 132 teachers (87.1% women), aged 24 to 68 ($M=38.03$, $SD=10.2$). Of the total number of teachers, 15.6% worked at preschools, 53.9% worked at primary schools, 13.3% worked at secondary vocational schools, 14.1% worked at secondary schools. An online questionnaire measuring: gender, age, and the type of school the individual teaches in. Subsequently, the teachers had a list of 27 areas at their disposal, where they were able to choose a maximum of 7 areas, they consider to be the most problematic and causing possible turnover in the teaching profession. Descriptive statistics were used for data analyses. In relation to the results, we interpreted as problematic these areas, which were marked at least one third of the respondents. We stated that teachers from different type of schools agreed on what is problematic in teacher profession and what can influence their turnover, except the teachers from preschools. Teachers from different type of schools (a=primary school; b=secondary vocational school; c=secondary school) perceived these areas as problematic: remuneration (a-68.1%; b-76.5%; c-77.8%); job satisfaction (a-62.3%; b-64.7%; c-61.1%); students' behavior during classes (a-56.5%; b-58.8%; c-38.9%); students' aggressiveness (a-60.9%; b-47.1%; c-55.6%); students' performance (a-44.9%; b-52.9%; c-55.6%). Other problem areas that have been mentioned in at least two types of schools included: stress linked to the teaching profession; work with a minority group; communication with parents; class size; working conditions; school's financial resources; teacher status in society and perceived value of teacher's work. Other areas didn't label as problematic. The research findings have extended the previous research in the context of Slovak teachers' turnover, which is little researched in Slovakia and is limited to the determining the current status of turnover without any deeper understanding of the causes. However, knowing the causes of Slovak teachers' turnover may be helpful in reducing it.

Keywords: *Teacher turnover, factors, Slovak teachers.*

1. Introduction

There is considerable tension among Slovak teachers today even though efforts are being made to improve their working conditions through various legislative amendments and teacher-related agreements. There are still a number of areas related to the teaching profession, teaching, and the education system as such that are problematic (Harkotová, 2018). It is important to note that not solving teachers' problems translates into turnover tendencies and turnover itself. Turnover is a voluntary departure from one's current job or organization (Milovanovic, 2017). Most studies focus on turnover tendencies as indicators of an intention to leave. Turnover tendencies or intentions to change one's job are defined as a deliberate and willingly controlled mental activity containing motivational elements, which leads the individual to leave the current organization (Tett & Meyer, 1993). Turnover is defined as a final product and turnover tendencies as a precursor to actual turnover. Turnover is linked to a number of negative impacts, including negative financial impacts (Abbasi, Hollman, & Hayes, 2008; Barnes, Crowe, & Schaefer, 2007); negative consequences on the remaining employees (Abbasi et al., 2008; Yin-Fah, Sok Foon, Chee-Leong, & Osman, 2010); greater school instability, disruption of curricular cohesiveness, and a continual need to hire inexperienced teachers, who are typically less effective (Grissom, 2011).

According to the literature and research studies review, there are a lot of determinants or factors related to turnover and turnover tendencies, and opinions on them vary from author to author. We include to these factors according to the other authors: size of school (Barnes et al., 2007); type of school (Cano et al., 2017; Stuit & Smith, 2010); working (organizational) conditions (Stuit & Smith, 2010; Ingersoll, 2001b; Grant, Jeon, & Buettner, 2019); class autonomy of the teachers (Ingersoll & May, 2012); superiors, management (Ingersoll, 2001a; Grissom, 2011; Kraft, Marinell, & Shen-Wei Yee, 2016); mentoring (Smith & Ingersoll, 2004); school poverty (Allen, Burgess, & Mayo, 2017; Barnes et al., 2007; Holme, Jabbar, Germain, & Dinning, 2017); students' performance (Barnes et al., 2007; Holme et al., 2017; Guin, 2004; Ronfeldt, Loeb, & Wyckoff, 2013); students' behavior (Ingersoll, 2001a); minority (Holme et al., 2017; Guin, 2004; Barnes et al., 2007; Ronfeldt et al., 2013); remuneration (Ingersoll & May, 2012; Ingersoll, 2001a); job satisfaction (Ajayi & Olatunji, 2018; Kravčáková et al., 2011; Addai et al., 2018); motivation (Grant et al., 2019); personal health (Ajayi & Olatunji, 2018); subjective well-being (Yang, Fan, Chen, Hsu, & Chien, 2018; Grant et al., 2019); role stress (Yang et al., 2018); teacher victimization (Curran, Viano, & Fisher, 2017); Burn-out syndrome (Laschinger & Fida, 2014; Huei-Ling & Ven-hwei, 2017); conflict between professional life and personal life (Ajayi & Olatunji, 2018; O'Neill et al., 2009); organizational justice (Addai et al., 2018); organizational commitment (Bull, 2005 in Ajayi & Olatunji, 2018); job involvement (Ashrafi, Farzaneh, & Azizi, 2017); freedom to decide (Ingersoll, 2001a); work engagement (Wan, Li, Zhou, & Shang, 2018).

We can see that there are a lot of factors in play. We assume that turnover and turnover tendencies are closely linked to the situation in the country, economic conditions, job description specifics, etc. We conducted a survey to identify the most important factors relevant to Slovak teachers, focusing on the areas teachers consider to be particularly problematic, i.e. potential reasons for turnover tendencies or actual turnover.

2. Goal of the survey

The goal of the survey was to identify the most important factors determining Slovak teachers' turnover tendencies and actual turnover according to the type of school, in which they teach (preschools, primary schools, secondary vocational schools, secondary schools).

3. Methods

3.1. Study sample and procedure

Our survey involved 132 teachers (87.1% women), aged 24 to 68 ($M_{age} = 38.03$, $SD = 10.20$). Of the total number of teachers, 15.6% worked at preschools, 53.9% worked at primary schools, 13.3% worked at secondary vocational schools, 14.1% worked at secondary schools, and 3.1% worked at other types of schools.

The research sample was selected from teachers reachable via social networks or email, taking advantage of the snowball effect. Suitable research participants ($n=150$) were subsequently contacted online. After giving their informed consent, they filled in an online survey questionnaire.

3.2. Measures

At the beginning, we looked into the following social-demographic variables:

- gender;
- age;
- the type of school the individual teaches in (preschool / primary / secondary vocational / secondary / other);

Subsequently, the teachers had a list of areas at their disposal, where they were able to choose a maximum of 7 areas they consider to be the most problematic in the teaching profession; more precisely, they were asked the following question: "What are you dissatisfied with and what type of departure would you consider for what area if this was possible?" The individual areas they could choose from were written down based on our review of the researched factors determining teacher turnover and turnover tendencies. The list included 27 areas related to the teaching profession. Additionally, the teachers involved in the survey were also given the choice of adding another area, other than those specified in the compiled list.

3.3. Statistical analysis

The information collected in the course of the survey was processed using descriptive statistics available in the SPSS 21.0 program.

4. Results

The goal of this survey was to select the most important factors of Slovak teachers' turnover tendencies and turnover itself. Table 1 shows the percentage representation of individual researched areas depending on the areas the respondents consider the most problematic in the teaching profession, that is to say, areas that would make them consider any type of departure.

Table 1. A percentage representation of individual areas depending on perceived problems in the teaching profession according the type of school, in which teachers teach.

Researched area	type of school				TOTAL
	preschools	primary schools	secondary vocational schools	secondary schools	
Remuneration	90.0%	68.1%	76.5%	77.8%	72.7%
Job satisfaction	65.0%	62.3%	64.7%	61.1%	63.6%
Students' behavior during classes	20.0%	56.5%	58.8%	38.9%	50.0%
Stress linked to the teaching profession	30.0%	58.0%	52.9%	27.8%	47.0%
Students' aggressiveness	0.0%	60.9%	47.1%	55.6%	45.5%
Work with a minority group	30.0%	50.7%	47.1%	16.7%	42.4%
Students' performance	10.0%	44.9%	52.9%	55.6%	42.4%
Communication with parents	20.0%	42.0%	29.4%	55.6%	42.4%
Class size (number of students in class)	30.0%	34.8%	52.9%	16.7%	33.3%
Working conditions (environment)	30.0%	34.8%	35.3%	16.7%	33.3%
School's financial resources	30.0%	23.2%	35.3%	44.4%	28.8%
Non-financial benefits	20.0%	21.7%	41.2%	22.2%	22.7%
Management, superiors and relationship to them	50.0%	11.6%	5.9%	5.6%	16.7%
Teacher status and value of teacher's work	5.0%	4.3%	35.3%	50.0%	16.7%
Quality of relationships with colleagues	30.0%	13.0%	5.9%	11.1%	13.6%
Health risks	10.0%	11.6%	5.9%	16.7%	13.6%
Perception of justice	30.0%	11.6%	5.9%	16.7%	13.6%
Career growth, opportunities for promotion	10.0%	13.0%	5.9%	11.1%	12.1%
Work with students in general	0.0%	14.5%	5.9%	16.7%	12.1%
Support from superiors	30.0%	4.3%	5.9%	22.2%	12.1%
Motivation	10.0%	7.2%	23.5%	5.6%	9.1%
Work commitment and engagement	10.0%	8.7%	5.9%	11.1%	9.1%
Workplace communication	10.0%	5.8%	5.9%	16.7%	7.6%
Mobbing / bossing	20.0%	2.9%	0.0%	11.1%	6.1%
Type of job (work itself)	10.0%	5.8%	0.0%	0.0%	4.5%
Conflict between professional life and personal life	0.0%	4.3%	5.9%	0.0%	3.0%
Freedom to take decisions and manage	0.0%	2.9%	5.9%	5.6%	3.0%

In relation to the presented results, we will focus on areas (factors) identified as problematic in the teaching profession by at least one third of the respondents.

5. Discussion and conclusion

We can conclude that more attention is paid to teacher turnover tendencies and teacher turnover abroad than in Slovakia. In the course of our study, a number of background factors were researched, too. In Slovakia, research is focused more on determining the current status of turnover and turnover tendencies without any deeper understanding of the causes; alternatively, turnover and turnover tendencies are only seen through problematic areas. Little attention is paid to the reasons causing the turnover of teachers, which leads to the fact that no effective effort is made to solve the turnover of Slovak teachers. It seems to be generally agreed that remuneration and issues encountered by teachers are the main reasons for turnover. However, there is no focus on what could motivate Slovak teachers to remain in their profession, finding ways of helping them solve their problems, or convincing them that their work is important and appreciated.

We assume that if we want to solve teachers' turnover tendencies and actual turnover, we have to take a closer look at what lies beneath, i.e. the factors that determine the phenomena in question. However, based on our review of existing research, we conclude that there are an almost infinite number of factors determining teachers' turnover tendencies and turnover itself, which is why we need to select only those that are relevant to Slovak teachers. We were able to do this after a thorough analysis of all the factors and additional information specified by Slovak teachers in surveys recently conducted in Slovakia. The result was a list of 27 areas, which we subsequently submitted to a sample of Slovak teachers, asking them to indicate which of the 27 areas they consider the most problematic and which of them would prompt them to consider any type of departure. We focused on areas that had been marked as problematic by at least one third of the Slovak teachers in the research sample, namely remuneration, job satisfaction; students' behavior during classes, aggressiveness, and performance; stress linked to the teaching profession; work with a minority group; communication with parents; class size; and working conditions (environment).

This research represents the first step in searching the causes of turnover tendencies and turnover of teachers and is the basic for our future researches, which will be focused on choosing factors in wider context. The aim will be reduction of turnover tendencies and turnover through motivate Slovak teachers to remain in their profession through the focusing on improving the job satisfaction or learning how to manage teacher stress or how better communicate with parents etc. we will focus mainly on these areas, which were revealed as problematic in our research.

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STRUCTURE OF MONEY ATTITUDES OF SMALL INDIGENOUS PEOPLES OF THE RUSSIAN ARCTIC (ON THE SAMPLE OF NENETS)

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Abstract

Negative effects of globalization are visible in the most remote parts of our planet today including human life in the Arctic. Perhaps, economic changes are the most painful for the small indigenous peoples of the North. The active development of the fuel and energy sector causing environmental problems limits the opportunities for traditional farming and creates a need to change the economic behavior strategies of the indigenous peoples of the North. However, this particular behavior including attitude towards money has not been sufficiently studied. Money attitudes were studied (N=75) using the Money Beliefs and Behavior Scale (Furnham, 1984). The results of the factor analysis have showed a more fractional structure than in Furnham's studies (1984, 2014) indicating a complex and ambiguous (more diverse) picture of the reflection of money in the economic mind of northern peoples. Nine factors were identified and supported by strong correlation links: money as power, money as an indicator in social comparison, money as evil, the factor of respect for money, factor of money fetishism, factor of restrictive behavior, and factor of financial control, factor of financial anxiety, factor of financial success or failure. Despite a large number of factors, the main trends of money attitudes of small indigenous peoples of the Russian Arctic can be observed. They do not put money first in their values, do not use them as a tool of influence on other people, they respect those who know how to save money and do not spend it in vain. At the same time, there is a place for financial anxiety and pessimism, negative feelings related to money. The results should be taken into account in the program for the transformation of the economic behavior of the indigenous peoples of the Russian Arctic.

Keywords: *Money attitudes, small indigenous peoples, economic mind, Russian Arctic, economic behavior.*

1. Introduction

These days the effects of globalization are noticeable in the most remote corners of our planet including the changes in human life in the Arctic. Perhaps, changes in the economy were the most painful for the indigenous peoples of the North. The active development of the fuel and energy complex causing environmental problems limits the possibilities of traditional farming and reveals the need to change the strategies for the economic behavior of the indigenous peoples of the northern territories (Detter, 2017; Pavlenko et al., 2019; Sukneva, 2010 et al.). At the same time, the economic behavior of the indigenous peoples of the Russian Arctic, including their attitude to money, has not been studied enough.

The previous pilot study on the material of the Nenets youth (Zabelina, Kurnosova, 2018) revealed contradictions in attitude to money in this sample. On the one hand, the young people are less rational, naiver in dealing with their personal finances than their peers from the southeastern part of the country. For example, they are willing to participate in lotteries, and borrow money easier. Additionally, they do not like to count and plan their money accurately. On the other hand, the Nenets youth perceive money as something stable that can be relied upon, and, at the same time, associated with negative emotions. Perhaps, due to the revealed contradictions in the economic consciousness, the young Nenets subconsciously seek to get rid of money. They can use money as a tool in building relationships. Perhaps, the young people of this group do not completely separate the economic and personal sphere (Zabelina, Kurnosova, 2018). These trends highlight the risks of adaptation of the young Nenets to modern economic realities and are confirmed in other studies (Lusan et al., 2019).

The revealed contradictions initiated this study, the purpose of which is to identify the structure of the attitude towards money among representatives of the indigenous peoples of the Russian Arctic, in particular, on the example of the Nenets.

2. Method and sample

Attitude to money was studied using A. Furnham's questionnaire "Money Beliefs and Behavior Scale" in the adaptation of O.S. Deineka (1999). Furnham was the first who proposed to explore money attitudes through the multifactorial questionnaire instead of using standardized techniques (Furnham, 1984) because of the flexibility that characterizes attitudes. The questionnaire consists of 45 items.

The study involved 75 people - representatives of the Nenets nationality aged 17 to 73 years (average age 28.6) living in the Yamal-Nenets Autonomous District (Aksarka village, Yar-Sale village) and the Nenets Autonomous District (Naryan-Mar city, Nes village, Krasnoye village). The form of the questionnaire was presented to the respondents in hard copy during the Reindeer Breeder Day celebration. The respondents' behavior, the clarification questions they asked, and the time of completion were fixed (the average time for filling the questionnaire was 20 minutes).

To substantiate the structure of money attitudes of the Nenets, an exploratory factor analysis was performed based on the method of principal components with Varimax rotation. When processing the data, a statistical package SPSS 24.0 was used, including the structural equation software IBM SPSS AMOS 22. (IBM Corporation, Armonk, NY, USA).

3. Results

A factor analysis of the questionnaires made it possible to identify 9 factors in the structure of the Nenets' monetary attitudes supported by strong correlations that reflect the main trends in their attitude to money.

The first factor, "Money - power," includes various ways of influencing people by dint of money (in competition, in friendship and love, through demonstrative behavior and play). According to the descriptive statistics, the respondents mostly deny manifestations of financial behavior of this type. This factor included with a negative sign the aggregate opinions of respondents on the following statements:

- "I often use money to influence rivals or enemies";
- "I usually feel better than those who have less money";
- "I think money is the only thing I can rely on";
- "I play lotteries";
- "Sometimes I buy things I don't need to impress my friends";
- "Questions about my personal money bother or annoy me".

It can be assumed that money is not an instrument of influence on other people for the Nenets or a means of achieving goals in personal relationships. In addition, money is not a priority in the value system of these peoples, nor is it a matter of concern or evident care.

The second factor, "Money as an indicator in social comparison" (envy, pleasure in spending) combines the commonality of opinion (also with a negative sign) according to the following statements:

- "I do not conceal from others the amount of money I have";
- "I feel worse than those who have more money than me";
- "My financial situation is worse than most of my friends think";
- "I often leave small change to the seller";
- "It is a pleasure for me to spend money";
- "Most of my friends have more money than me".

Negative values of these statements may indicate that the financial situation of the representatives of the indigenous peoples of the Russian Arctic is neither a subject of demonstration for other people nor a secret. They are not inclined to compare their financial status with the status of other people from their environment, the envy of money is also not typical for them.

The third factor of respect for money (ability to save) includes a respect for the ability to save money, not to waste money, accuracy in dealing with money and thereby to increase one's financial well-being. At the same time, this factor reflects the fact that money is not the main value in the lives of these peoples, there are more important things, such as helping another person in need, or the quality and reliability of the goods or services purchased.

- "I am proud of my ability to save money";
- "My financial situation is better than most of my friends think";
- "When shopping, I primarily think about the price (with a negative sign)";
- "I give alms";

“I lay out the money in my wallet neatly in order of increasing value”.

The fourth factor combines the idea of onomania with contempt for money (or “Money is evil”). This factor includes controversial but generally negative opinions about money. On the one hand, this is an irrational desire to spend money, a lack of readiness to clearly realize one’s financial situation. On the other hand, this factor reflects negative feelings associated with money - contempt, expectations of deception, anxiety, etc.

“I always know how much I have saved (with a negative sign)”;

“If I have any amount of money, I feel uncomfortable until I spend it”;

“I despise money and those who possess it”;

“I feel cheated if I pay for something more than others”;

“I think about money more often than others”.

The fifth is the “Factor of fetishization of money”. According to this factor, money for the representatives of the indigenous peoples is a symbol of freedom, a force that can solve all human problems. However, the Nenets do not believe that the presence of money is an indicator of one’s moral qualities, and they think that most people share this opinion.

“In our country, a person is judged by the amount of money he has (with a negative sign)”;

“I feel freer when I have money”;

“The best gift is money”;

“I strongly believe that money can solve all my problems”.

The sixth factor - the “Factor of restrictive behavior” - reflects the presence of psychological attitudes, mechanisms that restrain monetary spending, among representatives of the indigenous peoples of the North.

“Even if I have a lot of money, I feel guilty spending money”;

“I find it difficult to make decisions about spending money, regardless of their amount”;

“I like to count money”.

The seventh factor - the “Factor of financial control” - indicates the need for a clear, consistent calculation of one’s funds and the control of savings, as well as a careful attitude to money.

“I always know how much I have accumulated”

“I keep track of my expenses and income”

“I always know exactly how much money I have with me”.

“I lay out the money in my wallet neatly in order of increasing value”.

The eighth factor is the “Factor of financial anxiety”. This factor also reflects a careful attitude to money and focus on them, as well as the expectation of a financial failure in the future, financial pessimism.

“I carefully examine the design of notes and coins”;

“I always recount change”;

“I am saving money for a rainy day”.

The eighth factor like the sixth one is essentially a reflection of the financial anxiety of the respondents.

The ninth factor is the “Factor of financial success / failure”. The core of this factor is the connection of earnings with the abilities and efforts of a person. Lack of confidence in this connection leads to failure in financial affairs, inability to resist their own greed.

“I believe that people’s earnings depend on their abilities and efforts (with a negative sign)”;

“My financial situation is worse than most of my friends think”;

“I often buy unnecessary things only because the price of them is reduced”.

4. Discussion

The results of factor analysis showed a more fragmented structure than in the studies of Furnham (Furnham A., 1984), which indicates a complex and ambiguous (more diverse) picture of the reflection of money among representatives of the northern peoples. Other studies in the Russian sample also show a more holistic structure of monetary attitudes, consisting of five main factors that indicate an integrative assessment of the attitude to money, positive or negative (Semenov, 2010)

Despite the large number of factors in the structure, one can see the main trends in the attitude to money among the representatives of the indigenous peoples of the Russian Arctic. They do not put money in the first place in their lives, they are not inclined to use it as an instrument of influence on other people, they respect those who know how to save money and do not waste money in vain. At the same time, the representatives demonstrate financial anxiety and pessimism, negative feelings associated with money (contempt, expectations of fraud, anxiety), the desire to quickly part with money.

The study proves the thesis that the influence of the factor based on the social class overlaps the influence of the level of income on the attitude to money (Deineka, 1999). The data obtained also agree well with the conclusions about the tendency of the indigenous peoples of the Arctic zone to passive, safe, low-risk financial strategies (Lusan et al., 2019), possibly due to increased financial anxiety.

5. Conclusions

The formulated conclusions about the diverse and contradictory structure of the attitude to money among the indigenous peoples of the Russian Federation on the example of the Nenets indicate alarming factors in terms of the effective economic behavior of these peoples in the changing economic conditions in the Arctic.

The main limitation of the study is associated with a small sample size, which can be explained by the difficulties in the data collection (difficult accessibility of nomadic peoples). Nevertheless, the surveyed sample is representative and includes the respondents varying in age, gender, and socio-demographic characteristics.

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COMPARISON OF VISEGRAD FOUR FROM THE VIEWPOINT OF OPINIONS ON IMMIGRANTS¹

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Abstract

The goal of this paper is to analyze the opinions of Visegrad Four (V4) on immigrants and offer an overview of the basic information acquired from reliable data. According to Eurobarometer 88.2 (2017), immigrants are: people born outside of the European Union, who left their home country and currently legally reside in country. The research set consisted of: a) 1080 respondents from the Slovak Republic – 43.1% men and 56.9% women, aged 15 – 93 (M=49.45, SD=16.83); b) Czech Republic – 1027 respondents - 40.5% men and 59.5% women, aged 15 – 91 (M=47.08; SD=16.41); c) Hungary – 1038 respondents - 42.3% men and 57.7% women, aged 15 – 99 (M=51.69; SD=16.73); and d) Poland – 1037 respondents - 39.7% men and 60.3% women, aged 15 – 99 (M=48.94; SD=17.89). For these purposes we used data from module Integration of immigrants in the European Union Eurobarometer 88.2 (2017), which were newly introduced. Data collection took place in October 2017 in the form of a face-to-face interview in the form of a multi-level probabilistic selection.

We have used items from Eurobarometer 88.2 (2017) to measure the opinions. The items were subjected to principal axis factoring to assess the dimensionality of the data. We have named the first factor as “Immigrants as help“ (Cronbachs’alpha = 0.845) and the second factor as “Immigrants as a burden“ (Cronbachs’alpha = 0.762). We have found that the Slovak respondents, most of V4 (Slovakia, Czech Republic, Hungary and Poland) agree with the negative statements about immigrants and at the lowest rate (except Hungary) agree with the positive statements about immigrants.

The contribution of the paper is an overview of the opinions of V4 on a representative sample, thanks to which it is easier to understand the mood in the countries on this always-topical topic. The paper offers space for reflections and research topics within V4.

Keywords: *Immigrants, Visegrad Four, opinions, eurobarometer.*

1. Introduction

Residents of European countries have different experiences with migration, leading to differences on country level. The comparability of the obtained data with the secondary data of other European countries (ESS, ISSP, IVO, young - Kucharczyk et al., 2017) will be beneficial, considering the effect of the country. Information about attitudes toward migrants among Slovak respondents are currently only partial (ESS, ISSP) – e.g., in terms of the limited number of migrants with admission to the country, the Swedes appear to be the most tolerant and the Czech Republic the least (Boelhouwer, Kraaykamp, & Stoop, 2016). As individual countries differ in migration (e.g. 2017 in the SR - 29 asylum seekers vs. Germany - 186,644), we are interested in where the Slovak is placed. In our research we focused on Visegrad Four countries (the Czech Republic, Hungary, Poland and Slovakia), that are members of the European Union (EU) and NATO

Slovakia is not one of the traditional final destinations for migrants. It is a culturally homogeneous country, which was not affected by the dramatic increase of migration during the twentieth century. Until recently, Slovakia was almost exclusively a country of emigrants, in other words, a country, whose residents used to emigrate abroad for various reasons (IOM, 2019).

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According to the results of research on public attitudes towards migration of the International Organization for Migration (2019), the Slovak population has relatively little personal experience and knowledge of migrants. It typically creates its opinions based on media reports. Residents are afraid that Slovakia has a high number of migrants who take jobs, spread diseases, and are an economic burden for the budget (Vašečka, 2009). In 2019, out of 216 asylum seekers, nine were granted, eighteen were granted subsidiary protection and seven were granted citizenship. Prep comparison - in 2018 there were 178 asylum seekers in Slovakia, 1690 in the Czech Republic, 4110 in Poland and 671 in Hungary (V4 report, 2019).

Scientists from different disciplines are keen to examine these anti-immigration attitudes. Research in this field demonstrates that attitudes towards migrants are partially group-specific and dependent on cultural similarity of the migrants (Ford, 2011), educational level and work skills (Helbling & Kriesi, 2014), language and skin color (Hopkins, 2015), national origin (Hainmueller & Hangartner, 2013), religion and economic contribution (Bansak et al, 2016). The nature of migration also reflects in the willingness of the population to accept the migrants. If migration is perceived as voluntary, it is associated with a lower level of support and more anger, whereas for involuntary migration it is vice-versa (Verkuyten et al., 2018). In examining attitudes towards migrants, the most common explanatory socio-psychological constructs are the integrated threat theory (Nsom & Croucher, 2017), the theory of social dominance (Roccatò & Ricolfi, 2005; Ho et al., 2015), social distance (Heath et al., 2014) and the contact theory - direct contact between groups increases attractiveness because it makes it difficult for a group to accept typical negative stereotypes (Himmelroos & Leino, 2016). According to this theory, direct contact between groups eliminates the maintenance of typically negative stereotypes (Allport, 1954). Through contact, individuals are exposed to new information about another group. This information helps to understand the concerns and interests of the second group, while developing affective ties that reduce feelings of threat and refute negative stereotypes about members of the second group. Studies on the positive impact of contacts in relation to immigrants bring ambiguous results. While some of these assumptions were confirmed (Schlueter, & Scheepers, 2010; Ellison, Shin, & Leal, 2011), others did not confirm the assumed relationship (Gravelle, 2016). Karreth, Singh and Stojek (2006) have found that contact with immigrants can lead to their perception as a cultural threat, which may ultimately support overall anti-immigration sentiment.

Since the migration issue has gained a lot of attention recently, it is inevitable to analyze public opinions. The findings by Heath and Richards (2016) suggest some shift in the society. They analyzed over 40 000 survey responses in the European Social Survey, which were obtained in 2002/2003 (ESS Round 1) and 2014/2015 (ESS Round 7). The results show that out of 19 countries that participated in the 2002/2003 survey, only citizens from the Czech Republic and Austria expressed the opinion that migration makes their country a worse place to live. In both rounds, Swedes, Danes and Finns expressed the most positive attitudes towards migration and migrants, while the Czechs, Hungarians and Portuguese felt the most negative attitudes on this issue.

From this short theoretical overview, it is clear that the opinions on immigrants are influenced by many factors. Comprehensive study of this issue is needed to understand the whole process.

2. Goal of the survey

The goal of this paper is to analyze the opinions of the Visegrad Four (V4) on immigrants and offer an overview of the basic information acquired from reliable data. According to Eurobarometer 88.2 (2017), immigrants are: people born outside of the European Union, who left their home country and currently legally reside in country.

3. Methods

3.1. Study sample and procedure

Eurobarometer surveys monitor the evolution of public opinion in all EU Member States. The aim is to assess EU citizens' awareness of and support for the European Union's activities. For these purposes we used data from module Integration of immigrants in the European Union Eurobarometer 88.2 (2017), which was newly introduced. The full text of the module is freely available on the pages of said survey.

The first research set consisted of 1080 respondents (Eurobarometer 88.2, 2017) from the Slovak Republic – 43.1% men, aged 15 – 93 (M=49.45, SD=16.83), Czech Republic – 1027 respondents (40.5% men), aged 15 – 91 (M=47.08; SD=16.41), Hungary – 1038 respondents (42.3% men), aged 15 – 99 (M=51.69; SD=16.73) and Poland – 1037 respondents (39.7% men), aged 15 – 99 (M=48.94; SD=17.89). Data collection took place in October 2017 in the form of a face-to-face interview as part of Eurobarometer 88.2 (2017) in the form of a multi-level probabilistic selection.

3.2. Measures

We used items from Eurobarometer 88.2 (2017) to measure the opinions. The opinions of the migrants were measured using a 7 - item scale ranging from 1 - strongly agree - 4 - strongly disagree, we have reversed the polarity of the items for easier data interpretation - higher score = stronger approval with the statements. The items were subjected to principal axis factoring to assess the dimensionality of the data (Kaiser-Meyer-Olkin = .834; Bartlett's Test of Sphericity $X^2= 8792,561$; $df = 21$; $p < .01$). We have named the first factor as "Immigrants as help,, (Cronbachs'alpha = 0.845) and the second factor as "Immigrants as a burden" (Cronbachs'alpha = 0.762).

Table 1. Rotated factor matrix - opinions of the immigrants.

Impact of immigrants on society	Factor	
	Immigrants as help	Immigrants as burden
- positive for national economy	.762	
- burden on welfare system		.758
- take jobs away from workers		.576
- help to fill jobs	.641	
- new ideas and innovation in (country)	.787	
- enrich (national) cultural life	.760	
- worsen crime problems in (country)		.713

Extraction Method: Principal Axis Factoring.
Rotation Method: Varimax with Kaiser Normalization.

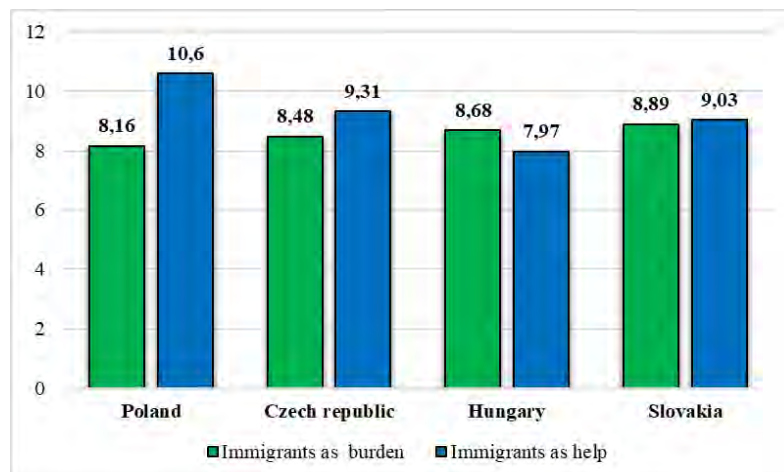
3.3. Statistical analysis

The information collected in the course of the survey was processed using descriptive statistics available in the SPSS 21.0 program.

4. Results

First of all, we would like to point out the opinions on immigrants of the Slovak Republic in the context of the V4 countries (Czech Republic, Hungary, Poland). In the "Immigrants as help" factor, the respondents could achieve the highest score of 16 and in the "Immigrants as a burden" factor the highest score was 12. We have used weighted data to compare the countries.

Figure 1. Attitudes towards immigrants in V4 (burden, help)– mean scores.

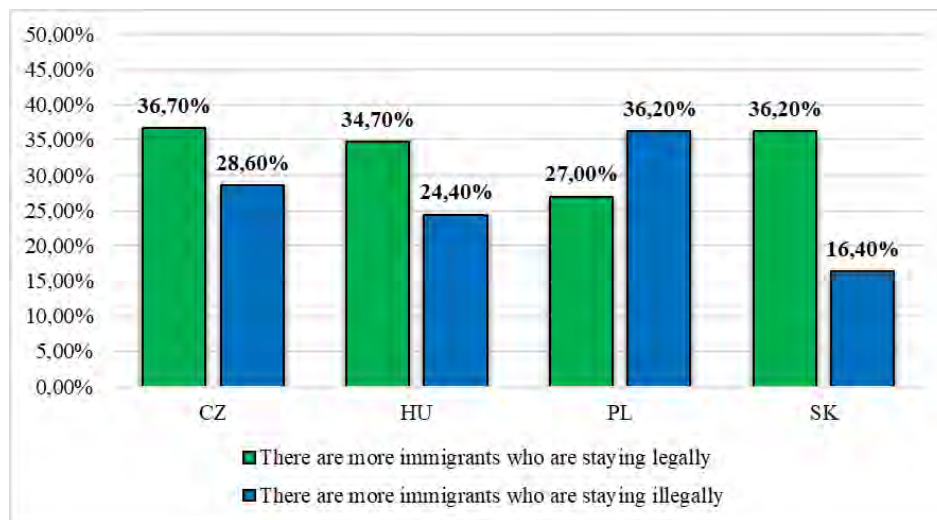


In Figure 1 we can see that in the V4 group, Slovakia agrees the most with statements denoting immigrants as a burden ($M = 8.89$; $SD = 2.14$). Poland has the lowest approval rate in this factor ($M = 8.16$; $SD = 2.13$) among the V4 countries. The one-way ANOVA analysis shows that there are statistically significant differences among the countries in their opinions on immigrants - "immigrants as a burden" - there was a significant effect for a country on the negative opinions on immigrants at the $p < .01$ level for four countries ($F(3, 3636) = 16.746$; $p < .01$). Post hoc comparisons using the Tukey HSD test indicated that the mean scores were significantly different in opinions on immigrants ("immigrants as a burden") between Poland and other countries (Poland has the lowest negative attitudes among countries); Slovakia and Czech Republic.

Furthermore, we have found that there are statistically significant differences among countries in their opinions on immigrants – “immigrants as help” – there was a significant effect for a country on the positive opinions on immigrants at the $p < .01$ level for four countries ($F(3, 3362) = 116.904; p < .01$). Post hoc comparisons using the Tukey HSD test indicated that the mean score was not significantly different ($p > .05$) between Slovakia and the Czech Republic. In other countries, there were significant differences ($p < .01$) in opinions on immigrants (“immigrants as help”).

We have found that the Slovak respondents, most of V4 (Slovakia, Czech Republic, Hungary and Poland) agree with the negative statements about immigrants and at the lowest rate (except Hungary) agree with the positive statements about immigrants.

Figure 2. Immigrants staying i/legally – opinions.



Interestingly, the respondents of Poland think that up to 36.2% of immigrants stay illegally in the country. Nevertheless, in other indicators of attitudes towards immigrants, they appear to be most positive. 16.4% of Slovaks think that more immigrants stay in Slovakia illegally and their attitude towards them is negative compared to other V4 countries.

5. Discussion and conclusion

The goal of this paper was to analyze the opinions of the V4 countries on immigration. Slovak, Czech Republic and Hungary have rather negative opinion on immigration and immigrants when compared to Poland. Similar to the findings of Heath and Richards (2016) based on data from the first and seventh round of the European Social Survey, Hungary and the Czech Republic are also among countries with rather negative opinions on immigration. In our research we have found that these countries agree the most with the item “immigrants as a burden” of all the countries of V4. Slovakia joins them. We consider this result as interesting, since compared to the other countries of the European Union, the Slovak Republic has low levels of foreigners in its population (IOM, 2019). Unlike Hungary, Slovakia does not have a negative experience with immigrants (immigrants’ boat the Budapest Keleti Train Station in 2015).

Polish people have the most positive opinions on immigrants of the V4 countries. We could also explain the more positive attitudes of Poles using contact theory. Of the V4 countries, Poles have the highest number of asylum applications, and similarly, they have the most experience with immigrants in the country. Through contact, individuals are exposed to new information about another group. This information helps to understand the concerns and interests of the second group, while developing affective ties that reduce feelings of threat and refute negative stereotypes about members of the second group (Himmelroos & Leino, 2016). It could also be an explanation of the more negative opinions on immigrants among Slovak and Czech Republic – the less possible contact with immigrant, the more prejudice, stereotypes and negative opinions. These assumptions should be verified empirically.

The cross-sectional character of the available data limits the research. The contribution of the paper is an overview of the opinions of V4 countries on a representative sample, thanks to which it is easier to understand the mood in the countries on this always-topical issue.

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PECULIARITIES OF THE PSYCHOLOGICAL TIME IN THE CONTEXT OF GLOBALIZATION. COMPARATIVE STUDY OF RUSSIA AND JAPAN

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Abstract

Because of the increasing flow of information in modern society, perceptions of personal time are changing. Psychological time becomes the universal aspect of life that allows marking changes in personality in the era of globalization. The purpose of this study is to identify similarities and differences of subjective (psychological) time in two countries Russia and Japan, which are quite different on the political, economic, and cultural levels. The theoretical basis of the study is the model of time perception according to T. Nestik (2016). According to this model, cognitive, affective, motivational and behavioral components of psychological time are studied among the students of regional universities in Russia and Japan (N = 593). Respondents completed paper forms of Inventory of Time Value as an Economic Resource (Usunier), Zimbardo Time Perspective Inventory, Attitudes towards Time (Nuttin), and Inventory of Polychronic Values (Bluedorn). The results of the comparative analysis revealed that there are differences in all components of psychological time. Russian students are more positive about their past than the Japanese because the past is more joyful, bright, and pleasant for them. It is connected with good memories. Japanese students are more focused on having a good time in the present, not always thinking about what will be in the future. They are more inclined to perceive the events that happen to them in the present as fatal, regardless of their will. At the same time, there are no differences in the vision for the future. Regardless of their cultural affiliation, students worry about their future, make plans and also try to create an action plan for the future, so it would be more predictable. Japanese students are generally more restrained in positive emotions when assessing their time, while Russian students are more optimistic about it. Russian students tend towards polychronicity (the habit of doing a few things at a time) more than the Japanese. Russian students determine the value of time as an economic resource more accurately, they can transform time into money more easily, and they know the cost of their time as well. The results of the study indicate that culture (language) continues to play an important differentiating role in the world, despite the processes of globalization. However, the impact of globalization is noticeable in such aspects as the desire to avoid uncertainty and willingness to live the moment. The results of the study can be used in advising students on their future professional choices as well as on how to live a psychologically healthy life in modern society.

Keywords: *Psychological time, Russia, Japan, future, past positive.*

1. Introduction

Because of inflation of traditional values, openness of social systems, unification of forms relations and behavior under the influence of globalization, modern societies face a certain mobility of perception and attitude toward time. Time and its subjective perception becomes a marker that highlights the trends of the global society: acceleration of the pace of life, erasure of the boundaries of the personal and professional sphere, and permanent deficit of time as a life resource (Zabelina, Smirnov, Chestyunina, 2016). In this regard, the study of psychological time in the conditions of globalization becomes more and more significant in terms of human wellbeing in the modern society.

In particular, the research on the subjective (psychological) time of young generations of various countries is relevant, because young people are involved in globalization faster and more actively. At the same time, the more different cultural patterns of social communities, the more significant the evidence of globalization trends will be. That is why for this study we chose two countries with different, largely contrasting cultures - Japan and Russia. The aim of this study is to identify similarities and differences in subjective (psychological) time of young people in these countries.

Psychological time has a wide definition. It is "a perception and experience of the objective time of one's life, representations of time, caused both by personal experience of individual and group life, and by learned social, historical and cultural experience, awareness of time, personal attitude to time, psychological organization and regulation of life time" (Kovalyov, 1988, p.217)

The theoretical basis of the study is the model of relation to time proposed by T. Nestik (2015). This model includes four components of the relation to time. Value and motivational component includes subjective importance of time as an irreplaceable resource. Cognitive component is illustrated by time perspective, temporal aspects of identity, etc. Affective component reflects emotional relation to time, and behavioral one describes preferred methods of time organization (Nestik, 2015, p.100).

2. Method and sample

The theoretical model was verified in the study of students from regional Russian and Japanese universities. The sample included 593 people: 293 students aged from 18 up to 23 years from Russia, 75 males, 218 females, and 279 students from Japan, aged from 18 up to 24 years, 121 males and 158 females. All the students study in full-time faculties of humanities.

Inventory of Time Value as an Economic Resource by Usunier (Nestik, 2015) was used to explore the content of the value and motivational component of psychological time. To study the cognitive component of psychological time, Zimbardo Time Perspective Inventory (Mitina, Sirtzova, 2008) was used. In order to identify the content of the affective component of psychological time, Attitudes towards Time (Nuttin, 2004) was used. This technique is based on a semantic differential, allowing to study emotional attitude to the past, present and future. Inventory of Polychronic Values (Bluedorn) was used to study the content of the behavioral component of psychological time.

Before the main study, the techniques were translated from Russian into Japanese (direct and reverse translation), and all necessary validation procedures were performed. The forms of the questionnaires were presented to the respondents in hand copy. The data was processed using the SPSS 24.0. statistical package. For the comparative analysis Mann-Whitney U criterion was used.

3. Results

The results of the comparative analysis revealed differences in all components of psychological time. The results of the comparison of the cognitive component of psychological time are shown in Table 1.

Table 1. Results of comparative analysis of cognitive component of psychological time for Russians and Japanese.

	Mean rank		U	p
	Russians	Japanese		
Past Negative	262.53	344.08	34130	0.000
Present Hedonistic	279.37	78781.50	38878.5	0.000
Future	303.82	308.79	45775.5	0.729
Past Positive	335.92	281.36	38234.5	0.000
Present Fatalistic	277.16	331.57	38256	0.000

The results show that Japanese students are more involved in the past, both positive and negative. They are more attentive to their experience, perceive joyful and sad events emotionally. At the same time, they are more focused on the present, on getting positive emotions from current events, to live fully the very moment. Furthermore, Japanese students more share the belief that what happens to them in the present is predetermined and does not depend on their efforts. At the same time, there were no differences in perception of the future: students, regardless of their cultural affiliation, worry about their future, make plans, seek to introduce certainty into them and make their future more understandable.

The analysis of the differences in the affective component of psychological time showed that Japanese students as a whole are more restrained in positive emotions when assessing their time. Russian students, on the contrary, are more optimistic in regards of the past, present and future (Table 2).

Table 2. Results of comparative analysis of affective component of psychological time for Russians and Japanese.

	Mean rank		U	p
	Russians	Japanese		
Attitude toward the past	254,33	364,32	31408.5	0.000
Attitude toward the present	279,02	342,33	38667	0.000
Attitude toward the future	236,03	380,63	26026.5	0.000

Japanese students assess their past, present and future more neutrally: time appears as emotionally balanced (causing neither pleasant feelings nor unpleasant ones), quite eventful, passing at an average pace (neither quickly nor slowly). It is moderately difficult, moderately successful, and moderately interesting. For the Russian sample the sense of personal control over the past, present and future is more typical. They perceive their time as more meaningful, active, belonging to themselves. For the Japanese sample, on the contrary, such control is less expressed. In their minds, time is less meaningful, more passive and refers, first of all, not to an individual, but to a certain social space.

The behavioral component of psychological time showed significant differences either. Russian students are more prone to polychromic way of life than the Japanese ($U = 42940$; $p = 0.013$). If Russians are used to doing several things at the same time, pay attention to many things in one stage, the Japanese prefer to finish one task before taking on another.

The value and motivational component of psychological time also showed some differences ($U = 40766.5$; $p = 0.001$). Russian students more accurately determine the value of time as an economic resource, easily translate time into money, can count the cost of their time. For Japanese students, time is not linked so tough with money. For example, they are calmer about standing in line (a waste of time) because it is a part of the public rules.

4. Discussion

The observed differences of psychological time in Japan and Russia, on the one hand, confirm the available data on the relationship between psychological time and culture (Graham, 1981; Levine, 1997; Trompenaars and Hampden-Turner, 1997; Vale et al., 2012), and on the other, clarify these data in the light of the processes of globalization.

Peculiarities of time perspective of the Japanese demonstrate the manifestations of perception of time due to culture. For example, for Japanese, time acts as a certain force which is not controlled by a person, and which subordinates a person to its will 時はすべてのものを貪り食う – «time devours everything» (Pariyeva, 2017). Moreover, one can observe such feature of the Japanese attitude as a focus on the present moment which is much more important, than the past or the future 昨日は今日の昔 "yesterday is the past of today." (Smirnov, Smirnova, 2019).

E. Iskbulova (2018) stresses the importance of the past for the Japanese. The existence here and now owes above all to the past, the history and the experience of previous generations. In particular, in Japanese national self-awareness, linguistic analysis traces the treatment of the past as something sacral. In Japanese culture a person is a debtor of the past, and every day the contact with other people increases his debt in the present (Iskbulova, 2018).

The results of the study indicate that culture continues to play an important differentiating role in the world, despite the processes of globalization. However, the impact of globalization is noticeable in such aspects as the desire to avoid uncertainty, the desire to live the moment. The results of the study can be used in advising students on professional choices, psychologically healthy lives in modern society.

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EVALUATING THE EFFECTIVENESS OF EXPOSURE TO COUNTERSTEREOTYPIC FATHERS ON REDUCING IMPLICIT FATHER AND MOTHER STEREOTYPES IN JAPAN

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Abstract

Lai, et al. (2014) compared 17 intervention effects on implicit racial prejudice and concluded that exposure to counterstereotypic exemplars was most effective. Therefore, this study examined whether exposure to counterstereotypic fathers can reduce the implicit stereotype that ‘fathers should work outside the home and mothers should keep the house’. The Go/No-Go Association Task (GNAT, Nosek & Banaji, 2001) was conducted among undergraduates ($N = 44$; $Men = 26$, $Women = 18$), whose mean age was 20.16 years ($SD = 1.35$). The results indicated that, in the control condition, more fathers than mothers implicitly associated with work ($F(1, 80) = 9.26$, $p < .01$), and more mothers implicitly associated with home ($F(1, 80) = 10.84$, $p < .01$); however, such differences were not significant in the counterstereotypic fathers condition. Thus, for men, exposure to counterstereotypic fathers can reduce the implicit father and mother stereotypes. Further research that can generalise the findings must be conducted.

Keywords: *Stereotype, father, mother.*

1. Introduction

Ohtaka (2019) investigated the difference between the parent stereotypes and the overall gender stereotypes in Japan and found that the content of the former differed from that of the latter. Ohtaka (2019) suggested that Japanese have the idea that ‘fathers (rather than men) should work outside the home, and mothers (rather than women) should keep the house’. Therefore, to solve gender inequality in Japan, the efficient approach may be to focus on parent stereotypes rather than the overall gender stereotypes.

Meanwhile, Park, Smith, and Correll (2010) examined not explicit but implicit stereotypes and showed that fathers are strongly associated with professional images and mothers, with childcare images. Moreover, explicit prejudice predicts deliberative behaviour, whereas implicit prejudice predicts spontaneous behaviour (Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997). Similarly, explicit prejudice predicts verbal behaviour, whereas implicit prejudice predicts non-verbal behaviour (Dovidio, Kawakami, & Gaertner, 2002). Especially, gender stereotypes are not explicitly expressed by social desirability; they persist implicitly (Blair & Banaji, 1996). Thus, this study centred on implicit parent stereotypes and attempted to identify ways of reducing them.

Lai, Marini, Lehr, Cerruti, Shin, Joy-Gaba, Ho, Teachman, Wojcik, Koleva, Frazier, Heiphetz, Chen, Turner, Haidt, Kesebir, Hawkins, Schaefer, Rubichi, Sartori, Dial, Sriram, Banaji, and Nosek (2014) meta-analysed 17 intervention effects on implicit racial prejudice and concluded that exposure to counterstereotypic exemplars is the most efficient. Therefore, this study investigated whether exposure to counterstereotypic fathers can reduce the implicit stereotype that ‘fathers should work outside the home and mothers should keep the house’.

2. Methods

Forty-four undergraduates participated in this study. They were 18 to 25 years old, of both genders, unmarried, born and raised in Japan, and spoke Japanese as their native language.

The first study was conducted as a study on memory based on Dasgupta and Asgari (2004). Participants were shown pictures and descriptions of either counterstereotypic fathers or flowers. After reading the descriptions, the participants saw the pictures again with an abbreviated correct and incorrect description of each individual (or flower) placed below each picture. They were asked to identify the correct description. This memory test was administered to ensure that the participants had paid attention to the information as well as to strengthen the memory cover story. After identifying the correct description, the participants in the counterstereotypic fathers' condition were asked to rate the extent to which they thought most other fathers could enjoy childrearing as these fathers on a five-point scale ranging from 0 (impossible) to 4 (possible). The participants in the flowers control condition were asked to indicate the flowers they liked most.

In addition, four famous fathers who enjoy childrearing were selected from 'Ikumen (fathers who enjoy childrearing) of the year' prize winners. The pictures were culled, and the descriptions of each individual were created from the internet site of 'Ikumen of the year' (Executive committee of ikumen of the year, 2020). Meanwhile, four flowers were collected for the control condition. The pictures were culled, and the descriptions of each flower were created from the internet site of 'gardening for pleasure'.

In the second study, the Go/No-go Association Task (GNAT, Nosek & Banaji, 2001) was conducted as a study on judgment based on Park, Smith, and Correll (2010). On the computer, the participants were presented with items from a number of different categories and instructed to press a button (go) whenever an item from one of two focal categories (e.g. 'dad' and 'home') appeared and to make no response (no-go) when the item was not from those two categories. Stimuli were presented for a 500-ms response window. Error feedback (X) was provided. Each d' (Green & Swets, 1966) (where as higher d' indicates a strong association between two categories) was calculated for four combinations of categories ('father' and 'home', 'mother' and 'home', 'father' and 'work', 'mother' and 'work').

The 'father' ($N = 5$) and 'mother' ($N = 5$) words were selected from fathers' and mothers' names called by their children (e.g. 'father', 'dad', and 'papa' / 'mother', 'mom', and 'mama') (Benesse, 2009). The 'home' ($N = 5$) words were 'cleaning', 'washing', 'housework', 'childrearing', and 'cooking'; the 'work' ($N = 5$) words were 'meeting', 'workplace', 'commuting', 'working', and 'company' (Hanita & Murata, 2013). Distractor categories were 'surnames' and 'bird names'. The 'surname' ($N = 5$) words were selected from three-character surnames taken from the most frequently used surnames in Japan (Origin Production Committee, 2020). The 'bird name' ($N = 5$) words were selected from three-character bird names taken from the most familiar bird names in Japan (Wild Bird Society of Japan, 2020).

Finally, the participants answered self-reported questionnaires on demographic measures on the computer.

3. Results

3.1. Respondents

The participants' mean age was 20.16 ($SD = 1.35$) years. The participants were 26 men and 18 women. Twenty-three (13 men and 10 women) participants were randomly assigned to the counterstereotypic fathers' condition, and 21 (13 men and 8 women) to the flowers control condition.

3.2. Analysis of variance

The data were analysed using four-way analysis of variance. The analysis design used four independent variables: the counterstereotypic fathers condition or the flowers control condition (between factor) [condition], being man or woman (between factor) [participants' gender], the category of either fathers or mothers (within factor) [parents' gender], and the category of either home or work (within factor) [domain]. Dependent variables were the d 's for the four combinations of categories ('father' and 'home', 'mother' and 'home', 'father' and 'work', 'mother' and 'work').

First, the four-way interaction effect of [condition]×[participants' gender]×[parents' gender]×[domain] was significant ($F(1, 40) = 4.81, p < .05$).

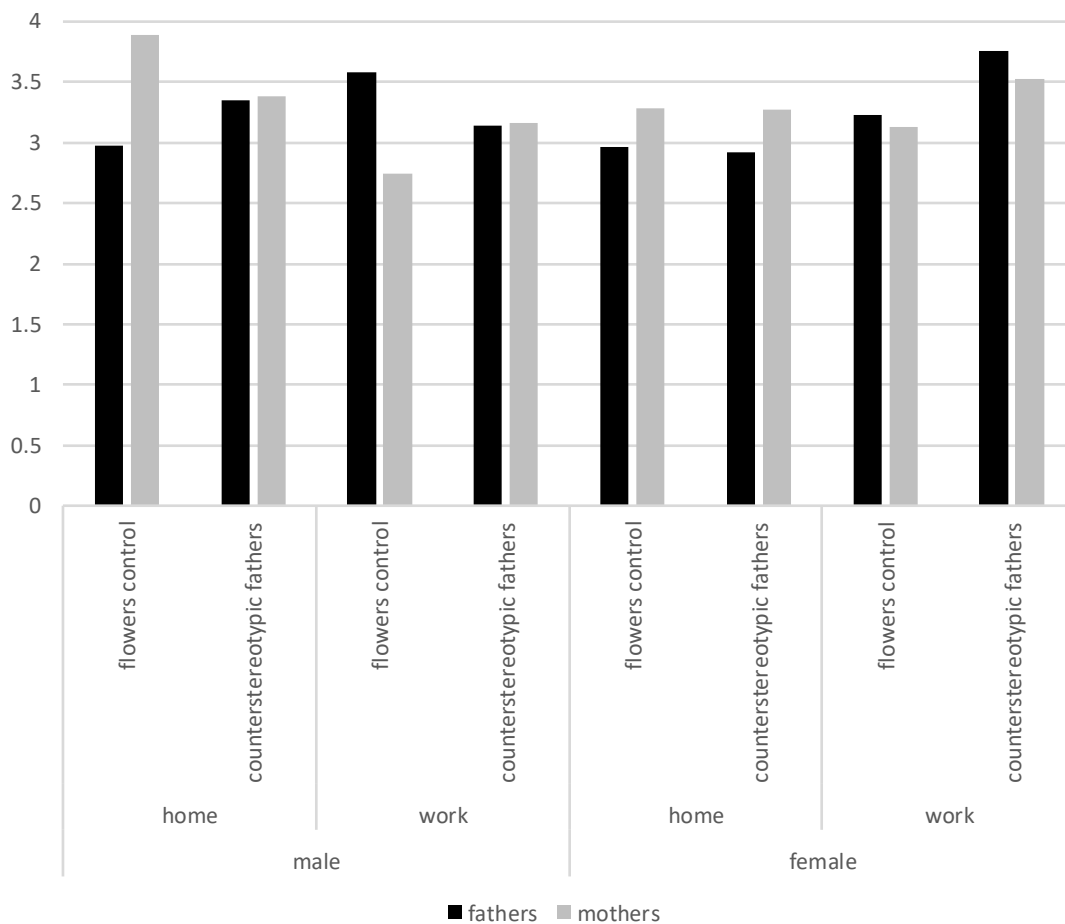
Second, the simple three-way interaction effect of [condition]×[participants' gender]×[domain] was significant in the fathers category ($F(1, 80) = 4.26, p < .05$).

Third, the simple-simple two-way interaction effect of [condition]×[parents' gender] was significant among men participants in the home category ($F(1, 80) = 4.97, p < .05$) and in the work category ($F(1, 80) = 4.88, p < .05$).

Fourth, the simple-simple-simple main effect of [parents' gender] was significant among men participants in the flowers control condition in the home category ($F(1, 80) = 10.84, p < .01$). Men participants in the flowers control condition associated mothers ($d' = 3.89$) more strongly with home compared with fathers ($d' = 2.98$). Such significant effect was not found among men participants in the counterstereotypic fathers' condition in the home category. As such, men participants might have associated fathers and mothers equally with home after exposure to counterstereotypic fathers.

The simple-simple-simple main effect of [parents' gender] was significant among men participants in the flowers control condition in the work category ($F(1, 80) = 9.26, p < .01$). Men participants in the flowers control condition associated fathers ($d' = 3.59$) more strongly with work compared with mothers ($d' = 2.75$). Such significant effect was not found among men participants in the counterstereotypic fathers' condition in the work category. As such, men participants might have associated fathers and mothers equally with work after exposure to counterstereotypic fathers.

Figure 1. Average d' scores.



4. Discussion

The results imply that exposure to counterstereotypic fathers can reduce the implicit stereotype that 'fathers should work outside the home and mothers should keep the house' among men. In contrast, among women, exposure to counterstereotypic fathers could not reduce the implicit stereotype. In this connection, Dasgupta and Asgari (2004) showed that women who are exposed to counterstereotypic women leaders are less likely to express implicit stereotypic beliefs about women. To reduce implicit stereotypes, an affective measure for men and women is exposure to counterstereotypic men and women, respectively.

Because gender stereotypes vary according to socio-economic factors (Suzuki, 2017), the future study should target not only undergraduates but also older and/or less educated people. It can generalise these findings.

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WELL-BEING AND EMIGRATION PLANS AMONG UNIVERSITY STUDENTS IN SLOVAKIA: THE MEDIATION EFFECT OF ROOTEDNESS

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Abstract

Objective: The objective of this study was to examine the relationship between well-being, rootedness and emigration plans (EP) among university students in Slovakia. It also tested the mediation effect of rootedness in the relationship between well-being and EP.

Methods: The data for this study were collected via an online survey which was part of the Student Life Cohort Study (SLiCE 2016). The research sample consisted of 141 (86.5% female) Slovak university students (M=22.5 years, SD=2.8). EP were identified by one question with 8 answer options. Based on the answer, the respondents were divided into two groups; those who do not plan to leave Slovakia (54.6%) and those who plan to leave in the long term (45.4%). Rootedness was measured by the Rootedness scale which consists of the Desire for Change and Home/Family subscales. For the purposes of the current study, binary logistic regression was used in two steps. The Hayes' PROCESS tool explored the indirect effects of well-being on emigration plans through two dimensions of rootedness. All analyses were controlled for gender.

Results: Firstly, the relationship between well-being and EP was examined. As predicated, well-being ($\beta = -0.183$, $p < 0.001$) was significantly associated with EP with higher well-being having a negative effect on EP. Next, rootedness was added to the model which explained 51.6% of the variance in emigration. Two dimensions of rootedness were found to make the largest contribution to explaining EP. A higher desire for change ($\beta = 0.367$, $p < 0.001$) had a positive effect on EP while higher family rooting ($\beta = -0.240$, $p < 0.05$) had a negative effect on EP. Interestingly, well-being ($\beta = -0.072$) was not shown to be a significant predictor of EP. These findings were also confirmed by the mediation analysis. The relationship between well-being and EP was negative, but not significant. The association between well-being and EP was fully mediated by two dimensions of rootedness with different psychological mechanisms. On one hand, the higher the well-being, the lower the desire for change and the lower the desire for change, the more likely it is that Slovak students will not plan to leave. On the other hand, the higher the well-being, the higher the family rootedness and the higher family rootedness, the more likely it is that Slovak students will not plan to leave.

Conclusion: This study contributes to the current knowledge regarding predictors of emigration plans among students.

Keywords: *Emigration plans, well-being, rootedness, university students.*

1. Introduction

Migration is a phenomenon of different causes and manifestations in the world and is currently taking on much larger proportions than it had in the past. However, migration is also not stable. This phenomenon naturally develops as the result of new and better modes of transport, the discovery of new technologies and the Internet. Slovakia has long been known as a country of origin of migrants. Even today's numbers remain quite high and 1863 residents left Slovakia in 2011 according to Káčerová & Horváthová (2014). Three groups of inhabitants leave Slovakia most often: highly qualified individuals (who are unable to find work with adequate financial remuneration here), students and also retired people (Baláž, 2009). In terms of education, Slovakia loses many secondary school leavers and university graduates every year. In 2011, 53.68% of those leaving Slovakia had secondary school education and 21.55% had higher education (Káčerová & Horváthová, 2014). In connection with this issue Haluš et al. (2017) have pointed out that Slovakia is facing both a demographic crisis and a significant brain drain due

to young people leaving. Slovakia has lost 300,000 citizens since 2000, which represents about 5% of the population. This number increases every year and more importantly is that more than half of these people are under the age of 30. The authors also point out that approximately one in 10 students who have completed their education leave abroad. According to Sheikh et al. (2012), only 24% of young students are willing to consider their decision to go abroad. Brahma (2009) described the profile of a Slovak migrant based on previous research. He found that the most fundamental factors are age and gender. The older a person is, the less willing he is to travel abroad. Also, men are more willing to travel abroad than the women.

Silventoinen et al. (2007) point out that overall life satisfaction in the home country has a direct impact on emigration tendencies. According to Diener, Suh and Oishi (1997) subjective well-being is understood as a multidimensional construct consisting of three separate components: (1) the presence of positive emotions, (2) the absence of negative emotions and (3) cognitive evaluation of life conditions (known as life satisfaction). Hřebíčková, et al. (2010) point out that this is a conscious assessment of one's own life, while the emotional dimension is a summary of moods and emotions, even at an unconscious level. Silventoinen et al. (2007) found that with increasing dissatisfaction with the living situation in their home country, there is an increasing tendency to emigrate. Other research has found that individuals with higher subjective well-being have lower international migration desires (Cai et. al., 2014). The same findings concerning Slovak students were presented in a study by Hajduch, Orosová & Kulanová (2018). The authors confirmed that life satisfaction and emigration intentions are related. Indeed, university students who were characterized by lower life satisfaction showed stronger intentions to emigrate.

Like Slovakia, Americans have always been perceived as a society of migrants (Cooke, 2011). However, their migration rates are at record lows, with only 3.7% of Americans moving from one country to another. Cooke (2011) concludes that approximately 63% of this decline in the migration rate between 1999 and 2009 can be attributed to the 2007 economic crisis, a further 17% can be attributed to the demographic changes (e.g. population aging) and the remaining 20% to increased rootedness. He assumes that with the possible stability of housing markets and the effects of economic recovery, the migration rate will likely increase over several years although the long-term effects of the population aging and rootedness will keep the migration rate lower than otherwise.

In the current study, it was decided to explore this area and see if well-being is really such an important factor affecting the creation of emigration plans among university students or if rootedness can somehow affect this established relationship.

2. Objectives

The main objective of this study was to examine the relationship between emigration plans and well-being and rootedness. We also tested the psychological mechanism of this relationship, in terms of the mediation effect of rootedness in the relationship between well-being and emigration plans.

3. Methods

3.1. Sample and procedure

The data were collected via an online survey, as part of the Student Life Cohort Study (SLiCE 2016) which focuses on emigration/migration intentions and risk behavior of university students. Our research sample consisted of 141 (86.5% female) Slovak university students; the mean age of the students was 22.5 years (SD = 2.8). Based on their emigration plans, we divided the respondents into two groups, those who do not plan to leave Slovakia ($n = 77$, 54.6 %, $M = 22.9$ years, $SD = 3.1$), and those who plan to leave Slovakia in the long term ($n = 64$, 45.4 %, $M = 22.1$ years, $SD = 2.3$).

3.2. Measures

All students were asked to fill in an online questionnaire, voluntarily and anonymously. For the purpose of this study, emigration plans and factors related to emigration plans were measured by the following:

- **Emigration plans:** were identified by one question: "Do you plan to leave Slovakia after you finish university" with 8 answer options: (1) No, I am not planning to leave; (2) I do not know, I have not thought about it; (3) I do not know, I have not decided yet; (4) I am planning to go abroad for six months; (5) I am planning to go abroad for six to twelve months; (6) I am planning to leave for more than a year; (7) I am planning to leave for more than five years; (8) I am planning to leave permanently. Based on the answer, the respondents were divided into two groups: (a) those who do not plan to leave Slovakia (answer 1); (b) those who plan to leave Slovakia in the long term (answer 6, 7 or 8).

- **Well-being:** was addressed using the construct of subjective well-being which consists of a cognitive aspect in terms of life satisfaction (Diener et al, 1995) and experiencing positive and negative emotions (Dzuka & Dalbet, 2002). Respondents were asked to indicate the extent to which they agreed with 5 statements (e.g. "In most ways my life is close to my ideal." or "If I could live my life over, I would change almost nothing.") on a seven-point Likert scale ranging from 1 – strongly disagree to 7 – strongly agree. The score ranges from 5 to 35 points with a higher score indicating a higher level of well-being. Cronbach's alpha for well-being was 0.828.
- **Rootedness:** was measured by the Rootedness scale (McAndrew, 1998) which assesses rootedness as a construct focusing on individual's psychological attachment to a place and social environment where one lives. The Rootedness scale captures this construct in two dimensions by focusing on the desire to change one's living environment ("Desire for change" subscale) and attachment to one's family and home ("Home/Family" subscale). Respondents were asked to indicate the extent to which they agreed with 6 statements for "Desire for change" subscale (e.g. "Moving from place to place is exciting and fun." or "I could not be happy living in one place for the rest of my life.") and with 4 statements for "Home/Family" subscale (e.g. "I am extremely satisfied with my present home." or "My family is very close-knit and I would be unhappy if I could not see them on a regular basis.") on a five-point Likert scale ranging from 1 – strongly disagree to 5 – strongly agree. The score ranges from 6 to 30 points for "Desire for change" subscale and from 4 to 20 points for the "Home/Family" subscale. A higher score for the "Desire for change" subscale indicates a higher level of a respondent's desire to change their living environment. Cronbach's alpha for this subscale was 0.528. A higher score for the "Home/Family" subscale indicates a higher level of a respondent's attachment to their family and home. Cronbach's alpha for this subscale was 0.604.

3.3. Statistical analyses

A binary logistic regression analysis was applied in two steps. The first model was used to examine the relationship between well-being and emigration plans. In the second model, we added two dimensions of rootedness as independent variables. After using these regression models, we explored whether two dimensions of rootedness would mediate the relationship between well-being and emigration plans. For that we used The Hayes' PROCESS tool. All analyses were controlled for gender.

4. Results

The results showed that 54.6 % of students in Slovakia (56.6 % female, 42.1 % men) don't plan to leave Slovakia after they finish their studies and 45.4 % of students (43.4 % female, 57.9 % men) plan to leave in the long term. The emigration plans among students with respect to gender can be seen in Table 1. There were no gender differences found in emigration plans. The descriptive analysis of all explored variables regarding emigration plans are presented in Table 2. In general, those who do not plan to leave Slovakia scored higher in well-being and family rootedness and lower in desire for change, compared to those who plan to leave Slovakia in the long term.

Table 1. Emigration plans among university students in Slovakia.

Emigration plan	Among sample (n=141)	Among female (n=122)	Among men (n=19)
Not planning to leave	77 (54.6 %)	69 (56.6 %)	8 (42.1 %)
Planning to leave in the long-term	64 (45.4 %)	53 (43.4 %)	11 (57.9 %)

Table 2. Descriptive characteristics in the measured variables according to emigration plans.

Variable	Theoretical range	Not planning to leave	Planning to leave in the long-term	T-test value
Well-being	5 – 35	M = 17.84 (SD = 3.78)	M = 14.75 (SD = 4.38)	4.497***
Rootedness – Desire for change	6 – 30	M = 17.36 (SD = 3.71)	M = 22.31 (SD = 3.30)	-8.275***
Rootedness – Home/Family	4 – 20	M = 16.76 (SD = 2.38)	M = 14.42 (SD = 3.03)	5.021***

M – Mean; SD – Standard deviation; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The first model explained 16.8 % of the variance in emigration plans. As predicted, higher well-being was significantly associated with a lower probability of having emigration plans. Gender was not significant. For more details see Table 3.

In the second model, rootedness was added which then explained 51.6 % of the variance in emigration plans. Two dimensions of rootedness were found to make the largest contribution in explaining emigration plans. Therefore, a greater desire for change was significantly associated with a higher probability of emigration plans while higher family rootedness was significantly associated with a lower probability of emigration plans. Interestingly, well-being was not shown to be a factor significantly related to emigration plans. Gender was not found to be significant either. For more details see Table 4.

Table 3. Regression model 1 – factors related to emigration plans among Slovak university students.

Model 1 (R ² = 0.168)						
Predictors	B	S. E.	Exp(B)	95 % C. I for Exp(B)		Sig.
				Lower	Upper	
Gender*	0.108	0.543	1.114	0.385	3.226	0.843
Well-being	- 0.183	0.048	0.833	0.758	0.914	< 0.001

Note: * female as a reference group

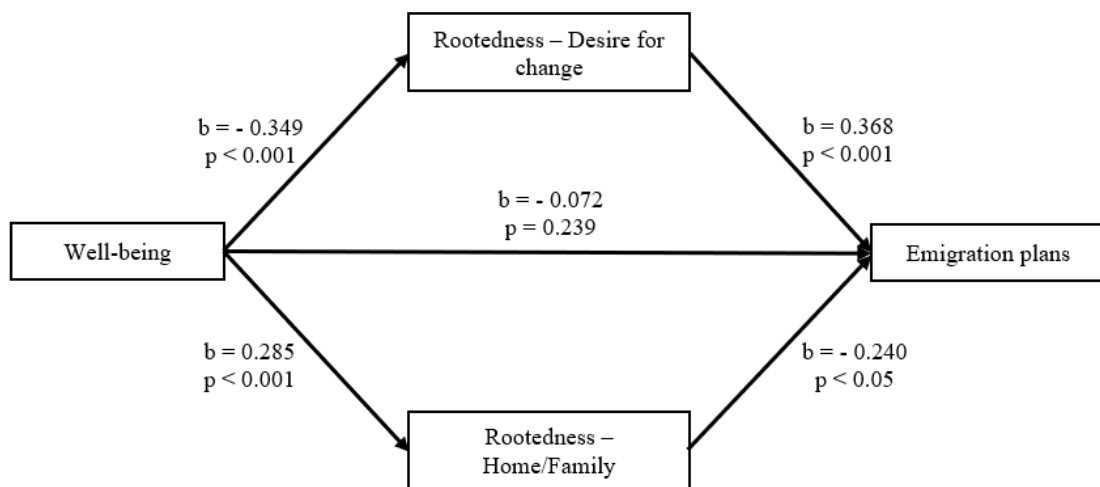
Table 4. Regression model 2 – factors related to emigration plans among Slovak university students.

Model 2 (R ² = 0.516)						
Predictors	B	S. E.	Exp(B)	95 % C. I for Exp(B)		Sig.
				Lower	Upper	
Gender*	0.102	0.666	1.108	0.301	4.082	0.878
Well-being	- 0.072	0.061	0.931	0.826	1.049	0.239
Rootedness – Home/Family	- 0.240	0.098	0.787	0.649	0.953	< 0.05
Rootedness – Desire for change	0.367	0.073	1.444	1.252	1.666	< 0.001

Note: * female as a reference group

These findings were confirmed by the mediation analysis. There was a significant indirect effect of well-being on emigration plans through rootedness – desire to change, $b = - 0.128$, BCa CI [- 0.240, - 0.064] and rootedness – family rootedness, $b = - 0.068$, BCa CI [- 0.149, - 0.015]. Therefore, the association between well-being and emigration plans was fully mediated by two dimensions of rootedness. Our results also show that there are different psychological mechanisms. On one hand, the higher the well-being, the lower the desire for change and the lower the desire for change, the more likely it is that Slovak students will not plan to leave Slovakia. On the other hand, the higher the well-being, the higher the family rooting and the higher family rooting, the more likely it is that Slovak students will not plan to leave Slovakia. For a visualization and further details see Figure 1.

Figure 1. The mediation effect of rootedness in the relationship between well-being and emigration plans.



5. Discussion and conclusions

Although many theories of migration speak of the importance of economics and demographic factors in understanding migration behavior (Massey et. al., 1998) Cai et. al. (2014) point out that there may be something else that needs to be considered. Like many others (e.g. Silventoinen et al., 2007; Hajduch, Orosova and Kulan, 2018), these authors found out that people with higher well-being have a lower desire to emigrate. This is so because the relationship between subjective well-being and migration appears to be more robust than the income-migration relationship according to Cai et. al. (2014). Our results point to the fact that gender plays no role in developing emigration plans. However, it is of interest to see that well-being does not have to be as important in creating student emigration plans as previously thought, which is not in line with previous findings. Our research has shown that rootedness has a much greater impact on this process. Specifically, the high desire for change can encourage (despite high well-being) the creation of emigration plans, while high family rooting can prevent (despite low well-being) the creation of emigration plans. This is in line with Cook (2011) who found out that rootedness has an impact on migration in America.

The biggest limitation of this study concerns working with a small sample and also its gender imbalance. In this study we only focused on Slovak university students, so there is an opportunity to extend this research to university students in other countries, where we could also focus on the moderation effect of the country.

Acknowledgements

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ASSOCIATIONS REGARDING TATTOOED INDIVIDUALS AMONG VARIOUS AGE COHORTS

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Abstract

Basing on the previous research, one can state that tattooing was mainly perceived from the perspective of clinical psychology and interpreted as self-injury that indicated negative attitude towards oneself, various mental disorders regarding – for example negatively developing personality. Tattoos were often associated with other risk – taking behaviors such as the use of psychoactive substances, the increased level of aggression and impulsiveness.

However, nowadays one can observe that more and more people are getting tattooed.

In addition, numerous tattoo parlors are being set up and more professional artists are interested in this kind of body art. The recent studies carried out in different parts of the world point out that there are more similarities than differences between their tattooed and non-tattooed participants. Therefore, one can conclude that tattoos are becoming a part of our mainstream culture. That is why, it is worth re-examining both the associations and stereotypes among different age cohorts connected with tattooed individuals.

In the first stage of the research program, a semi-structured interview was conducted to determine the attitude that different age cohorts towards tattoos and tattooed individuals. The given results show the differences in associations regarding tattooed people among different age groups.

400 Polish participants were obtained from the following development stages: preschool period, early school period, adolescence, early adulthood, middle adulthood and late adulthood. The study was conducted in a form of a semi-structured interview. The study results were analyzed using the chi-square test.

The research results showed that the associations regarding the tattooed individuals were significantly different in the studied age groups. Moreover, the younger age cohorts – pre-school period, early school period, adolescence and early adulthood – associated tattooed individuals with positive features. They often described them as interesting, brave, creative. The detailed research results will be presented during the conference.

Associations regarding tattooed persons change with age. Young people more often have a positive attitude towards tattooed individuals. It may indicate that tattoos are becoming a part of our mainstream culture. Basing on the research results, standardized questionnaire will be created to evaluate psychological reasons and effects of different body modifications. The questionnaire will also investigate the attitude to individuals with body modifications.

Keywords: *Body modifications, tattoos, stereotypes, positive and negative attitude towards distinctiveness of others.*

1. Introduction

The recent studies carried out in different parts of the world point out that there are more similarities than differences between their tattooed and non-tattooed participants. Therefore, one can conclude that tattoos are becoming a part of our mainstream culture (Antoszewski, Sitek, Fijałkowska, Kasielska & Kruk-Jeromin, 2016; Armstrong, Owen, Roberts & Koch, 2002; Armstrong, Roberts, Koch, Saunders, Owen & Anderson, 2008; Armstrong, Stuppy, Gabriel & Anderson, 1996; Broussard & Harton, 2017; Claes, Vandereycken & Vertommen, 2005; Daniszewska, 2012; Deschesnes, Demers & Fines, 2006; Jaworska, Fijałkowska & Antoszewski, 2018; Pajor, Broniarczyk-Dyła & Świtalska, 2015; Swami, Gaughan, Tran, Kuhlmann, Stieger & Voracek, 2015; Swami, Tran, Kuhlmann, Stieger, Gaughan & Voracek, 2008; Tate & Shelton, 2008; Zeiler & Kasten, 2016; Naude, Jordaan & Bergh, 2017).

Many studies show that negative associations and stereotypes about tattooed individuals still occur in society and have an influence on the perception of their e.g. character traits or deciding if somebody is guilty or not during a trial (Armstrong, Stuppy, Gabriel & Anderson, 1996; Durkin & Houghton, 2000; Forbes, 2011; Funk & Todorow, 2013; Zestcott, Bean & Stone 2015; Zeiler & Kasten, 2016; Broussard & Harton, 2017).

The research carried out in Australia pointed out that children at the age of 6 appear to have acquired strong negative stereotypes of persons with tattoos. Further, it indicated that while making a decision to obtain a tattoo, young people are already aware of the criminal stigma attached to this form of body marking (Durkin & Houghton, 2000).

Our own research shows that people from different age groups differ in terms of perception of people's tattooing motives, anticipated potential effects of obtaining a tattoo, as well as in terms of the emotional attitude towards tattooed individuals (Winiarek & Wojciechowska, 2019a; 2019b; 2020).

1.1. Research hypothesis

Representatives of different age groups have different associations regarding tattooed individuals.

1.2. Aim

In the first stage of the research program, a semi-structured interview was conducted to determine the attitude that different age cohorts have towards tattoos and tattooed individuals.

2. Method

A total of 400 people from different development stages (pre-school period, early school-age period, adolescents, early adulthood, middle adulthood and late adulthood – according to Erik Erikson's Psychosocial Development Theory) took part in the study. The study was conducted using a semi-structured interview.

The semi-structured interview was conducted directly by the researcher or using an online questionnaire (only in the case of adults). The study was carried out from October 2018 till February 2020. The research took place in Poland.

3. Results

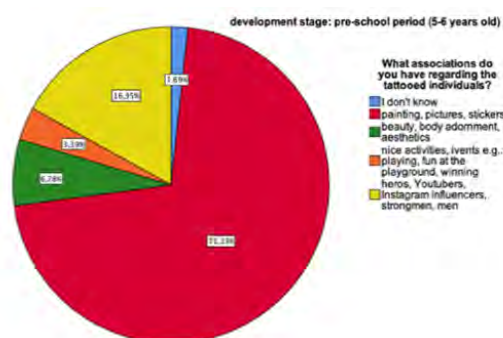
The collected data was analyzed using the χ^2 test.

$$\chi^2(155, N=400) = 539,24; p < 0,001$$

A significant dependence is observed between the age and the association regarding tattooed individuals.

Answer the following question: What associations do you have regarding the tattooed individuals?

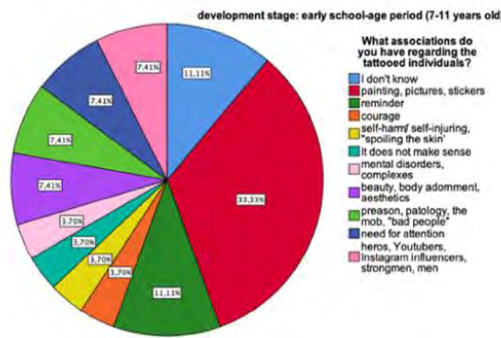
Figure 1. Percentage distribution of results in the pre-school period.



1. Pre-school children associate tattooed people most often with various types of pictures. This is a significantly more frequent response than in other age groups ($p < 0,05$). These are example answers given by children: "I associate tattooed people with painting, stickers, flowers, roses, fish, smoke, a dog, a cat, or with skulls." This shows that children associate tattooed people mainly with the content of pictures of the tattooed individuals.

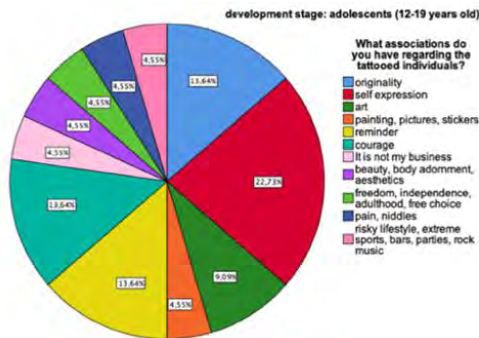
2. Definitely more often than in the group of teenagers and adults ($p < 0,05$), children associate tattooed people with heroes e.g. Avengers, Batman, Super Man, Star Wars. Perhaps these are also the motifs that children have seen in adults or it may be the motifs of washable tattoos for children.

Figure 2. Percentage distribution of results in the early school-age period.



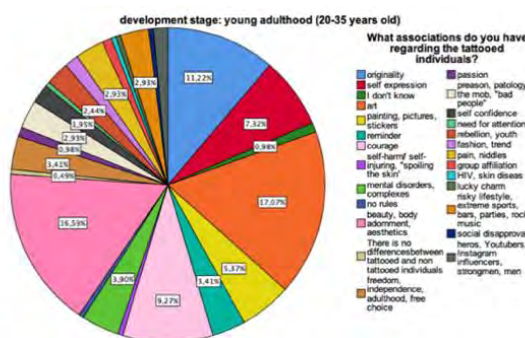
1. As in the previous age group, children in early school-age also associate tattooed individuals with various types of pictures.
2. Significantly more often than in the middle adulthood group, children in early school-age mentioned that they associate tattooed individuals with people who "want to show off" ($p < 0,05$).
3. It was significantly more difficult for children than for the early adulthood group to tell what tattooed people are associated with - the answer "I don't know" ($p < 0,05$).

Figure 3. Percentage distribution of results in the adolescents.



1. Tattooed individuals are most often associated by teenagers with the form of self-expression. This association is significantly more often declared by adolescents in comparison with the group of preschool children and the group of people from late adulthood ($p < 0,05$).
2. Significantly more often than in the group of early adulthood, teenagers believe that tattooing is a private matter of another person ($p < 0,05$).

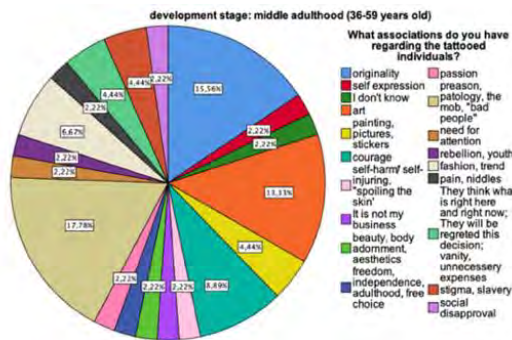
Figure 4. Percentage distribution of results in the young adulthood.



1. The early adulthood turned out to be the most diverse in terms of associations regarding tattooed people.
2. The most common association in this age group with regard to tattooed individuals was art. This association was definitely more often mentioned compared to preschool children ($p < 0,05$). Therefore, it can be assumed that children perceive tattoos more as a content aspect, and people in early adulthood as a form of art, e.g. the artistic style of a tattoo. The example answers are: "a work of art", "hard work of the artist", "artist's skills".

3. The second most frequently mentioned association with tattooed individuals was the association with beauty, body adornment, aesthetics, which may also be connected with artistic expression.

Figure 5. Percentage distribution of results in the middle adulthood.



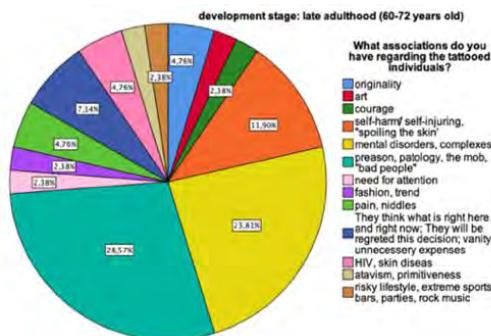
1. The middle adulthood group associates tattooed people most often with prison, pathology or crime / the mob. This association occurs significantly more often in comparison with the group of early adulthood and preschool children ($p < 0.05$).

2. In addition, it turns out that respondents from this development stage associate considerably more often the tattooed individuals with originality and interesting personality than the preschool children. *These are some examples of their answers: "they have their own style", "they are creative", "expressive".*

3. The middle adulthood respondents associate significantly more often the tattooed people with an impulsive, reckless decision to get a tattoo than the representatives of early adulthood ($p < 0.05$). These are examples of the way they described this decision: *"they will regret it", "they only think what is right here and right now", "unnecessary expense", "vanity".*

4. In comparison with the early adulthood, the representatives of the middle adulthood phase associate the tattooed individuals more often with slavery and stigma ($p < 0.05$).

Figure 6. Percentage distribution of results in the late adulthood.



1. People from the late adulthood stage associate the tattooed individuals most often with prison, pathology and the mob. This association appears significantly more often in this group rather than in early adulthood and in the group of preschool children ($p < 0.05$).

2. This age phase associates the tattooed people more often with self-harm, self-injuring than the early adulthood group ($p < 0.05$). *For example, they describe tattoos as "questionable body adornment".*

3. In comparison with the early and middle adulthood and also preschool children, the late adulthood group associates the tattooed individuals significantly more often with mental disorders, complexes ($p < 0.05$). *The examples of their answers are: "they are not so well-ordered", "they are simply crazy", "they are full of complexes."*

4. Compared to the group of early adulthood, the late adulthood respondents believed that tattooing is an impulsive and hasty decision ($p < 0.05$). *An example response is: "they were temporarily insane."*

4. Discussion

Our study confirmed the existence of stereotypical associations regarding the tattooed individuals in the Polish society.

It is evident that the older the respondents are, the more negative the association of the tattooed people they express. This may be related to the previous experiences of people in the late adulthood.

An interesting idea might be to check what kind of experiences with tattooed people the representatives of the late adulthood had.

The next stage of our research will be to create a standardized questionnaire to assess associations with tattooed people.

Analyzing previous studies (e.g. Broussard & Harton, 2017), it seems important to consider the sex of the respondents in subsequent research (in our study, most participants were women – 79%) and take more development phases into account.

Many studies suggest that what really matters is the content of a tattoo and not the fact that an individual possesses it (e.g. Zeiler & Kasten, 2016; Zestcott, Bean & Stone, 2015).

Therefore, it may be interesting to evaluate associations in terms of different tattoo contents.

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FAMILY ADVERSITY FACTORS AND EXTERNAL RESOURCES OF RESILIENCE IN A ONE-YEAR FOLLOW-UP

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Abstract

Objectives: External resources of resilience along with internal assets facilitate the healthy development of adolescents and eventually contribute to overcoming adversity. Therefore, it is crucial to examine the factors which enhance or reduce external resources of resilience. The main goal of this study is to explore the role of adversity factors: adolescents – parental conflict, antagonism and punishment and family structure in explaining perceived external resources of resilience – school meaningful participation and community meaningful participation in a one-year follow-up.

Methods: 146 (49% girls) adolescents (T1 mean age=13.51) participated in a repeated measures design with a 12-month follow-up. External resources of resilience (School meaningful participation (SMP) and Community meaningful participation (CMP)) were measured by the RYDM questionnaire. Parental conflict, antagonism and punishment were assessed by the NRI-SPV questionnaire separately for the mother and father. The family structure was dichotomized (both biological parents vs. other).

Results: The linear regression revealed that having something other than biological family is associated with lower SMP and CMP over the year while controlling for SMP and CMP at T1. Moreover, higher punishment from the father is associated with lower SMP while higher antagonism with the mother is associated with higher CMP after one year. In addition, the findings confirmed a moderation effect of gender and father punishment on SMP. This shows that the probability of lower SMP at T2 is higher for boys with a higher level of punishment by the father at T1.

Conclusion: Family structure is a key factor in contributing to lower external resources of resilience. Father punishment negatively contributes to SMP, although not CMP. Mother antagonism positively contributes to CMP but not SMP. The moderation effect of gender between father punishment and SMP implies a greater sensitivity of boys towards father punishment and a potential inhibition effect on participation at school in comparison to girls. Interestingly, antagonism with the mother contributes to higher CMP which reveals the potential self-protection mechanism of adolescents in compensating antagonism with the mother for meaningful participation in different environments such as the community. However, there is a failure to compensate at school when the punishment from the father is greater.

Keywords: *External resilience, family adversity, adolescents.*

1. Introduction

Adolescents from disadvantaged, dysfunctional or impaired home environments are more at risk of negative outcomes such as mental illnesses (Hughes et al., 2018), substance use (Pilowsky et al., 2009) or low life satisfaction (Levin et al., 2012). Moreover, this is not only in adolescence but can continue into adulthood. Initial research (Antonovsky, 1979; Werner & Smith, 1982) has confirmed that the relationship between adversity and negative outcomes is not direct. The existence of resilience factors that mediate or moderate the adversity and negative outcomes has been confirmed (Masten, 2014). However, less is known about how family adversity factors affect various resilience factors. Few studies have addressed home adversity factors such as parenting style, socioeconomic status, divorce/separation, abuse, parental disabilities which are negatively associated with internal assets and external resources of resilience such as: self-esteem (Zilioli et al., 2016), self-control (Ng-Knight & Schoon, 2017), meaningful activities (Garmienė, Žemaitienė & Zaborskis, 2006; Flynn et al., 2006) or relationships with others (Merz & Jak, 2013). There is also a research gap regarding longitudinal research. Thus, this current study aimed to explore whether specific family factors explain perceived external resources of resilience over a year.

2. Design

A repeated measure design was used.

3. Objectives

The objective of this study was to examine the role of family adversity factors: adolescents – parental conflict, antagonism, punishment and family structure in explaining perceived external resources of resilience – school meaningful participation and community meaningful participation in a one-year follow-up.

4. Methods

4.1. Sample and procedure

The data were collected in two repeated measure design study with a baseline (T1) and a 12-month follow-up (T2) in 6 randomly selected Slovak primary schools. All seventh-grade students from every school participated in the research. The sample consisted of 146 (49% girls) adolescents (mean age = 13.51 at T1).

4.2. Measures

The adolescents were asked to fill in a paper version of the questionnaire regarding their relationship with parents, their family structure and perceived external resources of resilience (school and community meaningful participation). Participation in the study was anonymous and voluntary.

- External resources of resilience were explored using the RYDM (Resilience and Youth Development Module) (Constantine, Benard and Diaz 1999) questionnaire with 4-point Likert-type responses (1= not true at all, 4 = very much true).
 - school meaningful participation (CA=0.67): “*At school I help decide things like class activities or rules*”
 - community meaningful participation (CA=0.93) “*Outside of my home and school, I do these things: I am part of clubs, sports teams, church/temple, or other group activities*”
- Family adversity factors were explored using the NRI-SPV (The Network of Relationship Social Provision Version) (Furman & Buhrmester, 1985) questionnaire with 5-point Likert-type responses (1= not at all or little, 5 = most of the time) separately for the mother and father.
 - conflict (mother CA=0.77; father CA=0.76): “*How much do you and this person get upset with or mad at each other?*”
 - antagonism (mother CA=0.70; father CA=0.69): “*How much do you and this person hassle or nag one another?*”
 - punishment (mother CA=0.75; father CA=0.81): “*How often does this person punish you?*”

Family structure was assessed using 4 separate items exploring the composite of the child’s home environment by the question „*Which of the following people live in the same household with you?*“ with possible answers: mother, father, stepmother, stepfather. We dichotomized the variables into: 0 – biological family (mother and father present in household) or 1 – others (one of the parents is absent or there is the presence of a step-parent)

4.3. Statistical analyses

Two separate linear regression models were used to assess the association between family adversity factors and external resources of resilience over one year. School meaningful participation and community meaningful participation at T2 served as the dependent variables while family adversity factors at T1 served as the independent variables. The models were controlled for the effect of resilience in T1. A T-test and Chi-square test were performed to assess the gender differences in all variables. In order to assess the potentially different effects in gender, all interactions with gender were tested.

4.4. Results

The descriptive analysis and gender differences in all explored variables are presented in Table 1. Generally, external resources of resilience were higher among girls with significant gender differences in community meaningful participation at T1 while negative interactions with parents (conflict, antagonism) and parental punishment was higher among boys with significant gender differences in father punishment. Gender differences in family structure were not found.

Table 1. The descriptive characteristics in the measured variables according to gender.

VARIABLE	BOYS Mean (SD)	GIRL Mean (SD)	T value	Sig
T1 School meaningful participation	2.35 (SD=0.77)	2.56 (SD=0.77)	-1.90	ns
T2 School meaningful participation	2.28 (SD=0.82)	2.49 (SD=0.80)	-1.80	ns
T1 Community meaningful participation	2.75 (SD=0.98)	3.27 (SD=0.70)	-4.29	<.01
T2 Community meaningful participation	2.28 (SD=0.82)	2.49 (SD=0.80)	-1.75	ns
T1 Father conflict	2.00 (SD=0.95)	1.81 (SD=0.72)	1.54	ns
T1 Father antagonism	1.99 (SD=0.95)	1.86 (SD=0.79)	1.01	ns
T1 Father punishment	2.53 (SD=1.07)	2.23 (SD=0.89)	2.00	<.05
T1 Mother conflict	2.00 (SD=0.85)	2.03 (SD=0.88)	-0.24	ns
T1 Mother antagonism	1.94 (SD=0.89)	1.83 (SD=0.80)	0.92	ns
T1 Mother punishment	2.49 (SD=0.96)	2.34 (SD=0.94)	1.09	ns
T1 Family structure*	74,7%	69,2%	0.70	ns

SD – Standard deviance; *biological family is presented; the Chi-square test was used; ns – not significant

Mother antagonism at T1 and family structure at T1 were significantly associated with community meaningful participation in T2. Having both biological parents and higher mother antagonism positively contributes to higher community meaningful participation over one year.

Table 2. Regression model for community meaningful participation regarding family adversity factors.

T2 Community meaningful participation (R² = 0.40)					
Predictors	B	S.E.	β	t	Sig.
T1 Community meaningful participation	0.56	0.07	0.53	7.22	<.01
Gender*	-0.03	0.14	-0.01	-0.21	ns
T1 Family structure	-0.57	0.15	-0.27	-3.71	<.01
T1 Father conflict	0.23	0.14	0.20	1.58	ns
T1 Father antagonism	-0.09	0.14	-0.08	-0.61	ns
T1 Father punishment	-0.07	0.12	-0.07	-0.58	ns
T1 Mother conflict	-0.10	0.14	-0.10	-0.69	ns
T1 Mother antagonism	0.33	0.14	0.33	2.24	<.05
T1 Mother punishment	-0.14	0.13	-0.15	-1.09	ns

Note: * boys as a reference group; ns – not significant

Father punishment at T1 and family structure at T1 were significantly associated with school meaningful participation at T2. Having both biological parents positively contributes to higher school meaningful participation over one year while higher father punishment negatively contributes to school meaningful participation over one year.

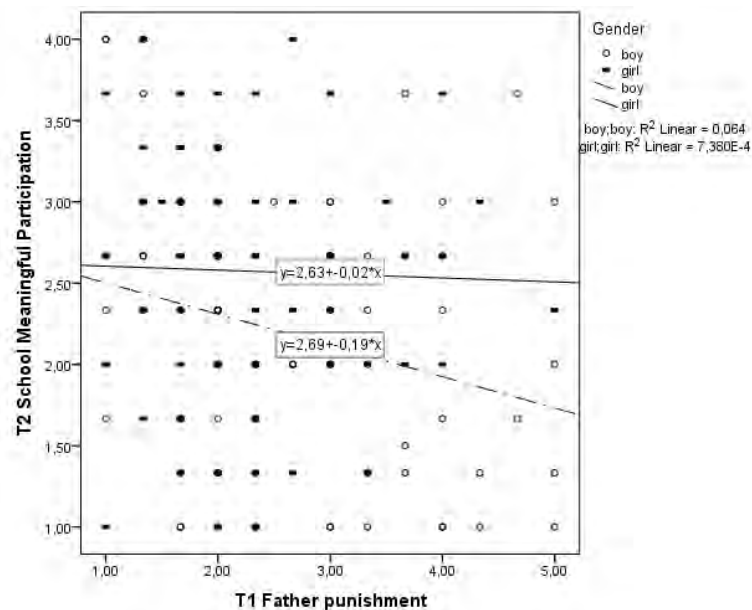
Table 3. Regression model for school meaningful participation regarding family adversity factors.

T2 School meaningful participation (R² = 0.39)					
Predictors	B	S.E.	β	t	Sig.
T1 School meaningful participation	0.45	0.07	0.46	6.26	<.01
Gender*	-0.46	0.32	-0.29	-1.42	ns
T1 Family structure	-0.36	0.13	-0.20	-2.69	<.01
T1 Father conflict	0.03	0.12	0.03	0.24	ns
T1 Father antagonism	0.21	0.13	0.21	1.60	ns
T1 Father punishment	-0.58	0.19	-0.73	-2.97	<.01
T1 Mother conflict	0.07	0.13	0.08	0.56	ns
T1 Mother antagonism	-0.79	0.13	-0.08	-0.59	ns
T1 Mother punishment	-0.08	0.11	-0.10	-0.72	ns
Gender * Father punishment	0.28	0.12	0.59	2.24	<.05

Note: * boys as the reference group; ns – not significant

Regarding the moderation effect, the relationship between father punishment and school meaningful participation varies depending on gender. Boys with high father punishment show a higher probability of low school meaningful participation compared to girls with high father punishment. Thus, it seems that gender moderates the relationship between father punishment and school meaningful participation. This can be seen in Figure 1. The moderation effects of other variables were tested but were insignificant and thus are not displayed.

Figure 1. Interaction effect of gender and father punishment at T1.



5. Discussion and conclusion

The findings of this study show that family adversity factors play an important role in perceived external resources of resilience over a year among adolescents. Moreover, a moderation effect of gender on the relationship between father punishment and school meaningful participation was found.

In our study, mother antagonism was found to be positively associated with higher community meaningful participation after one year. The possible self-protective mechanism could activate a healthy way of how to compensate the negative relationship with the mother, through meaningful participation in a different environment such as the community. Gauze et al. (1996) states that adolescents are “active consumers of social support” who can turn to different relationships if the other is not providing efficient support. Thus, we can extend these findings regarding social support and apply them to broader social contexts by hypothesizing that higher negative experiences in one’s environment is compensated by seeking positive experiences in others. However, this possible self-protective mechanism is not effective regarding father punishment (punishment in general, verbal aggression with insults, harsh criticism) which was found to be negatively associated with school meaningful participation. It seems that negative interaction such as antagonism with the mother has an activation effect on adolescents while punishment, a highly negative experience especially with the father, may inhibit responses other than the one being punished. Adolescents who are punished may become withdrawn, inhibited and less activated than others (Mhlongo, 2013). Thus, adolescents may be inhibited to seek healthy compensation as in the case when antagonism with the mother is experienced.

Moreover, the moderation effect of gender between father punishment and school meaningful participation revealed that boys who experience father punishment score less regarding school meaningful participation compared to girls who experience father punishment. It is well-known that girls are more social, active and involved in school activities, rule-setting or voluntary activities than boys (Villaruel et al., 2003). Thus, father punishment may have a less negative effect on their school meaningful participation compared to boys. The results from Table 1 show that girls score higher in meaningful participation not only in the school environment but also in the community with significant gender differences. This supports the claim that it is easier for girls to meaningfully participate in the environment.

Family structure was significantly associated with external resources of resilience. Having both biological parents positively contributes to school and community meaningful participation as well as to overall positive youth development (Levin et al., 2012). There may be several reasons for assuming that family structure has an effect on children’s meaningful participation. Firstly, the income of single parent families (usually mothers) can get in the way of participating in the environment. Secondly, parents are a great source of social capital, emotional support and everyday assistance. Adolescents from single parent families have lower access to social capital in comparison with two-parent households (Amato et al., 2015) and therefore are less active in their environment. It seems that stepfamilies may be more stable for adolescents although most adolescents currently living with a step-parent may have experienced

the disruption of the original family and additional transition to a new family structure followed by potential instability or turbulences within the family. This could again contribute to a lower level of activity, even the accessibility of meaningfully participating in the environment.

In conclusion, it is important to foster meaningful participation in both the school and community environment. It is also necessary to pay attention to unhealthy relationships in families and protect children due to the impact not only on negative youth development outcomes but also on external resources of resilience despite the potential compensation mechanism.

Acknowledgements

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ACHIEVEMENT MOTIVATION, PERSONALITY TRAITS AND THEIR RELATION TO GENERAL AND CAREER SELF-EFFICACY

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Abstract

Introduction: We started from Bandura's theory of self-efficacy, the onion model of achievement motivation according to Schuler & Prochaska, and 5-factor personality theory by Costa & McCrae. The aim of the study was to analyze the correlation and regression analysis of achievement motivation, personality traits, and general self-efficacy / domain-specific career self-efficacy. We expected the stronger relationship of stable personality characteristics with general self-efficacy than with specific-domain career self-efficacy.

Methods: 713 adult participants (university students and working adults) completed an achievement motivation questionnaire, a five-factor personality theory questionnaire, and a general and career self-efficacy questionnaire.

Results: Regression analysis showed, that confidence in success, dominance, competitiveness, and independence explained 45.7% of the general self-efficacy score. Confidence in success, independence, goal setting, fearlessness, dominance, internality, and competitiveness explained 38.5% of career self-efficacy. With the combination of personality and motivational predictors, we have achieved the following results: confidence in success, dominance and five-factor personality traits explained 59.3% of general self-efficacy. Confidence in success, independence, conscientiousness, extraversion, goal setting, fearlessness, dominance, and competitiveness explained 42.5% of career self-efficacy.

Conclusion: Confidence in success, dominance, and competitiveness can be seen as general motivational predictors of self-efficacy (general or domain-specific); fearlessness of career efficacy. Achievement motivation is the stronger predictor of the general and career efficacy than personality traits are. Stable traits and achievement motivation dimensions had bigger predictive power when speaking about general self-efficacy than domain-specific career self-efficacy.

Discussion: For further research, we recommend verifying relationships between self-efficacy constructs and some other important personality characteristics, e.g. attachment styles.

Keywords: *Achievement motivation, traits, general self-efficacy, career self-efficacy.*

1. Self-efficacy

Self-efficacy refers to the personal beliefs or to an individual's confidence in his own ability to perform effectively specified tasks. It affects behavior and motivation. The self-efficacy theory states that there are four main sources of efficacy expectations: previous performance accomplishments, vicarious experiences, verbal persuasion, and physiological states (Bandura 1977). These sources show the dynamic nature of self-efficacy. Efficacy beliefs influence how people feel, think, motivate themselves, and behave (Bandura, 1993). Bandura stated that beliefs about the nature of ability can make a difference in a group's performance. For example, people who believed that ability has an inherent intellectual nature failed in group problem-solving. They who believed that ability is an acquired skill achieved the group goals more efficiently. They simply managed better by fostering a "highly resilient sense of personal efficacy" (p. 121).

According to motivation Bandura says that self-efficacy beliefs play a key role in the self-regulation of motivation through cognition. He distinguishes three different forms of cognitive motivators: casual attributions, outcome expectancies, and cognized goals. Self-efficacy works with all three forms of cognitive motivators. It causes the difference in intellectual performance between children with the same level of cognitive ability but a different level of self-efficacy. The research in university students' samples proved the mediational role of self-efficacy on achievement motivation and learning strategies (Yusuf, 2011b) and a considerable correlation between self-efficacy and achievement motivation (Yusuf, 2011a).

Self-efficacy theory (Bandura,1982) says that perceived self-efficacy is a major motivational factor that contributes to successful task performance. Research showed that self-efficacy is the most

important predictor of university student achievement (Bartimote-Aufflick, Bridgeman, Walker, Sharma, & Smith, 2016). Bandura understands motivation as a cognitive phenomenon and the self-efficacy in the same way. He said: “Expectations of personal efficacy do not operate as dispositional determinants independently of contextual factors.” (Bandura, 1977, p. 203). Hence, it is necessary for a subject to identify the circumstance and to determine the required behavior. The dynamic nature of self-efficacy is therefore used for developmental goals in various settings, e.g. schools (Bartimote-Aufflick, et al., 2016). An example of a domain-specific self-efficacy is a also career self efficacy. It is broadly defined as “confidence in one’s ability to manage career development and work-related tasks” (O’Brien, 2003, p. 110).

When speaking about achievement and motivation we cannot forget dispositional theories. From that point of view, achievement motivation is a personality variable that has been used to explain individual differences in various contexts. It can be regarded as a complex construct consisting of different layers of dimensions, something as onion. Schuler & Prochaska (2011) view achievement motivation model as an onion model. Layers of onion are layers of personality: background variables (neuroticism, conscientiousness), theoretical compounds (locus of control, attribution style, self-confidence), peripheral facets (independence, status orientation), core facets (hope of success, goal setting, persistence). Therefore “it is regarded as a general orientation of the person towards the achievement” (p.9).

In spite of the fact, that self-efficacy is the dynamic cognitive construct, research in last years showed that personality traits contribute as antecedents to domain-specific kinds of self-efficacy, e.g. career self-efficacy (Brown & Cinamon, 2016; Hartman & Betz, 2007; Bullock-Yowell, Andrews, & Buzzetta, 2011), computer self-efficacy (Saleem, Beaudry, & Croteau, 2011), creative self-efficacy (Karwowski, Lebuda, Wisniewska, & Gralewski, 2013), entrepreneurial self-efficacy (Şahin, Karadağ, & Tuncer, 2019). These findings are important in light of the integration of trait and social-cognitive perspectives.

2. Objectives

We expect a significant relationship between the stable characteristics of personality and self-efficacy constructs. When considering the power of the situation in case of domain-specific self-efficacy constructs, we expect that the relationship between stable personality characteristics (achievement motivation, and personality traits) and generalized efficacy will be stronger than between stable personality characteristics (achievement motivation, and personality traits) and career self-efficacy.

3. Methods

Seven hundred and thirteen university students and adults participated in the research. All participants took achievement motivation inventory, 690 of them fulfilled career efficacy questionnaire, 600 five-factor personality inventory, 268 general self-efficacy scale. The participants were collected by the snowball method. The first contact - psychology students collected the data and they received the credits for a research practice course. The data were collected and processed anonymously. Participation in the research was voluntary.

Achievement motivation inventory (LMI; Schuller & Prochaska, 2011) in the Slovak language contains 170 items in a 7-point Likert format from (1) “Does not apply at all” to (7) “Applies fully to me”. The final questionnaire consists from 17 dimensions - Fearlessness, Flexibility, Independence, Preference for Difficult Tasks, Confidence in Success, Dominance, Goal Setting, Eagerness to Learn, Competitiveness, Compensatory Effort, Engagement, Pride in Productivity, Status Orientation, Flow, Internality, Persistence, Self-Control.

Generalized Self-Efficacy Scale (GSES) was confirmed as a cultural independent tool in 25 countries of the world (Luszczynska, Scholz, & Schwarzer, 2005; Scholz, Gutiérrez-Doña, Sud, & Schwarzer, 2002). For the research purpose, we used the Slovak version of the GSES (Košč, Heftyová, Schwarzer, & Jerusalem, 1993). It contains 10 items in a 4-point Likert format from (1) “Not true” to (7) “The truth”.

The Career Decision Self-Efficacy scale–Short Form (CDSES; Betz, Klein, & Taylor in O’Brien, 2003) is a self-report, 25-item inventory developed to assess confidence in making career-related decisions and engaging in tasks related to career decision making. A 5-point continuum, ranging from no confidence at all (1) to complete confidence (5) was used. All items were summed to obtain the total score on the CDSES–SF. High scores reflect strong levels of confidence in completing career-related tasks.

NEO the five-factor personality inventory NEO-FFI represents a shortened version of the five-factor personality theory questionnaire (Ruisel & Halama, 2007) that measures five main personality traits: neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. The dimensions represent the sum of answers for 12 questions using ratings from 1 to 5.

The data were analyzed by JASP 0.11.1.0 (correlation, and regression analysis). The study is part of the research project GA AA 3_5/2020.

4. Results

Correlation analysis showed small to large correlation coefficients between self-efficacy, personality traits and achievement motivation dimensions (Table 1).

Five achievement motivation dimensions predict general self-efficacy: dominance, confidence in success, flexibility, competitiveness, and goal setting. The regression model explains 48,3 % of general self-efficacy score variability ($R = 0,695$; $R^2 = 0,483$; $F(17, 240) = 13,192$; $p < .001$).

All five personality traits in combination with four dimensions of achievement motivation (dominance, confidence in success, self-control, and competitiveness) significantly predict general self-efficacy. The regression model explains 61,3 % of general self-efficacy score variability ($R = 0,783$; $R^2 = 0,613$; $F(22, 226) = 16,297$; $p < .001$).

Nine achievement motivation dimensions (dominance, confidence in success, flexibility, fearlessness, internality, eagerness to learn, preference for difficult tasks, competitiveness, and goal setting) significantly predict career self-efficacy. The regression model explains 39,7 % of career self-efficacy score variability ($R = 0,630$; $R^2 = 0,397$; $F(17, 655) = 25,380$; $p < .001$).

Three traits of personality (extraversion, agreeableness, and conscientiousness) with six achievement motivation dimensions (dominance, engagement, confidence in success, fearlessness, competitiveness, and goal setting) significantly predict career self-efficacy score. The regression model explains 44,4 % of career self-efficacy score ($R = 0,666$; $R^2 = 0,444$; $F(22, 537) = 19,467$; $p < .001$).

5. Discussion

Stable traits and achievement motivation dimensions significantly predict both, general and career self-efficacy. They had bigger predictive power when speaking about general self-efficacy than about domain-specific career self-efficacy. Achievement motivation is the stronger predictor of the general and career efficacy than personality traits are. When speaking about the general self-efficacy score, all five personality traits predict the overall score. In comparison with that, only three personality traits predict the domain-specific career self-efficacy score. It agrees with Bandura's (1993) statement, that domain-specific efficacy constructs depend more on the situation. Dominance, confidence in success and competitiveness as the achievement motivation dimensions can be seen as general motivational predictors of self-efficacy, whether general or career. These motivational dimensions of the LMI questionnaire belong to the most stable ones (Prochaska & Schuler, 2011). Dominance reflects a tendency to exercise power and influence others. Confidence in success reflects a tendency to achieve success even when there are obstacles to overcome. This phenomenon described Bandura (1993) as a key behavioral strategy of highly efficient thinking. Competitiveness expresses the desire to win and be better and faster than others. Dimension fearlessness was included in career self-efficacy predictive models and it was not significant in the general self-efficacy regression model. Fearlessness expresses a lack of fear of failing at difficult tasks, or of being judged by others (Schuler & Prochaska, 2011).

There are also other studies that showed a significant relationship between self-efficacy and achievement motivation. Small to medium correlation between self-efficacy and achievement motivation was found (Liqin & Lesen, 2018; Harahsheh, 2017; Jalal, Mansor, & Arshadi, 2016), but also no significant correlation (Sharma, 2015; Zhang, Zhang, Zhang, Liu, Zhang, Wang, & Liu, 2015). The relatively strong predictive power in the current study can be caused by the stable nature of LMI achievement motivation dimensions.

Relationships between self-efficacy and achievement motivation were recently examined in the context of various variables, e. g. negligence (Jalal, et al., 2016), self-identity and hope (Liqin, Lesen, 2018). For further research, we recommend verifying relationships between self-efficacy constructs and some other important personality characteristics, e.g. attachment (Klanduchová & Greškovičová, 2019; Greškovičová & Hírešová, 2019).

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Table 1. Correlations.

	1	2	3	4	5	6	7	8	9	10	11
1 CDSES	—										
2 GSES	0.648***	—									
3 N	-0.381***	-0.456***	—								
4 E	0.386***	0.464***	-0.409***	—							
5 O	0.162***	0.212***	-0.042	0.207***	—						
6 P	-0.004	-0.158*	-0.178***	0.154***	0.100*	—					
7 S	0.424***	0.456***	-0.366***	0.298***	0.036	0.229***	—				
8 PE	0.392***	0.421***	-0.478***	0.301***	0.003	0.045	0.531***	—			
9 DO	0.461***	0.548***	-0.348***	0.475***	0.241***	-0.214***	0.263***	0.415***	—		
10 EN	0.248***	0.266***	-0.126**	0.180***	0.032	-0.080	0.410***	0.449***	0.396***	—	
11 CS	0.514***	0.592***	-0.452***	0.394***	0.180***	0.007	0.427***	0.534***	0.594***	0.409***	—
12 FX	0.458***	0.493***	-0.425***	0.460***	0.257***	0.035	0.306***	0.447***	0.495***	0.208***	0.559***
13 FL	0.219***	0.238***	-0.050	0.159***	0.213***	-0.070	0.224***	0.243***	0.345***	0.446***	0.398***
14 F	0.427***	0.423***	-0.575***	0.280***	0.110**	0.003	0.320***	0.603***	0.377***	0.195***	0.490***
15 IN	0.310***	0.180**	-0.395***	0.172***	0.150***	0.254***	0.359***	0.441***	0.165***	0.125***	0.285***
16 CE	0.115**	0.084	0.121**	-0.026	0.012	0.008	0.256***	0.155***	0.178***	0.394***	0.274***
17 PP	0.279***	0.245***	-0.064	0.194***	0.120**	0.039	0.411***	0.296***	0.404***	0.421***	0.475***
18 EL	0.394***	0.301***	-0.230***	0.209***	0.334***	0.008	0.332***	0.349***	0.471***	0.443***	0.519***
19 PT	0.392***	0.455***	-0.380***	0.245***	0.178***	-0.051	0.371***	0.556***	0.484***	0.482***	0.628***
20 ID	0.461***	0.528***	-0.508***	0.326***	0.167***	-0.020	0.401***	0.534***	0.531***	0.322***	0.539***
21 SC	0.260***	0.167**	-0.255***	0.086*	0.016	0.207***	0.613***	0.543***	0.159***	0.402***	0.307***
22 OS	0.226***	0.235***	0.024	0.242***	0.117**	-0.243***	0.050	0.069	0.478***	0.245***	0.348***
23 CO	0.132***	0.084	0.093*	0.178***	0.064	-0.313***	0.008	0.074*	0.456***	0.304***	0.255***
24 GS	0.407***	0.382***	-0.157***	0.264***	0.226***	-0.037	0.328***	0.282***	0.467***	0.426***	0.492***

Table 1. Correlations – continue.

	12	13	14	15	16	17	18	19	20	21	22	23
12 FX	—											
13 FL	0.320***	—										
14 F	0.539***	0.044	—									
15 IN	0.351***	0.124***	0.476***	—								
16 CE	0.057	0.373***	-0.218***	-0.010	—							
17 PP	0.319***	0.593***	-0.006	0.186***	0.578***	—						
18 EL	0.471***	0.391***	0.297***	0.217***	0.287***	0.408***	—					
19 PT	0.602***	0.491***	0.537***	0.296***	0.193***	0.349***	0.547***	—				
20 ID	0.566***	0.283***	0.626***	0.416***	0.007	0.260***	0.409***	0.584***	—			
21 SC	0.198***	0.131***	0.318***	0.398***	0.274***	0.283***	0.267***	0.313***	0.298***	—		
22 OS	0.249***	0.344***	-0.059	-0.077*	0.372***	0.527***	0.345***	0.209***	0.129***	-0.012	—	
23 CO	0.142***	0.384***	-0.068	-0.098**	0.373***	0.445***	0.287***	0.221***	0.099**	-0.018	0.666***	—
24 GS	0.451***	0.406***	0.201***	0.182***	0.361***	0.517***	0.547***	0.475***	0.379***	0.232***	0.578***	0.445***

*p < .05, ** p < .01, *** p < .001

CDSES = career self-efficacy; GSES = general self-efficacy; N = neuroticism; E = extraversion; O = openness to experience; A = agreeableness; C = conscientiousness; F = fearlessness; FX = Flexibility; ID = Independence; PT = Preference for Difficult Tasks; CS = Confidence in Success; DO = Dominance; GS = Goal Setting; EL = Eagerness to Learn; CO = Competitiveness; CE = Compensatory Effort; EN = Engagement; PP = Pride in Productivity; OS = Status Orientation; FL = Flow; IN = Internality; PE = Persistence; SC = Self-Control.

TRANSGENERATIONAL EFFECT: REMEMBERED ATTACHMENT, ATTACHMENT TO PARTNERS AND BONDING TOWARDS NEWBORNS

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Abstract

There is no doubt that emotional relationships are very important. Attachment theory describes functioning in these relationships through inner working models that guide expectations and behaviours in the relationships. Therefore, we can suppose that attachment affect actual relationships toward partners as well as own children since both are emotional-relationship objects. Our aim was to explore transgenerational effect of attachment (what was I given, what do I share with my partner, what do I give to my newborn). We had three objectives- to find out whether remembered attachment is a predictor of attachment in close relationships and bonding; whether attachment in close relationships is a predictor of bonding, and whether there are differences between men and women in attachment and bonding. Our sample consisted of fathers ($n=27$) and mothers ($n=73$) who recently gave birth. Participants of age between 21 and 46 years were approached at obstetrics and gynaecology clinic in Bratislava, Slovakia. They filled in 3 self-administered questionnaires: sEMBU (remembered attachment), ECR-R (attachment in close relationships), and MIBQ (bonding towards infant). The results showed weak to moderate correlations among remembered attachment and attachment in close relationships/bonding. Mother's emotional warmth in remembered attachment predicts both avoidance (adjusted $R^2=.091$, $\beta=-.317$, $p=.001$) and anxiety (adjusted $R^2=.045$, $\beta=-.233$, $p=.019$) in attachment in close relationships. Mather's emotional warmth (adjusted $R^2=.086$, $\beta=.309$, $p=.002$) and rejection (adjusted $R^2=.051$, $\beta=-.246$, $p=.014$) in remembered attachment predict acceptance of parental role in bonding. Attachment in close relationships did not prove to be a predictor of bonding. As to differences between men and women, we found that men felt more rejected by mother than women in remembered attachment ($r_m=.215$), men scored higher in both avoidance ($r_m=.210$) and anxiety ($r_m=.209$) than women in attachment in close relationships, and women were more prepared for nurturing the infant than men in bonding ($r_m=.272$). The differences were small though. We see several limits among which self-reported instruments, new questionnaire MIBQ, relatively big age range of our participants, smaller sample of men are the most serious ones. Even though, we consider our research to be important in slightly clarifying an importance of remembered emotional warmth of mother in functioning in actual relationships.

Keywords: Bonding, attachment, parent, newborn, transgenerational transmission.

1. Introduction

Attachment stems from child's innate need to attach to a primary person (Bowlby, 2010). From a life span perspective (Hennelová, 2014), attachment behaviour manifests all one's life and its main goal- feeling of security- is constant (Bowlby, 2010). Only the needs of the attachment, the event of its triggering, the forms of acquiring a closeness and attachment figures are subjects to change (Mikulincer & Shaver, 2007). Attachment runs on "inner working models" that store scenes with attachment situations and they create interpretation filters that affect behaviour, thinking, and perception in attachment relationships (Bretherton & Munholland, 2008). One of the vexing questions in attachment research dedicates to intergenerational transmission of attachment, and especially on its effect size (Verhage et al., 2016).

Intergenerational/transgenerational transmission involves two or three objects (generations) of research sample (mothers/fathers and their children) and the results confirmed concordance of attachment styles (Behrens et al., 2016; Bretherton & Munholland, 2008; Feeney & Woodhouse, 2016).

But what about having just one object of research? Let's illuminate this transmission within one person. We call this transgenerational effect of attachment (what was I given- remembered attachment, what do I share with my partner- attachment in close relationships, what do I give to my newborn- bonding) and there are researches that have partially devoted to this effect. Between remembered attachment to

parents and attachment in close relationships there were several weak and moderate relationships (Priel & Besser, 2000; Rozvadský Gugová et al., 2014). Furthermore, researchers provide invincible evidence that parent representations are empirically linked to parenting (Feeney & Woodhouse, 2016; Van Ijzendoorn, 1995) with a moderate relationship between parent attachment representations and his/her sensitivity (Feeney & Woodhouse, 2016). There is also robust evidence that adult romantic attachment styles are empirically linked to parenting (Feeney & Woodhouse, 2016; Priel & Besser, 2000) with moderate negative correlations found between dimensions of anxiety/avoidance and maternal attachment toward her children (Şen & Kavlak, 2012).

But there is little evidence that attachment transgenerational effect (what was I given, what do I share with my partner, what do I give to my newborn) within one object (mother or father) is congruent, not to mention that fathers are usually excluded or rather that domain of attachment is strongly patriarchal when tackling the issue of parenting. There is small effect size in remembered attachment in father's rejection, father's emotional warmth and mother's overprotection (Gugová & Eisemann, 2016; Poliaková et al., 2007). Regarding adult romantic attachment, women are more anxious and men are more avoidant (Del Giudice, 2011; Rozvadský Gugová et al., 2014), even though that the differences are of small effect size. When talking about relationship towards own newborn, we take parent-to-infant relationship or bonding to be our conceptual frame. Bonding is a type of emotional relationship that is unique, specific, and long-lasting (Ainsworth, 2006). There are moderate differences between women and men with men stating less bonding than women (Greškovičová et al., 2018).

Considering the absence of empirical studies on the attachment transgenerational effect and exclusion of men in the parenting issues, our study aimed to explore this effect. Most of the researches rely heavily on observation of parental sensitivity therefore we chose only self-reported instruments to catch the inner world of our participants and their representations. We formulated:

RQ1 Will remembered attachment be a predictor of attachment in close relationships and bonding?

RQ2 Will attachment in close relationships be a predictor of bonding?

RQ3 Will there be a difference in remembered attachment?

RH1 Women will be more anxious and men more avoidant (Del Giudice, 2011; Rozvadský Gugová et al., 2014).

RH2 Women will have higher bonding than men (Greškovičová et al., 2018).

2. Methods

Our sample consisted of 26 fathers and 74 mothers (N=100) who recently gave birth ($M_{\text{age}}=31,11$, min 21, max 46 years). They were approached at obstetrics and gynaecology clinic in Bratislava, Slovakia, from November 2018 till January 2019. We used 3 self-administered questionnaires: sEMBU (remembered attachment), ECR-R (attachment in close relationships), and MIBQ (bonding towards infant).

The Slovak version (Poliaková et al., 2007) of the s-EMBU by Arrindell et al. (1999) measures remembered parental rearing behaviour. 23 items are distributed into three dimensions: rejection (7 items), emotional warmth (6 items including item no. 9) and overprotection (9 items). The items are scored on a 4-point scale ranging from "no, never" to "yes, most of the time". Summary indices are computed for each dimension regarding mother and father rearing approach. Higher summary index score indicates increased dimensions. In case of missing answers (7 cases), we granted the participants mean scores. In our research, esteem of reliability ranged between $\alpha = .798$ and $.595$ for the dimensions.

The Slovak version (Bieščad & Hašto, 2010) of the ECR-R (The Experiences in Close Relationships-Revised) by Brennan et al. (1998) is a 36-item measure of adult romantic attachment style. It consists of two dimensions (avoidant and anxiety) with 18 items in each. The items are scored on a 7-point scale ranging from "strongly disagree" to "strongly agree". Average scores are computed for both dimensions. Higher average score indicates increased avoidance/anxiety. Internal consistency for avoidance was $\alpha = .865$ and for anxiety $\alpha = .773$.

The MIBQ (Mother Infant Bonding Questionnaire) by Laohapensang (1988 in Eksirinimit, 2012) measures mother-to-infant bonding. It includes 31 items divided into 6 dimensions: perception of infant features (5 items), attention and connection to the infant (6), acceptance of the infant's individuality (5), acceptance of the parent's role (4), preparation for nurturing the infant (7) and desire to touch or hold the infant (4). The items are scored on a 5-point scale ranging from "strongly disagree" to "strongly agree". Summary indices are computed for each dimension regarding mother and father rearing approach. Higher summary index score indicates increased dimensions. In our study, there was a low estimate of reliability in the dimension acceptance of the infant's individuality. Thus, we removed item no. 16 (After childbirth I feel like I have lost some parts of my body) to correct it. Internal consistency of MIBQ questionnaire dimensions ranged $\alpha = .493 - .801$.

3. Results

3.1. Univariable analysis of variables

Basic descriptive statistics and reliability esteems are displayed in table 1. Histograms and boxplots are available at authors. On the basis of graphs, descriptive statistics and normality tests we concluded that the variables except anxiety are all non-Gaussian distributed.

Table 1. Descriptive statistics of variables. source: authors.

Remembered attachment	M	Mdn	Mod	SD	Min	Max	Skwe	Kurt	Range
Father's rejection	10.18	9	8	3.31	7	24	2.01	4.60	17
Mother's rejection	10.19	9	8	3.08	7	22	1.52	2.33	15
Father's emotional warmth	20.49	21	21	4.46	8	28	-0.59	0.07	20
Mother's emotional warmth	21.74	22	20	4.33	8	28	-0.88	0.76	20
Father's overprotection	18.79	18.79	15	3.81	11	30	0.33	0.01	19
Mother's overprotection	20.47	20	20	4.14	11	30	0.26	-0.37	19
Attachment in close relationships	M	Mdn	Mod	SD	Min	Max	Skwe	Kurt	Range
Avoidance	2.40	2.06	1.89	0.97	1	5.06	0.86	-0.07	4.06
Anxiety	2.92	2.89	2.94	0.83	1.33	5.17	0.20	-0.25	3.83
Bonding	M	Mdn	Mod	SD	Min	Max	Skwe	Kurt	Range
Acceptance of the infant's individuality	16.13	17	20	3.39	4	20	-1.06	1.19	16
Preparation for nurturing the infant	28.41	29	31	4.84	10	35	-1.67	3.65	25
Perception of infant features	21.77	23	25	3.74	5	25	-2.63	8.43	20
Attention and connection to the infant	24.69	25	24	4.52	11	30	-1.27	1.75	19
Acceptance of the parent's role	15.77	16	20	3.25	8	20	-0.20	-0.95	12
Desire to touch or hold the infant	17.36	18	16	2.80	5	20	-2.62	9.01	15

3.2. Prediction of attachment in close relationships and bonding

First, we analysed correlations and then we calculated a stepwise multiple regression to predict attachment in close relationships and bonding.

In remembered attachment and attachment in close relationships, mother's emotional warmth negatively correlated with both avoidance ($\rho = -.342$) and anxiety ($\rho = -0.266$). Mother's emotional warmth also proved to be a predictor for attachment in close relationships (RQ1). It predicted avoidance ($F=10.917$, $p < .01$) with adjusted $R^2 = .091$, ($\beta = -.317$; $p = .001$). and anxiety ($F = 5.641$; $p < .05$) with adjusted $R^2 = .045$, ($\beta = -.233$; $p = .019$).

With regard to remembered attachment and bonding, rejection by both parents was positively correlated with desire to touch or hold the infant ($\rho = .200$, $p = .046$). Father's rejection was negatively associated with perception of infant features ($\rho = -.219$, $p = .029$). There were several correlations with acceptance of the parent's role: with father's rejection ($\rho = -.219$, $p = .028$), mother's rejection ($\rho = -.285$, $p = .004$), and mother's emotional warmth ($\rho = .314$, $p = .001$). Acceptance of the parent's role was predicted by remembered attachment (RQ1), namely by both mother's emotional warmth ($F=10.312$; $p < .01$), with adjusted $R^2 = .086$, ($\beta = .309$; $p = .002$), and mother's rejection ($F=6.325$, $p < .05$), with adjusted $R^2 = .051$, ($\beta = -.246$, $p = .014$).

And lastly, both avoidance and anxiety in attachment in close relationships negatively correlated with the desire to touch or hold the infant ($\rho = -.263 / -.235$ respectively). But we did not find any significant regression model (RQ2).

3.3. Comparison of women and men in remembered attachment, attachment in close relationships and bonding

The statistical differences with small effect size were in the following variables:

- In remembered attachment (RQ3)- mother's rejection ($U = 694$; $p = .032$; $r_m = .215$) with men ($Mdn=10$) being more rejected than women ($Mdn=9$);
- In attachment in close relationships (RH1)- avoidance ($U = 695$; $p = .035$; $r_m = .210$) with men ($Mdn=2,6$) being more avoidant than women ($Mdn=2,0$), and anxiety ($U = 697$; $p = .037$; $r_m = .209$) with men ($Mdn=3.3$) being more anxious than women ($Mdn=2.8$);
- In bonding (RH2)- preparation for nurturing the infant ($U = 621.5$; $p = .006$, $r_m = .272$) with women ($Mdn=30$) being more prepared than men ($Mdn=27.5$).

4. Discussion

Transgenerational transmission is an intriguing area to study. We defined so-called attachment transgenerational effect that stands for one-object-attachment-representation transmission and we explored it by three self-reported tools (for remembered attachment, attachment in close relationships, and bonding). We formulated three research questions and two hypotheses.

We confirmed that the more avoidant and anxious participants were, the less mother's emotional warmth they felt. This relationship was moderate that is in accordance with other researchers (Rozvadský Gugová et al., 2014). Mother's emotional warmth was actually a predictor of both anxiety (5%) and avoidance (9%) in close relationships (RQ1), that is in line with other researches (Priel & Besser, 2000; Rholes et al., 1995).

If the participants felt rejection by either mother or father, they wanted to touch and hold the baby more. The most important dimension in bonding was acceptance of the parent's role which was linked to mother's emotional warmth and rejection by both parents. The more mother's emotional warmth participants felt during their upbringing, the more they accepted their parent role (which could help to quicker adapt to new life event transition). On the other hand, if the participants felt rejection by either mother or father, they were less able to accept their own parent's role. With regard to predictions, mother's emotional warmth (9%) and rejection (5%) were predictors of how women / men accept their role as being a parent (RQ1).

Parent representations/adult romantic attachment styles are clearly associated with parenting (Benoit & Parker, 1994; Feeney & Woodhouse, 2016; Priel & Besser, 2000; Şen & Kavlak, 2012; Van Ijzendoorn, 1995) and the same was in our research, even though we found only weak (negative) relationships and only with one of the bonding dimensions (desire to touch or hold the infant). Consequently, regression analysis did not confirm prediction power of attachment in close relationships to bonding (RQ2). We explain this surprising result with the instruments. MIBQ for assessing bonding does not probably measure the attachment qualities as stated in attachment theory.

As to differences due to sex, in remembered attachment (RQ3), there was a small difference in mother's rejection with men feeling more rejected than women. No difference was found in other dimensions. Our results differ to results of other researchers (Gugová & Eisemann, 2016; Poliaková et al., 2007), but effect size is also small. In attachment in close relationships (RH1), men were more avoidant than women, which is in the line with other researches (Mikulincer & Shaver, 2007; Rozvadský Gugová et al., 2014), but men scored higher than women in anxiety. We interpret this difference with new family structure and family roles. Men may have changed the attitude to women as romantic partners, as men could be afraid to lose the love of their partners to a new member of the family. Men could feel rejected and abandoned since their partners were probably intensely involved in child caring and were also still at hospitals. It is possible that family structure change confirms the stability of attachment style in women and shudders it for men as suggested by Crowell et al. (2002). In exploring sex differences in bonding (RH2), we found almost medium difference in the scale of preparation for nurturing the infant with women being more prepared than men. These differences are not surprising and are in line with our previous researches (Greškovičová et al., 2018).

We see several limits among which self-reported instruments, new questionnaire MIBQ, relatively big age range of our participants, smaller sample of men are the most serious ones. Transgenerational effect is difficult to tap and our methods were potentially not the best ones in doing so. We should deliberate whether other concepts such as psychological types (Lisá, 2017) or traits (Lisá & Kališ, 2019) are not involved in the manifested/ measured behaviours. Even though, we consider our research to be important in slightly clarifying attachment transmission and attachment transgenerational effect within one object. Based on our results and interpretations, we conclude that namely mother's emotional warmth seems to be important and helpful in creating romantic relationships as well as accepting the parent role.

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THE RELATIONSHIP BETWEEN EMPLOYEE ATTITUDES TO CHANGE IN THE ORGANIZATION AND JOB PERFORMANCE

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Abstract

Today, it is important for organizations to successfully adapt to ongoing changes, not only domestically but also globally. Successful implementation of change, an advantage over other organizations, and maintaining high job performance become the most important task in the organization (Doll et al., 2017). However, organizational change is not successful for all organizations, and practice shows that in many cases, organizations fail to make changes, leading to declining employee performance or even organizational disruption (Lewis, 2019; Fernandez and Rainey, 2017). Organizations implementing organizational change are often asked what psychosocial factors are important to successful change, to ensuring the quality of the work of employees and to the successful functioning of the organization. Organizational change in organizations often involves reorganizing institutions, reviewing staff structure, resulting in a sense of insecurity for themselves and the future of the organization, and often creating negative employee attitudes toward ongoing organizational change. Employee attitudes toward organizational change are an important psychosocial factor that can determine how successful an organization will be in implementing change (Armenakis et al., 2007). Negative employee attitudes towards change reduce the employee job performance, as employees undergo a lot of stress during change, resulting in worsening relationships with colleagues and interpersonal conflicts (Jaramillo et al., 2013). The purpose of this work is to carry out a review of the literature on the employees' attitudes and the importance of employees' attitudes towards organizational change in the employee job performance. Given the above purpose of this work, literature analysis from electronic databases: SpringerLink, Taylor & Francis Online, APA PsycNET, Google Scholar, and others were performed. These databases were chosen because they contain the most research on organizational psychology. Keywords were used in the research: attitudes, work performance, changes, etc. Based on these criteria, 322 articles were selected in the initial research sample, but after the initial review of the articles, 107 articles were selected and subjected to the following research steps. Practical implication of this research: the results of the research are expected to help better understand employees' attitudes towards organizational change and their significance for the job performance, to understand why attention should be paid to the relationship between these phenomena. This would help organizations to develop more effective plans for implementing organizational change, and to streamline employee communication about ongoing changes. Defining employees' attitudes towards organizational change and their significance for the job performance will allow organizations to work more effectively with employee attitudes and thus be more successful in implementing organizational change.

Keywords: *Attitudes, organizational changes, job performance.*

1. Introduction

In organizations today, change is very common and inevitable, driven by business growth, innovation, globalization, various rules, competition and rising consumer expectations (Pasmore 2011). The organizational change began to be explored as early as World War II when Lewin began to do so. His research focus was on the behavior of the individual to change and their process. Lewin's theories inspired research into the role of human behavior in organizational dynamics (Al-Haddad, 2015). Change can be described as covering both internal and external change processes within the organization. These may be changes in the organization aimed at improving or replacing certain elements of the organization (Zakarevicius, 2003). Although changes in the organization are usually associated with positive results and success, they present many challenges to employees. Organizations expect change not only to enable employees to learn new skills or procedures if the change demands it but also to maintain a positive attitude to work and high quality of performance. Technology-based organizations are

undergoing a great deal of change (García-Arca and Prado-Prado 2007), but it is not only these organizations that are undergoing major changes these days. It is important to understand that the success of organizational change depends not only on the actions of the organization but also on the employees. The perception of employees determines the attitude of the employees, which determines their behavior at work and the quality of work performance.

Thus, even when relatively small in an organization, employees who are experienced or aware of uncertainty can form negative attitudes toward change and resist it. Negative employee attitudes towards change can have a profound impact on employee engagement, quality of performance, and relationships with other employees and managers. As a result, change management requires a great deal of effort to manage it, often through structural or leadership interventions using various messages to change employees' beliefs about ongoing organizational change (Armenakis and Harris, 2009). Often, organizational factors, such as communication during change, have a positive impact on employee attitudes and attitudes. It is also important how employees perceive other factors, such as organizational support, organizational justice, which are critical to the quality of their performance and positive attitudes. It is also important to keep in mind that it is the employee who is responsible for making the various changes at work. Employees can help managers create positive experiences in executing change (Cullen, 2014). It can be said that if the employee develops negative attitudes towards organizational changes, which may lead to poor relations with colleagues, the management will be poor and the quality of performance will decrease. However, if employees have the perception that change is positive for or about the organization, they can even help the manager implement it. First and foremost, the employee needs to understand his or her changing environment and determine how certain changes will affect his or her daily life, financial situation, career opportunities, and so on. (Bartunek et al., 2006). Given that employee attitudes are relevant to his or her productive work and the organization, the following work describes these elements in greater detail and their relationship. The purpose of this paper is to conduct a literature analysis of attitudes to change and their implications for work performance in research papers published between 1990 and 2020 and to answer the question of whether attitudes toward change are related to the quality of work performance.

2. Methods

Given the above purpose of this work, literature analysis from electronic databases: SpringerLink, Taylor & Francis Online, APA PsycNET, Google Scholar, and others were performed. These databases were chosen because they contain the most research on organizational psychology. Keywords were used in the research: attitudes, work performance, changes, etc. Based on these criteria, 322 articles were selected in the initial research sample, but after the initial review of the articles, 107 articles were selected and subjected to the following research steps.

Criteria used for literature analysis: 1) research papers should have been written no earlier than 1990, 2) full text of research papers available online, 3) main research topic is related to employee attitude and/or work quality. Criteria for the exclusion of works: 1) works older than 1990, 2) works with repetitive titles.

In the first phase of the study, abstracts were read and entries that did not meet the criteria above or those whose abstracts did not correspond to the research topic were rejected. Then, in the second phase of the research, the full text of the thesis was read to find out the main theme of the study and whether the thesis could be included in the analysis. Finally, the information required by the research topic was selected from the selected articles.

3. Attitudes and their significance in the organization

Everyone is guided by their attitudes when making certain decisions or behaviors. Attitudes are described as favorable or unfavorable, a reaction to the appreciation of a subject or person, often based on beliefs, but expressed in feelings and behavioral intentions (Eagly and Chaiken, 2005). Positive attitudes towards change are important for achieving the goals of the organization because only then can the organization function properly (Eby et al., 2000). Employee attitudes can be affected by a variety of social, economic, political, religious and cultural factors. The employee of the organization acts based on social circumstances and the decision-maker of the organization. It is wise to be aware of preferences because strong attitudes are likely to affect a person's behavior. Attitude towards a manager, salary, benefits, promotion or anything can cause positive or negative reactions. However, while the description of the attitudes seems to be clear, there is some contradiction in the literature regarding the understanding of the attitudes as a construct. It is noticeable that some authors claim that attitudes are a construct of one dimension, while others argue that attitudes consist of a model consisting of three components: cognitive,

emotional, and behavioral. Some authors disagree with this categorization of claims and argue that it is not possible to measure all three components separately, which makes preferences a one-dimensional construct that can be positive or negative. Besides, the authors note that all three components are interrelated and one of them is negative, the other is also negative, indicating that it is a single construct. However, other authors object to this by arguing that attitudes can be formed from any component and it would be difficult to assess how they are formed if we did not have a three-component model (Kwon & Vogt, 2010).

The cognitive component is the thoughts or ideas about the subject of attitudes. These thoughts are often described as beliefs that are formed from the attributes of the subject-matter of the attitudes when relevant links are created. Symptoms can be assessed both positively, negatively, and neutrally (Eagly, Chaiken, 1993).

Affective component - feelings, moods, sympathetic nervous system activity, which is felt when confronted with the object of attitudes. The emotional component is based on emotional experiences or choices and may be expressed in admiration or anger. Thus, the emotional response can be both positive and negative depending on whether the subject of the attitudes is evaluated as liked or not (Eagly, Chaiken, 1993).

Behavioral component - An action that is expressed when confronted with the subject of attitudes. Behavioral reactions may not be expressed immediately upon encountering the subject-matter but also after a while. In this, these reactions are different from the emotional and the sensual. Depending on how the subject-matter of the attitudes is evaluated, attitudes can take the form of positive behavior that is based on and conducive to attitudes, or negative - opposing or disturbing (Eagly, Chaiken, 1993).

This three-component model can be useful in helping to identify and measure different reactions to objects of attitudes and attitudinal change or formation.

4. The relationship between attitudes and job performance

Of particular importance are not only the individual elements of attitudes towards organizational change and the quality of work performance but also the interrelation between them. Employee attitudes play a particularly important role in the organization as they shape employee behavior and individual elements within the organization (Silverthorne, 2004). Employees who are more committed to the organization make a more significant contribution to the activities of the organization and the quality of their work (Freund and Carmeli, 2003). In research papers, authors describe job performance as the totality of work values that include the behavior that an employee uses to achieve organizational goals (Rich et al., 2010). Usually, the quality of work performance is divided into three parts: task performance, contextual performance, and counterproductive performance. When an organization implements organizational change, employees experience a great deal of stress, anxiety, and uncertainty. This affects employee satisfaction, commitment, and quality of performance (Buchanan et al., 2006). In the process of change, performance quality is an indicator of whether employees have adapted to change and are performing their tasks properly (Van den Heuvel et al., 2010). To understand whether employees are successfully adapting to ongoing changes and maintaining a high quality of performance, it is important to determine the importance of employees' attitudes to the changes in performance. Positive employee attitudes towards and changes in the organization result in less willingness of employees to leave the workplace and increased employee productivity (Jernigan et al., 2002). It is also noticeable that commitment to the organization is a critical factor that determines the quality of work performance of employees, and therefore positive attitudes towards change make employees feel more committed to their organization (Lee, 2000). It is worth noting that one of the essential factors in change management is employee resistance to change, influencing the success or failure of any change and closely related to positive or negative attitudes toward change (Bouckenooghe, 2009). High levels of employee resistance to change mean that employees are unable to do their job productively, and it is noticeable that organizations' productivity may also decline as a result of the change. Indeed, individuals' attitudes are a good predictor of any organization's willingness to change (Hayes, 2010). This is considered to be one of the most important factors that determine a person's intentions to behave in support of or resistance to change. This resistance can be expressed in many ways and different dimensions, from hesitation about ongoing change to hostility to or attempt to disrupt them (Jones et al., 2008). Positive attitudes toward change can lead to positive behavioral intention and positive subsequent behavior, such as active engagement with change (Oreg, 2003) or a strong commitment to change (Spreitzer and Mishra, 2002). Analyzing employee attitudes toward change and the job performance can be based on Ajzen's theory of planned behavior, which provides a theoretical basis for this relationship. Ajzen's theory of planned behavior is one of the most widely used theories in scholarly work that can explain human behavior. The theory itself is made up of three main components that describe people's behavior: These are attitude

to behavior, subjective norm and behavior control. The combination of these three elements and their combinations results in employee behavioral intention, which shows that the greater the behavioral intention, the more the individual has a certain behavior (Ajzen, 2002). Therefore, it can be seen that positive attitudes and the subsequent job performance of employees are based precisely on this theory. Positive attitudes are noted to play a key role in the innovation process (Thomas, 2003). Conversely, negative attitudes toward change will be a negative factor in trying to successfully implement change, which will lead to lower job performance and lower quality of organization (Vakola and Nikolaou, 2006). Negative attitudes toward change lead to negative behavioral intention and corresponding behaviors, such as absenteeism (Martin et al., 2006) or retirement (Cunningham, 2006). Empirical research also supports the idea that employee attitudes are significantly related to the job performance (Hettiarachchi et al., 2014). It is also worth noting that employee attitudes toward a object, whether positive or negative, are communicated and can easily spread to coworkers (Martin, 2014).

5. Conclusions

Summarizing the importance of employee attitudes to change in the employee job performance, we find that these factors are closely related. This results in the positive attitude of employees towards change, the employee has positive intentions towards change and determines the quality of his / her job performance. Because the change process is relevant and active worldwide, regardless of the area in which the organization operates, these changes are essential for organizations to properly prepare for and implement upcoming changes, as this process of change is one of the success factors of the organization. Identifying employees' attitudes as change approaches is also an important process, perhaps as important as planning change itself, as understanding employees' attitudes toward ongoing changes can prevent a collapse of change. Likewise, understanding employees' attitudes toward change may allow organizations to properly plan the work of their employees so that their work is done qualitatively, both during and after the change. Organizational Personnel Management departments can also pay close attention to employee attitudes toward change, as, as stated above, attitudes are a changing factor, and successful changes to these attitudes can bring about both faster and better-quality change.

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PARENTAL ATTACHMENT AND PHYSICAL INTIMATE PARTNER VIOLENCE IN YOUNG ADULTS: MEDIATIONAL ROLE OF DYSFUNCTIONAL ATTITUDES

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Abstract

Introduction. Physical violence (PV) is a form of intimate partner violence. It has serious consequences on the population health. Previous studies have linked PV victimization with parental attachment. However, little is known about dysfunctional attitudes and this relationship. This study aimed to evaluate dysfunctional attitudes as a mediator between parental attachment and PV victimization of young adults. **Methods.** Cross-sectional design was used to study 915 participants aged 18–30 years old with 84.8% women, the average age was 23.59 ± 3.35 years old and the average level of education 15.07 years ± 2.70 . Several self-report questionnaires were used: the Revised Conflict Tactics Scale 2 (CTS2; only physical assault subscale), the Inventory of Parent and Peer Attachment (IPPA) and the Dysfunctional Attitude Scale (DAS). **Results.** Two-hundred and six participants (21.1%) were victims of PV during their lifetime. They had more dysfunctional attitudes and an *insecure* attachment to parents compared to PV non-victims. Our results showed a partial and weak mediation of dysfunctional attitudes between attachment to mother and PV victimization. There was not mediation for attachment to father. **Conclusions.** An *insecure* parental attachment was associated with more dysfunctional attitudes and a risk to be victims of PV for the young adults. However, the dysfunctional attitudes only partially mediate the link between parental attachment to mother and PV victimization.

Keywords: Physical violence, dysfunctional attitudes, parental attachment, young adults.

1. Introduction

Intimate partner violence is a current worldwide public health problem. It can take different forms: psychological, physical and sexual. Physical violence (PV) associated with other forms of violence, has serious consequences on mental and physical health. It is defined as “the intentional use of physical force with the potential for causing death, disability, injury, or harm” (Saltzman et al., 1999) in a romantic relationship. It can be used by the intimate partner as an inappropriate strategy to keep control of the relationship. PV victims are in a subjugated relationship and do not always have individual resources to get out of it. In France, women are especially concerned with 154 000 PV victims in 2018 (MIPROF, 2019). According to ENVFF (2001), 20% of intimate partner violence are 20–24 years old. Young adult victims of intimate partner violence are exposed to a risk of re-victimization in adulthood (e.g., Smith, White, & Holland, 2003). During this stage, the discovering of oneself and others contribute to the construction of one’s future identity and represents an important developmental period.

Many studies have examined vulnerability factors for physical intimate partner violence (Stith, 2003) and one of the most established links is parental attachment. Bowlby’s theory (1980) is based on the fact that every human being continually tries to develop bonds of attachment with those around him in order to survive. Classically three styles of parental attachment were described: *secure*, *insecure-avoidant* and *insecure anxious-ambivalent* (Ainsworth, Blehar, Waters, & Wall, 1978). A *secure* attachment to parents for young adults allows positive self-interpersonal relationships. A young adult with an *insecure* attachment to parents finds it difficult establish intimate relationships with others. He will not know how to put the right emotional distance with his partner (either by being too close or by being too distant). Also, according to the family environment during childhood, the individual has constructed representations of himself, of others and of the world around him called internal working models (Pietromonaco & Barrett, 2000). They may change throughout life, but are predefined during childhood and are linked to the type of parental attachment. Miljkovitch and Cohin (2007) showed that parental attachment and working models in childhood are lifelong models and therefore would continue throughout adulthood, especially in couples.

Adults with an *insecure* attachment in their couple have the same working models as in childhood. However, adults *secure* tend to adapt their representations to those of their partners. If these “encoded schemes” are negative, they can be the source of various psychopathologies. Beck’s cognitive theory (1976) postulates that childhood maladaptive beliefs will be retained in adulthood and will lead to dysfunctional attitudes when stressful events occur. Kaygusuz’s study (2013) has shown that young adults who have negative beliefs about themselves and others have non-harmonious and conflicting relationships. The link between parental attachment and dysfunctional attitudes has been largely developed in clinical psychology as a predictor of depression (Lee & Hankin, 2009; Otani, Suzuki, Matsumoto, & Enokido, 2016; Roberts, Gotlib, & Kassel, 1996). However, up to now, very few studies have explored the links with intimate partner violence, especially PV. We hypothesize that parents’ *insecure* attachment will lead to inappropriate beliefs about themselves and about others resulting in dysfunctional attitudes that can be a vulnerability factor to PV. Therefore, the present study aims to examine the mediating role of dysfunctional attitudes between parental attachment and physical intimate partner violence among young adults.

2. Methods

2.1. Procedures and participants

The current study followed a cross-sectional design. A self-administered online questionnaire intended for young adults aged 18–30 years old was distributed through various networks (university, associations, professionals, etc.). The inclusion criteria’s in this study were to have been involved at least once in a romantic relationship during one’s life and to have been in contact with at least one of one’s parents¹. The sample consisted of 915 participants including 84.8% women, with an average age 23.59 years old \pm 3.35 and an average level of education of 15.07 \pm 2.70.

2.2. Measures

The Revised Conflict Tactics Scale 2 (CTS2; Straus, Hamby and Boney, 1995 translated by Lussier, 1998) was used to measure the level of conflict and abuse between partners. We only used the physical assault subscale and the form for victims (39 items). The scoring used is the authors’ one in dichotomous (yes: victims of at least one act of PV during his lifetime, no: non-victims of PV during his lifetime). *The Inventory of Parent and Peer Attachment* (IPPA; Armsden and Greenberg, 1987 translated by Vignoli and Mallet, 2004) measures young adults’ mother and father attachments. It is composed of 28 items and measured through three dimensions: communication, trust and alienation. From these dimensions, the scale was categorized into three attachment styles according to Vivona (2000). In this study only the *secure* and *insecure* styles were studied. For attachment to mother 14% of the data could not be coded, the same for the father. These proportions are similar to those of Vivona. *The Dysfunctional Attitude Scale* (DAS; Weissman 1980 translated by Bouvard, 1994) assesses the level of dysfunctional attitudes according to the hypothesis of Beck’s cognitive theory. We used the form A of the scale which includes 29 items. A high score indicates greater endorsement of cognitive biases.

2.3. Statistical analysis

Data were analyzed with the use of SPSS version 25. Victims were divided into two groups: victims of PV and non-victims of PV. Independent sample *t*-tests were used to compare the participants characteristics between two groups. A series of logistic and linear regressions were conducted, based on the steps proposed by Baron and Kenny (1986) to examine whether dysfunctional attitudes mediate the relationship between parental attachment and PV. Models were tested separately for mother and father attachments.

3. Results

Bivariate statistics. There was not significant difference between the groups of non-victims of PV and victims of PV according to age, sex and level of education. Victims of PV were 21.1% ($n = 206$). They had a more *insecure* style of attachment to mother (53.5%, $X^2 = 13.27$, $p < .001$), and the same for the attachment to father (52.4%, $X^2 = 12.35$, $p < .001$) than non-victims. Victims also showed a higher total score of dysfunctional attitudes ($M = 99.6 \pm 25.6$; $t = -3.20$, $p < .01$) than non-victims (Table 1). Moreover, it was found that victims of PV had a majority of higher scores of dysfunctional attitudes than non-victims of PV (except for the *insecure* style to the father). Especially, the victims with an *insecure* style to their mother had more dysfunctional attitudes ($M = 103.77 \pm 28.65$; $t = -2.35$, $p < .05$) than non-victims of PV with an *insecure* style (Table 2).

¹19 participants were not in contact with their mother and 115 participants were not in contact with their father

Table 1. Comparison of independent variables between victims of PV group and non-victims of PV group.

Variables	Non-victim of PV		Victim of PV		X^2	t
	n	$M \pm SD$ or %	n	$M \pm SD$ or %		
Attachment to mother	593		172		13.27***	
Secure	368	62.1	80	46.5		
Insecure	225	37.9	92	53.5		
Attachment to father	531		142		12.35***	
Secure	338	63.7	70	47.6		
Insecure	193	36.3	72	52.4		
Dysfunctional attitudes	709	92.45 ± 28.86	206	99.58 ± 25.58		-3.20**

Data are presented as % or mean ± standard deviation; * $p < .05$, ** $p < .01$, *** $p < .001$.

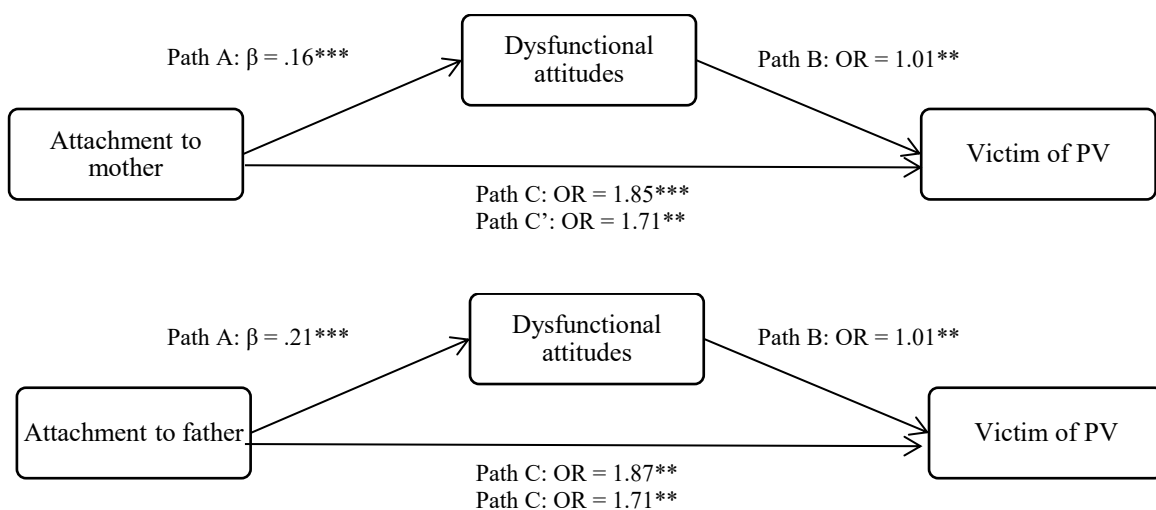
Table 2. Comparison of dysfunctional attitudes and parental attachment between victims of PV group and non-victims of PV group.

Variables	Dysfunctional attitudes				t
	Non-victim of PV		Victim of PV		
	n	$M \pm SD$	n	$M \pm SD$	
Attachment to mother	593		172		
Secure	368	88.38 ± 28.13	80	95.90 ± 24.69	-2.21*
Insecure	225	95.91 ± 27.74	92	103.77 ± 25.35	-2.35*
Attachment to father	531		142		
Secure	338	88.29 ± 27.94	70	96.8 ± 28.06	-2.31*
Insecure	193	100.02 ± 28.35	72	103.32 ± 28.65	ns

Data are presented as mean ± standard deviation; ns: not significant; * $p < .05$, ** $p < .01$, *** $p < .001$.

Mediation analysis. The mediating models remained significant after adjusting for age, sex and education. The first step examined whether dysfunctional attitudes were associated with PV. There was a significant association between attachment to mother and PV (OR = 1.85, 95% CI = [1.31;2.61], $p < .001$) and attachment to father and PV (OR = 1.87, 95% CI = [1.29;2.72], $p < .01$). In the second step, there was significant associations between parental attachment and dysfunctional attitudes (mother: $\beta = .16$, $p < .001$; father: $\beta = .21$, $p < .001$). In the third step, higher dysfunctional attitudes were associated with PV victimization (mother: OR = 1.01, 95% CI = [1.00;1.02], $p < .01$; father: OR = 1.01, 95% CI = [1.00;1.02], $p < .05$). In the final step, when dysfunctional attitudes were included in the regression model, association between attachment to mother and PV decreased (OR = 1.71, 95% CI = [1.21;2.43], $p < .01$), indicating partial mediation. For attachment to father, when dysfunctional attitudes were included in the regression model, association with PV did not change (OR = 1.71, 95% CI = [1.17;2.51], $p < .01$), indicating no mediation.

Figure 1. Mediation model of dysfunctional attitudes between parental attachment and PV.



β = standardized coefficient; OR= odds ratio; * $p < .05$, ** $p < .01$, *** $p < .001$. Path A: Test of whether parental attachment is a significant predictor for dysfunctional attitudes. Path B: Test of whether dysfunctional attitudes are a significant predictor for the PV victimization. Path C: Test of whether parental attachment is a significant predictor for the PV victimization. Path C': Test of whether parental attachment and dysfunctional attitudes together are significant predictors for the PV victimization.

4. Discussion

The present study found that 21.1% young adults have already been victims of at least one act of PV in their lifetime by one of their partners. The prevalence of victims of PV varies from 9% to 49% depending on the studies (WHO, 2010). It was interesting here to study the history of PV in the life of young adults since we wanted to see if negative beliefs built up from childhood could at some point in life be a factor of vulnerability to PV. The results showed that an *insecure* attachment to the father or mother increased the risk of being victim of PV at least once in this lifetime by 1.8 times compared to the *secure* style attachment. Parental attachment is an important vulnerability factor for PV victimization (Velotti, Zobel, Rogier, & Tambelli, 2018). Young adults with *insecure* parental attachment have a greater propensity to have dysfunctional attitudes. The *insecure* does not cause psychopathologies directly but depends on having negatives attachment experiences which are linked to a negative self-model. In this study, dysfunctional attitudes seem to be little associated with victimization of PV (OR close to 1) although this association is significant. However, when the groups of victims are compared, victims have significantly more dysfunctional attitudes than non-victims. The dysfunctional attitudes have a very partial mediating effect on the link between attachment to mother and PV victimization, but not for attachment to father. In the literature, this mediation is well established with depression (Lee & Hankin, 2009; Otani et al., 2016; Roberts et al., 1996). To obtain similar results with PV victimization, further complementary analyses are required.

Limits. First, the scoring utilized to evaluate PV was dichotomous and therefore it could not be possible to test the indirect effect of mediation (Sobel *test*). It would be a good thing to repeat the statistical analyzes via a structural equation model. Participants were essentially female, which is not representative of the population. For the sake of feasibility, we chose to focus only on PV victims, but it would be interesting to study the bidirectionality between perpetrators and PV victims, especially among young adults (Glowacz & Courtain, 2017; Palmetto, Davidson, Breitbart, & Rickert, 2013). Finally, in order to generalize the results, the design could be tested longitudinally.

Implications. In the literature, no studies have searched the link between physical intimate partner violence and dysfunctional attitudes. Indeed, if young adults have *insecure* working models, they will tend to have dysfunctional attitudes and to turn to partners with the same profile, thus increasing the risk of dysfunctional relationships. This mediation between parental attachment and PV, through dysfunctional attitudes, indicate that failing to act on the attachment of young adults to their parents, we can try to act on their beliefs and representations in an attempt to deconstruct them. Thus, this research provides a first reflection to support interventions in the universal prevention of PV and more generally in intimate partner violence.

5. Conclusions

An *insecure* parental attachment and having dysfunctional attitudes can be factors of vulnerability to victimization of PV. When these results are crossed, dysfunctional attitudes appear to be only a partial and weak mediator of attachment to the mother and victimization of PV in young adults.

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THE COGNITIVE ORIENTATION OF INTUITIVE THINKING

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Abstract

The objective of the study was to identify the motivational components of intuition. The methodology was based on the cognitive orientation (CO) theory which assumes that cognitions orient toward behaviors. The hypotheses were that the CO assessment of intuition will be related to the standard measures of intuition. The participants were 90 undergraduates in the behavioral sciences. They were administered the CO questionnaire of intuition that included beliefs of four types. The Types of Intuition scale and the Decision Style scale. The results showed that the four CO types of beliefs predicted significantly all the intuition measures. The major motivational components of intuition were found to be focusing on emotions, opening-up to situations, preference for fast and easy solutions and self reliance. The theoretical conclusions are that intuition is a personality tendency grounded in a specific motivational network, amenable for assessment and training.

Keywords: *Intuition, cognitive orientation, beliefs, motivation.*

1. Introduction

Intuitive thinking is a common type of thinking, usually considered as grounded in unconscious, illogical, uncontrolled, emotionally-tainted cognition, involved in various cognitive activities, including decision making, planning, problem solving, mathematics and religion (Heintzelman & King, 2016; Sagiv et al., 2014). On the one hand, it has been claimed to be responsible for biases (4), overconfidence in judgments (Hansson et al., 2008), wrong conclusions in diagnoses (Gäbler, 2017), but on the other hand, it was reported as correlated with creativity, humor, aesthetic judgment, empathy and social popularity (Norris & Epstein, 2018). It is described as fast, effortless, and easy as compared with rational, evidence-based and deliberate thinking (Kahneman, 2003). It appears already in children (Schlottmann, 2001) and in animals (Rakoczy et al., 2014) and is manifested neurally in desynchronized alpha waves in the posterior cortex (Razumnikova et al., 2017). Sometimes it is considered as secondary to rational thinking which it complements (Thompson, Prowse Turner, & Pennycook, 2011), at other times as a separate experientially-based kind of cognition, opposed to logical deliberation (Kahneman, 2003). Intuition is subject to individual differences but little is known about its psychological correlates. It is the objective of this study to examine the motivational correlates of intuition which would provide insight into the tendencies underlying intuition, enabling identifying individuals who rely on intuition and even training those who do not.

2. The theoretical approach

2.1. The cognitive orientation theory

The cognitive orientation (CO) approach is a theory and methodology which provides an explanation about why individuals behave as they do without relying on assumptions of consciously controlled systematic decision making based on considerations of benefit and utility (Kreitler, 2004; Kreitler & Kreitler, 1982). Rather, it is assumed that behavior is function of specific beliefs that orient toward the behavior without the conscious intention or decision of the individual. The beliefs are characterized in terms of form and contents. Formally the beliefs are of four kinds: beliefs about oneself that describe traits, events and other facts referring to oneself; general beliefs that deal with information about others and reality in general; beliefs about rules and norms which refer to ethical, social, esthetical and functional rules and standards; and goal beliefs which refer to actions or states desired or undesired by the individual. In terms of contents the beliefs refer to deep underlying meanings of the involved inputs rather than to their obvious and explicit surface meanings. These underlying meanings are identified for the

behavior in question by means of a standard stepwise interviewing procedure conducted with pretest subjects. The recurrent meanings in these interviews are called motives and are used for formulating statements conforming to the four types of beliefs. For example, a motive such as overlooking details could be formulated in the following statements: "I dislike dealing with details", "Details are unimportant", "One should never overlook the details" and "I would like to be able to deal with details", referring to beliefs about self, general beliefs, norm beliefs and goal beliefs, respectively. The meaning elaborations are based on clarifying the extent to which the involved beliefs support or do not support the indicated action. If all four or at least three belief types support the action, a cluster of beliefs is formed orienting toward the particular act. It generates a unified tendency or vector which represents the motivational disposition orienting toward the performance of the action. The beliefs are assessed in terms of a CO questionnaire which provides scores for the four belief types (see Tools and Appendix). Previous studies showed that questionnaires constructed on the basis of the CO theory provided significant predictions of various cognitive, emotional, behavioral and physiologic variables (Kreitler, 2004, 2014; Kreitler & Kreitler, 1982).

2.2. The hypotheses

The hypotheses of the study were that the scores of the CO questionnaire of intuition –the four belief types and the factors based on the motives – will be correlated with the scores of intuition on the basis of responses to validated questionnaires assessing intuition. The expectation is that all four belief types or at least three will have significant contributions (Kreitler, 2004).

3. Method

3.1. Design

The study was based on a correlational design. It consisted in analyzing the correlations between the scores of the CO questionnaire of intuition, on the one hand, and the scores of intuition provided by two intuition scales, on the other hand.

3.2. Participants

The participants were 90 undergraduate students (55 women, 45 men) in the behavioral sciences, in the age range 21-25 years. They were administered three questionnaires in random order, in the google.docs online format. Questionnaires that had over 5% of missing responses (16%) were deleted from the final file.

3.3. Tools

There were two questionnaires assessing intuition. Both underwent extensive validation examinations. One was the The Types of Intuition Scale (TIntS) (Pretz, Brookings, Carlson et al., 2014). The scale includes 29 items in the form of statements to which the respondents were asked to respond by checking one of 5 alternatives ranging from definitely false (=1) to definitely true (=5). The scale measures three types of intuition identified on the basis of a previous literature review): holistic (8 items), inferential (12 items), and affective (9 items). Holistic intuitions integrate diverse sources of information in a Gestalt-like, non-analytical manner; inferential intuitions are based on previously analytical processes that have become automatic; and affective intuitions are based on feelings.

The second intuition scale was the Decision Style Scale (DSS) (Hamilton, Shih & Mohammed, 2016) DSS representing rational and intuitive dimensions. The rational decision style involves information gathering, alternative generation, and thorough evaluation; the intuitive style involves relying on feelings and making decisions quickly. Each of the two dimensions was represented by five items. The response format was a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

A third questionnaire the subjects got was the CO questionnaire of intuition (see Appendix). It consisted of four parts corresponding to the four belief types with 18 items in each. The response format consisted of 4 response alternatives ranging from not at all true (=1) to very true (=4). Thus, each individual got four scores for beliefs about self, general beliefs, norm beliefs (affective intuition), norms and goals. The 18 items in each part of the questionnaire represented 18 motives. These yielded five factors (principal component; accounting for 68% of the variance) labelled as: emotions, opening-up, fast solutions, comprehensive view, self reliance. Thus, each subject got also five scores for the five motive factors.

4. Results

4.1. Control analyses

Control analyses showed that all the five dependent measures of intuition and the four basic intuition measures of the CO questionnaire had satisfactory reliability coefficients (α Cronbach $\geq .70$). Further, correlation analyses showed that of the four belief types of the CO questionnaire only beliefs about self and goal beliefs were correlated significantly ($r = .25, p < .05$). Concerning the dependent variables assessing intuition, there were the following significant correlations: holistic intuition (TIntS) with intuition (DSS) $r = .35 (p < .01)$, affective (TIntS) with intuition (DSS) $r = .41 (p < .01)$, and holistic (TIntS) with rationality (DSS) $r = -.26 (p < .05)$.

4.2. Relations between the CO of Intuition and the intuition scales

Table 1 presents the results of the regression analyses performed with the four types of CO beliefs as predictors and each of the five variables assessed by the two questionnaires TIntS and DSS as dependent variables. The results show that the CO beliefs yielded a significant prediction of all the four intuition variables. The amount of variance in the intuition variables accounted for by the CO beliefs ranged from 26.2% (holistic intuition) to 32.7% (affective intuition). On the whole the differences in the variance accounted for are not large (on the average 28.67%). Thus, the results support the hypothesis in showing that the CO beliefs are related significantly to the intuition variables.

Table 1. The results of regression analyses between the CO four belief scores and the variables assessing intuition (TIntS and DSS).

Dependent variable: Holistic (TIntS) R=.544 R ² =.296 F (df=4/85) = 4.21**			
Coefficients	unstandardized	Standardized	t-test
Beliefs about self	.367	.345	2.370***
General beliefs	.252	.221	2.000*
Beliefs about norms	.342	.319	2.381**
Goal beliefs	.332	.238	2.202*
Dependent variable: Inferential (TIntS) R=.512 R ² =.262 F (df=4/85) = 3.07*			
Beliefs about self	.200	.198	2.036 *
General beliefs	.252	.221	2.000*
Beliefs about norms	.304	.286	2.270*
Goal beliefs	.299	.257	2.183*
Dependent variable: Affective (TIntS) R=.572 R ² =.327 F (df=4/85) =3.66**			
Beliefs about self	.317	.335	2.530**
General beliefs	.372	.322	2.025*
Beliefs about norms	.358	.320	2.350*
Goal beliefs	.301	.275	2.110*
Dependent variable: Intuitive (DSS) R=.512 R ² =.262 F (df=4/85) =3.68**			
Beliefs about self	.349	.295	2.451**
General beliefs	.362	.378	2.485**
Beliefs about norms	.314	.303	2.310*
Goal beliefs	.322	.268	2.194*
Dependent variable: Rational (DSS) R=.322 R ² =.104 F (df=4/85) =2.46 (p=.052)			
Beliefs about self	-.327	-.305	-2.080*
General beliefs	-.305	-.317	-1.751*
Beliefs about norms	-.237	-.215	-1.980*
Goal beliefs	-.211	-.209	-1.560

Note. * $p < .05$ ** $p < .01$ *** $p < .001$

In addition to providing a significant prediction of the four intuition variables the findings show that, as predicted, in each case all four CO beliefs had a significant contribution to the prediction. However, the relative contribution of each belief type differed in regard to the four intuition variables. Beliefs about self had the relatively highest contribution in regard to holistic and affective intuition, while norm beliefs had the highest contribution in regard to inferential intuition and general beliefs in regard to intuitive decision style.

Notably, in regard to rationality, which is the opposite of intuition, the CO beliefs accounted only for 10.4% of the variance. The contribution of all CO beliefs was negative. The contribution of goals was not significant.

The results concerning the factors based on motives confirm and expand the cited findings. The five factors provided a significant prediction of the four intuition variables, accounting on the average for 31.23% of the variance. All five factors had significant contributions to the prediction, which varied however across the variables. The factor of Emotions was related most highly to the affective intuition; the factors of Comprehensive view and of Opening-up were related most highly to holistic intuition; the factors of Self-reliance and Fast solutions were related most highly to inferential intuition. Again, the CO factors were related to rationality less than to the intuition variables and their contributions were negative.

5. Discussion

The results provided support to the hypothesis about the relation of CO variables to intuition by showing that the four CO beliefs enabled a significant prediction of four different intuition variables. Further, in regard to each prediction all four belief types had a significant contribution. These findings indicate that intuition is embedded in a network of personal tendencies and attitudes which constitute the motivational source for the disposition to rely on intuition in regard to the different domains of life. The earmarks of these motivationally relevant tendencies are focusing on emotions, opening-up to situations, preference for fast and easy solutions, promoting the overall comprehensive view of things and self-reliance. The power of these tendencies to orient toward intuition is due to the fact that they represent deep underlying meanings of intuition and operate in the form of a four-pronged vector defined by beliefs about self, general beliefs, beliefs about norms and beliefs about goals.

The structure of motivation allows however for some flexibility, both in regard to different forms of intuition as well as in regard to individual differences. The findings show that the relative weight of the four belief types as well as of the five motive factors changes in line with the different kinds of intuition. For example, as may be expected, the contribution of beliefs about self was largest in regard to the holistic and affective kinds of intuition. Similarly, it may be assumed that the relative contribution of the belief types or the motive factors to the prediction of the various intuition kinds may vary across individuals, in line with their personality traits and cognitive tendencies.

It is of particular interest to note that the belief types and factors provide a prediction also of rationality which may be considered as antithetical to intuition. As expected, the contribution of the three CO variables with a significant contribution is negative.

6. Conclusions

The study showed that intuition is cognitive tendency embedded in a motivational network of beliefs and meanings. As such it can be considered as a personality disposition. The findings provided a clear definition of the specific and unique components of the motivational groundwork of intuition, namely, reliance on oneself and especially on one's emotions, preference of a comprehensive overall view of issues and of fast solutions, complemented by opening-up to situations. This conclusion is not only theoretically important but has also practical implications. It enables assessing the motivational structure of intuition with a tool which does not suffer from social desirability because its items do not refer directly to intuition. Further, it enables devising a training program for promoting intuition when it is considered desirable. The training program will be based on strengthening the particular aspects of the CO of intuition identified in the study, in line with the systematic intervention procedure of the CO (Kreidler, 2004).

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Appendix 1

The Cognitive Orientation Questionnaire of Intuitive Thinking

Note: In each of the following four parts of the questionnaire only 5 of the 18 items are presented for reasons of limited space. For the complete questionnaire, please write to Krit@netvision.net.il

Concerning each of the following statements please check how true it is: very true (4), true (3), not true (2) not at all true (1)

Beliefs about oneself: 1. In everything I do I focus mainly on the utilitarian-functional aspect; 2. I am curious only concerning very specific things; 3. I like to open-up to things, to grasp the solution dictated by the situation; 4. I like fast and easy solutions; 5. I don't mind being sometimes wrong.

General beliefs: 1. Reason is able to control emotions; 2. it is impossible to rely on easy and fast solutions.; 3. Sensory experiences, such as colors, shapes, smells and tones can clarify the situation better than various theories; 4. It is better to let the situation to dictate to you the action than to impose on the situation a ready-made solution; 5. The external impression is at least as important as the internal contents

Beliefs about norms: 1. It is necessary to deal with the comprehensive view rather than with the details; 2. One should let oneself flow with the situation, to experience the direction of the solution towards which the situation directs one; 3. In order to delve deeply into the issue it is necessary to examine it thoroughly and systematically and not rely on intuition and generalized insights; 4. One should grasp things as they are without trying to impose on them some structure or organization; 5. One should not flounder too much in regard to decisions

Beliefs about goals (to what degree do you want each of the following to be or continue): 1. To be able to get simple and fast solutions; 2. To strive to simple and clear things without complications; 3. To be always able to focus on various examples and concrete demonstrations; 4. To be able to open-up to a situation and let it dictate to me the desired solution; 5. To let emotions rule me instead of reason

CROSS-SECTIONAL ANALYSIS OF THE METHODS USED TO EVALUATE THE MENTAL AND PHYSICAL WELL BEING OF MILITARY PERSONNEL

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Abstract

Military service is both physically and mentally demanding given its risk factors, shift work, long working hours, the necessity of relocation and great responsibility. Although soldiers are highly selected from among the population, their daily duties can be reflected in their health. In this study, we chose two specific military groups that have very different tasks in the Czech Army to determine their actual physical and mental states. The first group was the military Castle Guard, and the second group was military paratroopers. Both of these groups underwent psychological testing of personality, IQ, self-evaluation, cognitive abilities and the motivation to perform the duties of military service. Physical health was tested by a body composition analysis, health-related biochemical parameters, sleep analysis and diagnostics on the musculoskeletal apparatus. The aim of our study was to find significant associations that have an impact on the well-being of elite Czech military units, and for this purpose we used the association rule learning method. The results of this study demonstrate the most significant associations between the mental state of soldiers and their quality of sleep. The health state was usually reflected in the sleep pattern which plays a role in life vitality, independence and professional success. The results support the need for the complex preparation of military personnel and a much-needed prevention program which would also include sleep adjustments that would help to improve their overall performance and to maintain appropriate combat readiness.

Keywords: *Physical and mental workload analysis, military castle guard, military paratroopers, combat readiness.*

1. Introduction

Military personnel are confronted daily with mental and physiological challenges given by a difficult working environment defined by its rules, responsibility and discipline. To perform well in these conditions, it is necessary to consider both mental and physical well-being within a single context. This study aims to reveal the current state of the Czech Army in the very different, but both highly responsible, aspects and to see which components play the main role in their well-being. Since the Czech Army is fully professional and it's more and more difficult to find competent personnel, it is important to help current soldiers keep fit. Due to the discrepancy between the requirements for military personnel and their actual physical abilities, a risk of chronic disability may occur (Larsson, Tegem & Harms-Ringdahl, 2012; Payne & Harvey, 2010).

This broad-spectrum study was designed to verify the mental and physical states of military units. Soldiers regularly undergo psychological testing which is utilized in describing, explaining, predicting and modifying behaviors (Nwafor & Adesuwa, 2014). However, to prevent possible problems, it is necessary to include testing for motivation, cognitive ability, self-evaluation and IQ as well to keep performance at the highest level. A high motivation to work in the military and a dedication to the cause can help protect against posttraumatic stress disorder (PTSD) together with better intellectual functioning (Kaplan et al., 2002). Good cognitive abilities are usually a decisive factor in a soldier's tasks, and they should be kept at the highest possible level. Findings indicate that when soldiers are under stress their decision-making and cognitive functioning are significantly decreased, which can also result in lowered shooting accuracy (Nibbeling, Oudejans, Ubink, & Daanen, 2014). Moreover, it can be associated with additional health concerns, less physical activity, less vitality, and more emotional problems (Zammit, Weiner, Damato, Sillup & McMillan, 1999). Even one night of sleep deprivation can cause considerable deterioration in alertness and performance, which makes accidents in the workplace more likely (Van Dongen, 2006). Especially in the military environment, sleep can be impaired because of common shift changes.

Night-shift soldiers have significantly worse sleep efficiency as compared to day-shift soldiers. They also reported more problems falling asleep and staying asleep compared to the day-shift (Peterson, Goodie, Satterfield & Brim, 2008). Disrupted sleep, as is usually seen in military personnel on duty, results in a high risk of daytime sleepiness and fatigue (Toblin et al., 2012). A sleep deficit decreases combat performance, and there is a significant association between the number of hours of sleep and the incidence of mistakes and potential accidents (loPresti et al., 2016). Unfortunately, among the military, little attention is paid to sleep quality. When taking breaks, the rest areas for soldiers are not customized for healthy sleep, as sleeping areas are usually uncomfortable and noisy (Troxel et al., 2015). Sleep is currently disregarded during operational planning, although it might produce significant advantages in increased readiness and resilience (Mysliwiec, Walter, Collen, & Wesensten, 2016). In operational planning, the breaks and spare time are not well-organized, so, instead of sleeping, soldiers communicate with their families or play video games (Pruiksma & Peterson, 2018). Too much excitement before sleep produces insomnia among military personnel (Bonnet & Arand, 2010; Ramos, Arvelo, & Gomez, 2013).

The biochemical parameters related to stress and overload are usually cortisol, creatine kinase (CK) and urea. Fatigue is most accurately reflected in urea for endurance activity. On the other hand, for strength training, the best blood-borne marker reflecting fatigue is increasing CK (Hecksteden et al., 2016). Creatine kinase is an enzyme that catalyzes the conversion of creatine to creatine phosphate, which serves as an energy storage in the body. Serum CK increases in healthy subjects right after exercise which consists of a very intense muscular load, and it is probably the best biochemical marker of muscle fiber damage (Mougios, 2019). Urea is formed in the liver, and it is the end product of protein metabolism, it serves as the main product of the excretion of excess nitrogen from the body. After performing long-lasting exercise, there is usually a higher concentration of urea occurring in the blood (Virus & Virus, 2001). The accumulation of urea does not change during short-term exercise, but it increases with longer-lasting effort and depends primarily on the duration and intensity of exercise (Mougios, 2019). Cortisol is known to be a key factor in the biological stress response, and it mainly contributes to the regulation of stress responses (Glienne & Piefke, 2017). An increased release of cortisol occurs in a body facing a stressor by up to ten times the normal amount (Lüllmann, Mohr, & Wehling, 2004). Measuring cortisol at rest can help estimate physical and mental stress, while measuring cortisol after exercise can show the adaptation of the body to a certain stress load level (Mougios, 2019). Exercise based on endurance can cause significant changes in resting cortisol values (Anderson, Lane & Hackney, 2016). Cortisol secretion is suppressed in sleep, and therefore in long-lasting sleep deprivation, the cortisol level tends to remain higher and can be a marker of chronic insomnia (Basta, Chrousos, Vela-Bueno, & Vgontzas, 2007). While a number of test batteries and procedures are used in the military to determine physical fitness, muscle strength and endurance, unfortunately they are often not sufficiently relevant or reliable to predict an increased risk of injury or to assess real physical performance (Malmberg, 2011; Larsson, Tegern & Harms-Ringdahl, 2012). The test of muscle imbalance could be a good indicator of possible future problems, because the number of individuals with muscle imbalance has increased, especially in the lower limbs which are usually caused by incorrect posture or inappropriate lifestyle (Kang et al., 2011).

2. Subjects

The subjects tested were from two military groups significantly different in their type of duty. The first group consisted of 105 men working as the Castle Guard, ensuring the protection of the Czech president and other statesmen. The second group consisted of 101 men working as paratroopers (military parachutists) in the Czech Army. Their duty is quite different in physical demands and also in a different sleeping schedule. The airborne gets a full night's sleep, even when on duty, but the Castle Guard sleeps in 2-hour intervals. The schedule is divided into a two-hour duty, a two-hour rest and two-hour preparation for another duty including night shifts. On the other hand, the airborne has much more strenuous physical demands, and there is a greater risk of injuries.

3. Methods

To analyze sleep and its impact on the performance of soldiers on duty, we used actigraphy to extract the main actigraphic variables. For this purpose, we used a Mindpax MindG bracelet actigraphic device which is battery-powered unit with a Kionix KX022 accelerometer. Detailed indexes derived from actigraphic data: average sleep time per 24-hour period, time to fall asleep, wake-up time, number of arousals during sleep, sleep efficiency estimate, amount of daily sleep, amount of daily activity, chronotype estimate, percentage and stability estimates of individual sleep stages (deep sleep, light sleep, REM), regularity of wake-up time, speed of fall asleep, etc. These indexes were computed as a mean value over multiple days (2-14 days for individual subjects). AKTI_IND features were transferred to 5-point scale where 1 is minimum, 2-3 is average for given population and 5 is maximum. The body composition measurement

device was a Tanita foot-to-foot and hand-to-foot bioelectrical impedance analyzer. The MC780U Multi Frequency Segmental Body Composition Analyzer was used in this study and provided data on weight, body fat, fat mass, muscle mass, total body water, body mass index, bone mass and basal metabolic rate. Biochemistry data were obtained by a biochemical analysis from a blood sample. For all participants, a capillary blood sample was taken and immediately analyzed using a dry chemistry method (SPOTCHEM™ EZ SP-4430). Further, hormone cortisol was measured in the blood sample by the enzyme-linked immunosorbent assay (ELISA). The muscle endurance test was based on the McGill test (McGill, 1999) protocols divided into four core endurance tests. The subjects were instructed to hold a static position for as long as possible. The endurance tests included the trunk flexor test, the trunk extensor test, and the bilateral side bridge test. Cognitive tests were administered to measure the level of the cognitive performance of the soldiers. The test battery contained the psychomotor vigilance test (PVT), Go/NoGo, visual search, inhibition of return, the Corsi block test and the Mackworth clock task. The tasks assigned are described in more detail in the PsyToolkit SW (Stoet 2010; Stoet 2017). Psychological data were obtained by the NEO-PI-R personality test which can detect the main tendencies for neuroticism, depression, conscientiousness and agreeableness (Costa & McCrae, 2008). The motivation to work in the military and to perform daily duties was measured by a series of questions covering the weekly schedule of the soldiers, including work, family and leisure balance, and their motivation to make any changes. Another method was mapping the life satisfaction of the soldiers tested using a self-evaluation questionnaire. The task was to evaluate each item on a scale of 1-10 from worse to the best. The test had 10 scales referring to appearance, health, independence, physical fitness, work success rate, sexual performance, ability to satisfy your partner, vitality and life satisfaction. The IQ test used was the Efekt computer-based test which among the usual IQ score provided data about the level of aspiration of the subjects tested based on Kurt Lewin’s research (Lewin, 1944). Strategy tells us how the person accurately evaluates his abilities. The points are based on the level of another question he chooses after failure or correctly answered question, so the higher the number is the higher aspirations the person has and takes more risk. Cata feature in the Efekt test means that even after correct answer the person lowers his aspirations and chooses easier question. The Pole feature is about overestimating abilities because the person chooses more difficult question after a failure. All of the last three mentioned tests were specially constructed by CASRI for the purposes of this research project, although their significance among military subjects has already been proven in previous projects conducted by the Czech Armed Forces.

4. Results

In this study, we obtained a total of 149 features. We worked with incomplete data, because it was not possible to perform all the necessary experiments on all the subjects analyzed. Features whose missing data rate was above the threshold $th = 75\%$ for at least one dataset were removed and not considered in further analyses. The total number of features after feature rejection was 118.

We used an apriori-type algorithm for generating the association rules executed in the Weka software (Frank, Hall & Witten, 2016). The algorithm iteratively reduces the minimum support until it finds the required number of rules with the given minimum confidence. Confidence is computed as the proportion of the examples covered by the premise that are also covered by the consequence. We used a “lift” metric with the minimum of criteria set to 1.1. Lift is confidence divided by the proportion of all examples that are covered by the consequence. This is a measure of the importance of the association that is independent of support.

As typical for association rule learning, the number of rules found is enormous. The total number of association rules found for Castle Guard was 757599, and for paratroopers 307304. The most relevant results are based on the counted only simple rules across different groups with lift >2. For Castle Guard the number of rules found was 190 and 20 for paratroopers. In Table 1 and Table 2 are the most significant results for each group regarding the lift parameter. This is a direct output of the Weka software (Frank, Hall & Witten, 2016).

Table 1. Best rules found for the Castle Guard dataset.

1. AKTI_RAW __Median_wake_time_h="[7.32-9.08]" 17 ==> PSYCHO __Self-evaluation __Vitality="[7.9-8.6]" 11 conf:(0.65) < lift:(4.53)>
2. PSYCHO __Self-evaluation __Vitality="[7.9-8.6]" 15 ==> AKTI IND __Continuity_of_sleep_estimated_by_number_of_ arousals="[2.6-3]" 12 conf:(0.8) < lift:(3.65)>
3. AKTI_IND __Continuity_of_sleep_estimated_by_height_of_microarousals="[2.6-3]" 23 ==> PSYCHO __Self-evaluation __Independence="[9.5-inf]" 11 conf:(0.48) < lift:(3.59)>
4. AKTI_IND __Sleep_efficiency="[2.6-3]" 23 ==> PSYCHO __Self-evaluation __Appearance="[6.8-7.2]" 11 conf:(0.48) < lift:(3.59)>
5. PSYCHO __Self-evaluation __Health="[8.5-9]" 16 ==> AKTI_IND __Average_number_of_ arousals="[2.6-3]" 12 conf:(0.75) < lift:(3.42)>

Table 2. Best rules found for the paratroopers' dataset.

1.	KOGNI_CORSI="[40-50]" 13 ==> PSYCHO Self-evaluation_work_success_rate="[7.9-8.6]" 10 conf:(0.77) <lift:(2.99)>
2.	AKTI_RAW Dispersion_of_sleep_effectivity_%="[1.3-1.95]" 14 ==>Self_evaluation_work_rate_success="[7.9-8.6]" 10 conf:(0.71) <lift:(2.77)>
3.	AKTI_RAW Number_of_awakenings_per_hour_>_10_min="[-inf-0.04]" 23 ==> BIO Anthropometry Basal_metabolism_kcal="[2097.5-2225.4]" 10 conf:(0.43) <lift:(2.31)>
4.	BIO Anthropometry total_body_water_kg="[50.75-53.62]" 20 ==> AKTI_RAW Number_of_awakenings_per_night_>_10_min="[-inf-0.45]" 11 conf:(0.55) <lift:(2.22)>
5.	AKTI_IND Average_length_of_sleep="(-inf-3.1)" 21 ==> PSYCHO Self-evaluation Independence="[8.6-9.3]" 11 conf:(0.52) <lift:(2.2)>

5. Conclusion and discussion

The purpose of this study was to examine the most useful methods and feature extraction algorithms that effectively reflect the physical and mental health of Czech Armed Forces. Since the workload and work schedule can vary among military units, we chose two specific groups that have very different duties and organizational planning. The differences between these units can be seen in the results, where the features for Castle Guard group had the most significant associations in median wake time and vitality. Self-evaluated vitality is also connected to the continuity of sleep. There are more sleep relevant features, like continuity of sleep and self-perceived independence or sleep efficiency and appearance. The paratrooper unit had slightly different results more closely related to biological markers, although sleep plays a role in health and work success as well. The work success rate is associated with good cognitive ability focused on visuo-spatial short-term working memory as measured by the Corsi test. Professional success is also related to a low level of dispersion of sleep efficiency, which means that the person usually gets the same effective sleep over the 14-day measurement period. Other significant biological associations were found, such as low percentage of awakenings and higher basal metabolism together with higher total body water. The more continuous sleep the person gets the better basal metabolism he has together with a healthier water ratio in the body.

The results indicate that health and work efficiency is mostly reflected by sleep related features. Given the analysis of the 118 features extracted from various fields and commonly used methods to determine military personnel vitality, fatigue, work success and overload, the sleep related features demonstrated the most relevant associations. To make conclusions for the military environment as a whole, it is necessary to differentiate between units, their working schedule and their mental and physical demands, so we cannot expect these results to be applied uniformly to all military personnel. Giving these findings, the goal of a new research might consider potential ways to measure various military units. Still, our results indicate a clear need for discussing and ensuring better sleep hygiene practices, which are often routinely disregarded during operational planning.

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LEARNING STYLE, INTERCULTURAL SENSITIVITY, AND INTERNATIONAL ATTITUDES: A CASE OF A JAPANESE UNIVERSITY

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Abstract

We explored how learning style relates to intercultural sensitivity and how these two variables are associated with international attitudes in the context of a Japanese university. Since the Japanese Ministry of Education, Culture, Sports, Science and Technology articulated the magnitude of shifting towards globalization of Japanese higher education, many universities have continued to advance initiatives to prepare their students for globalized contexts. Little is known about how learning style relates to psychological variables of cross-cultural communication. Thus, the present empirical study attempted to fill this gap. Participants of the study were 109 Japanese students enrolled at a Japanese university. We applied three measures: Kolb's Learning Style Inventory, Chen and Starosta's Intercultural Sensitivity Scale, and Yashima's International Posture measure. Because factor structure with constituent items of the Intercultural Sensitivity Scale was unresolved, we initially examined how its latent constructs are configured and then identified four underlying components: Affirmative & Enjoyment Interaction, Negative Perceptions, Anxious Interaction, and Respect of Cultural Differences. The International Posture consists of four themes to measure Intercultural Approach Tendency, Interest in International Vocation, Interest in Foreign Affairs, and Willingness to Communicate to the World. Results of regression analysis illustrated that a learning style variable of more acting over reflecting significantly related to the sensitivity variable of Anxious Interaction ($\beta = -0.26, p < 0.01$). Subsequently, results of regression analysis indicated that a learning style variable of more thinking over feeling was significantly associated with Intercultural Approach Tendency ($\beta = -0.19, p < 0.01$), while that of more acting over reflecting was significantly associated with Intercultural Approach Tendency ($\beta = 0.16, p < 0.05$) and Interest in International Vocation ($\beta = 0.30, p < 0.01$). As to relationships between intercultural sensitivity and international attitudes, the results showed that Affirmative & Enjoyment Interaction was significantly associated with all four international attitudes (β s ranged from 0.24 to 0.57); Anxious Interaction significantly related to only Willingness to Communicate to the World ($\beta = -0.33, p < 0.01$); and Respect of Cultural Differences was significantly linked with Intercultural Approach Tendency ($\beta = 0.20, p < 0.01$) and Interest in Foreign Affairs ($\beta = 0.28, p < 0.01$). The results suggest that learning style relates to intercultural sensitivity and international attitudes, but the relationship depends on the type of learning style variable and the specific factor in intercultural sensitivity and international attitudes.

Keywords: *Learning style, intercultural sensitivity, international attitudes, Japanese higher education.*

1. Introduction

The Japanese government initiated a strategy to advance the globalization of Japanese higher education. This initiative established the goal of receiving 300,000 international students from foreign countries until 2020 and increasing the number of Japanese students who study abroad (MEXT, 2008). To facilitate this initiative, the Japan Student Service Organization with the cooperation of Japanese firms launched a study abroad program for Japanese students in 2014. The program aims to send abroad a total of 180,000 Japanese university and high school students (MEXT, 2020). The implementation of the government strategy has allowed Japanese educational institutions to educate Japanese students not only for development of English proficiency (Toyama & Yamazaki, 2019a) but also for the capability to deal with cross-cultural and international situations. It is thought that Japanese students need to learn in cross-cultural contexts where they feel, think, and act to acquire demanding competencies and knowledge. In line with this perspective, our study sought to understand a relationship between a way of

learning, which is called ‘learning style,’ and psychological aspects of Japanese university students in terms of cross-cultural communication.

The literature on such a relationship in the area of cross-cultural and international studies is limited, involving only a handful of reports on work attitudes in an international context (Yamazaki & Kayes, 2010) and cultural intelligence of global leaders (Li, Mobley, & Kelly, 2013). Although intercultural sensitivity and international attitudes have been examined in Japanese academic contexts (see Elwood & Monoi, 2015; Suzuki & Saito, 2016; Yashima & Zenuk-Nishide, 2008), we do not know much about how these two cross-cultural psychological variables are related to learning style.

Intercultural sensitivity may change and develop over time (Straffon, 2003), so several studies have examined the effect of cultural sensitivity training (Wade & Bernstein, 1991), English as a foreign language education (Bordie, 1970), and healthcare study (Bohanon, 2018). For the present study, therefore, it was assumed that intercultural sensitivity can be learned and developed based on experience. Accordingly, we explored how individuals’ learning style relates to intercultural sensitivity followed by a study of the association of those two variables with international attitudes.

2. Literature review

2.1. Learning style

Learning style is defined as “an individual’s preferred way of responding (cognitively and behaviourally) to learning tasks which change depending on the environment or context” (Peterson, Rayner, & Armstrong, 2009, p. 520). Among multiple learning models proposed in the literature (Cassidy, 2004), we used Kolb’s (1984) experiential learning model because it has been applied in numerous cross-cultural studies (Yamazaki, 2005). It is characterized by focus on individuals’ experiences as a source of learning (Kolb, 1984; Kolb & Kolb, 2017). Kolb’s learning model consists of four learning modes: concrete experience (CE), reflective observation (RO), abstract conceptualization (AC), and active experimentation (AE). The CE mode requires feeling and sensing in the immediate experience of a learning situation, while the AC mode, in contrast, calls for thinking and using logic to form concepts based on the experience. The two modes in this dimension involve different ways of grasping experience. The RO learning mode requires reflecting on the experience, while the AE mode involves action to examine the conceptualized idea. The two modes in this dimension serve to transform an individual’s experience in a distinct way. Each person tends to have a preference for one learning mode over the other in each learning dimension.

2.2. Intercultural sensitivity and international attitudes

Intercultural sensitivity describes “the ability to discriminate and experience relevant cultural differences” (Hammer, Bennet, & Wiseman, 2003, p. 422). Individuals can acquire and develop this ability in a learning situation. Within the cross-cultural literature, scholars have largely agreed that individuals who are more interculturally sensitive will become more interculturally competent (Wang & Zhou, 2016). Chen and Starosta (2000) developed the Intercultural Sensitivity Scale with 24 items. The scale was designed to measure individuals’ intercultural sensitivity as the affective component of intercultural communication, which is the core construct of an upper layer built on affective, cognitive, and behavioral aspects (Chen & Starosta, 2000). The Intercultural Sensitivity Scale has a five-factor structure: Interaction Engagement, Respect of Cultural Differences, Interaction Confidence, Interaction Enjoyment, and Interaction Attentiveness. However, several studies documented inconsistent factorial configurations, including a three-factor structure (Suzuki & Saito, 2016) and a five-factor structure with different constituent items (Petrovic, Starcevic, Chen, & Komnenic, 2015). In this study, we attempted to examine the configuration of the Intercultural Sensitivity Scale before applying it for analysis.

International attitudes have been investigated in the domain of English as a foreign language as the concept of International Posture proposed by Yashima (2002, 2009). This concept was influenced by Gardner’s construct of Integrativeness, developed to identify individuals’ attitudes towards cross-cultural or international situations/events. The International Posture measure originally had five subscales corresponding to five factors. For this study, however, we eliminated the subscale of Ethnocentrism due to its low psychometric values, as reported by Yashima (2002). The other four factors of International Posture include Intercultural Approach Tendency, Interest in International Vocation, Interest in Foreign Affairs, and Willingness to Communicate to the World.

3. Methods

Participants for this study were 109 undergraduates of a Japanese university located near Tokyo. The students were majoring in business management or information society. Of the 109 participants, 44 (40%) were women and 65 (60%) were men. Their average age was 20.1 years ($SD = 0.65$). In the spring 2019 semester, one of the authors distributed survey questionnaires to the students in class.

The questionnaires included Kolb's (1999) Learning Style Inventory, the Intercultural Sensitivity Scale, and the International Posture measure with demographic questions. Before analyzing a relationship between learning style, intercultural sensitivity, and international attitudes, the factor structure of the Intercultural Sensitivity Scale consisting of 24 items was examined, as discussed earlier. We conducted exploratory factor analysis using the same sample, applying the method of maximum likelihood with the direct oblimin. Although five factors were extracted employing a technique of a factor loading of at least 0.5 with the guideline of eigenvalues > 1 , we decided to adopt four factors with a total of 15 items because one factor had only one item that also had cross-loading with another factor. Subsequently, confirmatory factor analysis showed a chi-square score of 210.04 ($p < 0.01$), goodness of fit of 0.83, comparative fit index of 0.84, and root mean square error of approximation of 0.10. The four factors comprised Affirmative & Enjoyment Interaction (6 items), Anxious Interaction (3 items), Negative Perceptions (3 items), and Respect of Cultural Differences (3 items). The Cronbach's α coefficients for those components ranged from 0.70 to 0.84, all of which were an acceptable level. For the International Posture measure, the Cronbach's α coefficients were 0.78 for Intercultural Approach Tendency (7 items), 0.72 for Interest in International Vocation (6 items), 0.58 for Interest in Foreign Affairs (4 items), and 0.66 for Willingness to Communicate to the World (6 items).

4. Results and discussion

This study applied regression analysis of how learning style relates to intercultural sensitivity, as well as how learning style and intercultural sensitivity relate to international attitudes. Results of the regression analysis indicated that a learning style variable of more acting over reflecting (AE-RO) significantly related to Anxious Interaction ($p < 0.01$) and was marginally associated with Affirmative and Enjoyment Interaction ($p < 0.10$). However, other relationships between learning style variables and intercultural sensitivity variables were insignificant. This result implies that individuals who learn by using more action than reflection will have less anxiety when interacting with culturally different people and tend to have more Affirmative and Enjoyment Interaction. Table 1 summarizes results of the regression analysis.

The results are consistent with those of prior studies that investigated learning style and state and trait anxiety (Ayalp & Özdemir, 2016; Toyama & Yamazaki, 2019b). Compared with those with a Converging learning style (with a focus on AC and AE), those with a Diverging learning style (with a focus on CE and RO) had more state and trait anxiety (Toyama & Yamazaki, 2019b) and more test anxiety (Ayalp & Özdemir, 2016). It seems that too much reflection without action elicits pessimistic feelings that lead to anxiety in general. In contrast, those with an action orientation in a learning situation may tend to have optimistic feelings when facing challenges and taking risks, leading to increased opportunities for development in the ability of affirmative and enjoyable interaction.

Table 1. Results of Regression Analysis of Learning Style and Intercultural Sensitivity.

Variable entered	Dependent variables			
	Affirmative & Enjoyment Interaction	Anxious Interaction	Negative Perceptions	Respect of Cultural Differences
	β			
AC-CE (thinking vs. feeling)	0.03	-0.13	-0.01	-0.02
AE-RO (acting vs. reflecting)	0.19 [†]	-0.26**	-0.15	0.03
<i>F</i>	1.84	4.04*	1.25	0.09
<i>R</i> ²	0.03	0.07	0.02	0.00

Note. $N = 109$; ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$.

Table 2. Results of Regression Analysis of Learning Style, Intercultural Sensitivity, and International Attitudes.

Variable entered	Dependent variables			
	Intercultural Approach Tendency	Interest in International Vocation	Interest in Foreign Affairs	Willingness to Communicate to the World
	β			
AC-CE (thinking vs. feeling)	-0.19**	-0.12	0.00	-0.14 [†]
AE-RO (acting vs. reflecting)	0.16*	0.30**	-0.16 [†]	0.02
Affirmative & Enjoyment Interaction	0.57**	0.24*	0.27**	0.45**
Anxious Interaction	-0.02	-0.15	-0.08	-0.33**
Negative Perceptions	-0.02	-0.03	0.03	0.01
Respect of Cultural Differences	0.20**	0.07	0.28**	0.15 [†]
<i>F</i>	23.73**	6.43**	4.76**	12.37**
<i>R</i> ²	0.58	0.27	0.22	0.42

Note. $N = 109$; ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$.

Table 2 illustrates results of regression analysis for how two learning style variables and four intercultural sensitivity variables relate to four international attitudes. The results showed that the learning style variable of more thinking over feeling (AC-CE) was significantly negatively associated with Intercultural Approach Tendency ($p < 0.01$) and marginally negatively related to Willingness to Communicate to the World ($p < 0.10$). Since the learning mode of concrete experience (feeling) is linked with a competency of forming good human relationships with others (Boyatzis & Kolb, 1991), those who use the feeling learning mode more than the thinking learning mode tend to be more communicative and more involved with foreigners. The results also indicated that a learning variable of more acting over reflecting (AE-RO) was significantly associated with Intercultural Approach Tendency ($p < 0.05$) and Interest in International Vocation ($p < 0.01$) and was marginally related to Interest in Foreign Affairs ($p < 0.10$). An active orientation toward learning might lead to development of more interests relevant to the outer world, in contrast to a reflective orientation of learning that engages the inner world.

As to the relationship between intercultural sensitivity and international attitudes, results of the regression analysis indicated that Affirmative & Enjoyment Interaction was significantly associated with the four international attitudes; Anxious Interaction significantly negatively related to only Willingness to Communicate to the World ($p < 0.01$); and Respect of Cultural Differences was significantly linked with Intercultural Approach Tendency ($p < 0.01$) and Interest in Foreign Affairs ($p < 0.01$) and was marginally related to Willingness to Communicate to the World ($p < 0.10$). It is logical that intercultural sensitivity variables have a strong relationship with international attitudes.

5. Conclusions

Our study explored how learning style, intercultural sensitivity, and international attitudes are associated with each other. The results led us to conclude that learning style relates to intercultural sensitivity and international attitudes, but the relationship depends on the type of learning style variables and the type of underlying factors in intercultural sensitivity and international attitudes. More specifically, a learning variable of active over reflective modes may be more influential than that of thinking over feeling modes in terms of sensitivity and attitudes in a cross-cultural context. Also, it would be reasonable to say that the two sensitivity factors of Affirmative & Enjoyment Interaction and Respect of Cultural Differences play an important role in changes of international attitudes.

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POSTERS

PERSONAL RESOURCES, DEPRESSIVE SYMPTOMS AND SELF-RATED HEALTH IN HIGH-RISK PROFESSIONS

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Abstract

The importance of personal resources in the context of high demanding work conditions is often being reported. However, when and what type of personal resources are the beneficial ones is not fully understood. The aim of this study is to apply network analysis and explore closeness of relationships between personal resources, depressive symptoms and self-rated health in individuals working in high-risk professions. The study sample comprised 276 police officers, prison guards, customs officers and physicians (72.1% men, Mage = 36.58, SDage = 8.99). Observed variables included personal resources (OSI-R), depressive symptoms (SDS) and self-rated health (item from SF-36). The network analysis (EBICglasso) was performed in two groups: workers in emergency services (N=133), and individuals, who do not work in emergency services (N=143). Network analysis revealed that individuals who do not work in emergency services reported depressive symptoms in negative relationship to rational coping, social support, recreation and self-care. In this group, the decrease of self-rated health is related to decline of self-care, social support and recreation. Conversely, emergency workers reported their self-rated health depending solely on the level of recreation they perform. In this group, depressive symptoms could be reduced by recreation, rational coping and social support, but are not related to self-care. In the emergency workers, the self-care and self-rated health were the nodes of low strength. Therefore, intervention programs should target individuals in high-risk professions by stimulating appropriate personal resources to maintain their health. Importantly, self-care strategies might lose their protective role in emergency workers.

Keywords: *Personal resources, depressive symptoms, self-rated health, emergency services, network analysis.*

1. Introduction

Occupational stress has been recognized as a risk factor in the development of depressive symptoms (Madsen et al., 2017) and deterioration of well-being and health. In high-risk professions, stress, anxieties and depression are among common reasons leading to work absence and formal disability (Baumann et al., 2010). Night shifts, changing working hours and emergency service are related to sleep disorders, depression and health deterioration (Bara, Arber, 2009). Additionally, selected professionals – police officers, prison guards, customs officers, and physicians are in direct contact with every day threatening situations. Yet, studies suggest that personal resources may protect from the development of depression (Wu et al., 2011) or health deterioration.

2. Design and objective

The aim of this cross-sectional study was to identify central variables that can be targeted by intervention programs to improve well-being and health in selected professions. The network analysis was utilized to compute the importance of specific variables (nodes). It is a useful tool for understanding the relationships between multiple variables - personal resources, self-rated health, and depressive symptoms in high-risk professions.

3. Research methods

3.1. Participants

The sample comprised 276 professionals from the high-risk professions. These individuals were analyzed independently based on whether they work in an emergency or not. Further description of both groups is in Table 1. The groups did not differ in any studied variable, except for gender proportion.

Table 1. Demographic characteristics of the sample.

Characteristic	Non-emergency sample		Emergency sample		t	p
	N	%	N	%		
Profession						
Police officers	46	32.2	23	17.3		
Prison guards	58	40.6	19	14.3		
Customs officers	32	22.4	33	24.8		
Physicians	7	4.9	58	43.6		
Gender						
Male	106	74.1	93	69.9		
Female	37	25.9	40	30.1		
	M	SD	M	SD		
Age	37.16	9.15	35.94	8.81	1.12	0.26
Depressive symptoms	34.99	7.50	35.68	9.14	-0.67	0.51
Self-rated health	2.25	0.83	2.20	0.84	0.56	0.58
Personal resources						
Recreation (RE)	31.62	6.38	31.45	7.13	0.20	0,84
Self-care (SC)	24.95	6.26	25.39	6.09	-0.59	0.56
Social support (SS)	40.41	9.42	41.50	7.85	-1.04	0.30
Rat./Cognitive coping (RC)	35.15	6.82	36.12	6.28	-1.21	0.23

Note. M = mean; SD = standard deviation; t = independent t-test

3.2. Measures

Respondents fulfilled sociodemographic variables (age, gender, nightshifts, type of work), self-rated their health by a single scale and rated their depressive symptoms (20 items) in the Zung Self-Rating Depression Scale (SDS). In addition, the Occupational Stress Inventory – Revised (OSI-R, Osipow, 1998) was used. The OSI-R questionnaire measures three areas of stress in working individuals: 1. Occupational stress, 2. Psychological strain and 3. Coping resources (Personal Resources Questionnaire): Recreation, Self-Care, Social Support, and Rational/Cognitive Coping. In this study, only PRQ form OSI-R was used.

3.3. Data analysis: network analysis

Psychology network analysis is a form of exploratory analysis. Between each node (variable) are edges - representing the partial correlation between the two variables controlled for all other relationships in the network. The network analysis was constructed separately for individuals that do work in emergency services and those who do not offer emergency services. Both groups comprised high-risk professions - physicians, police officers, customs officers, and prison guards. Total scale scores (Zung) and total subscale scores (Self-rated health and Personal resources from OSI-R: social support, recreation, self-care, rational coping) were used for better interpretability instead of using individual item scores. The scale scores represent “nodes” in the network. The network of complex interactions between personal resources, depressive symptoms, and self-rated health was estimated using the estimation technique: graphical LASSO (Glasso). The color of the edges signifies the positive (blue color) or negative relationship (red color) between the variables and the thickness of edges represents the strength of each relationship. The used algorithm places nodes with a stronger relationship closer to the center of the graph. In the network analysis, several indices are computed to estimate the importance of each node. In this analysis, the Strength was of our main interest. The strength indicates the magnitude of the *direct relationship* with other nodes in the network. The estimation of the stability of the centrality indicators and the stability of edge weights – the accuracy of networks, were also computed.

4. Results

The stability of the centrality measures (the indicators of the importance of the nodes) revealed that the indicator of strength is stable. The analysis of the stability of edge weights performed by using 1000 bootstrap samples suggests that the tie strengths were reliably estimated. Supplementary material of difference tests between nodes centrality or edge weights may be sent upon the request.

Inspection of the network for the non-emergency and emergency employees (Figure 1, Figure 2) aiming at the strength, as a centrality measure of our main interest, reveals that the most central nodes are in both networks *depressive symptoms, recreation and rational/cognitive strategies of coping*. The estimated network and centrality indicators are presented in Figures 1 and 2. Self-reported (low) health was not central in the networks. Social support was not central for non-emergency employees. However, Social support was important, although with less centrality, for the group working in an emergency. On the other hand, self-care activities were of very low centrality in the group of emergency workers but were central in non-emergency workers.

Figure 1. Estimated network of the a) non-emergency and b) emergency working group in high-risk professions.

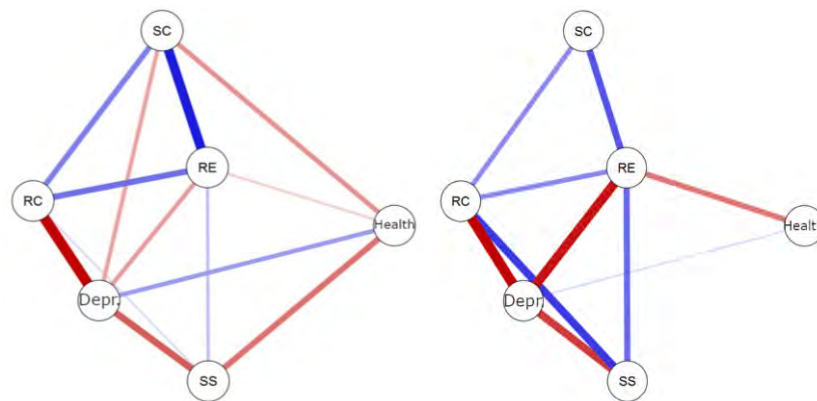
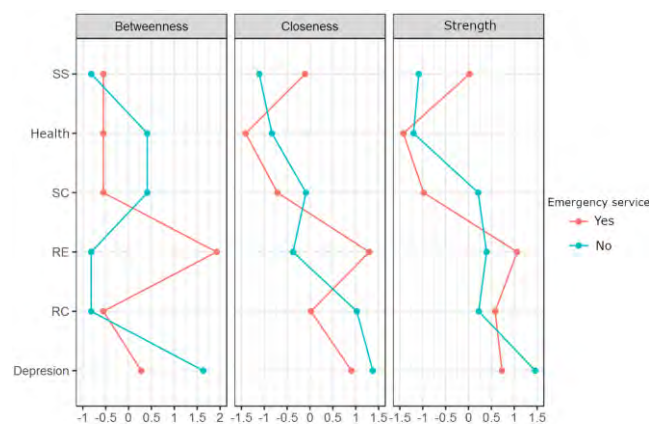


Figure 2. The Centrality Plot for emergency (red) and non-emergency (blue) group of professionals.



Note. Only Strength was stable indicator and was used as a centrality measure in the study.

5. Conclusion and practical implications

The study explored importance (centrality) of particular nodes, in this case, depressive symptoms, decrease of self-reported health as well as areas of personal resources. It can be concluded that depression, recreation and rational/cognitive strategies of coping are among the central variables that should be targeted by intervention programs supporting the health and well-being of high-risk professions as police officers, prison guards, customs officers or physicians. Additionally, intervention program makers may select participants who will benefit more from activating social support - the emergency employees, while activating self-care strategies could be more valuable in non-emergency employees. Such personalized approaches are already being implanted in programs developed for patients (Bačová, Žiaková, 2017). The results should be further explored and experimentally verified.

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ARE THE 5CS RELATED TO RISKY BEHAVIOUR: ANALYSIS ACROSS COUNTRIES

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Abstract

The Positive Youth Development approach views youth development from a broader perspective by emphasizing strengths rather than deficits (Catalano, Hawkins, Berglund, Pollard, & Arthur, 2004). Youth tend to develop more positively when their strengths are aligned with the resources in their environment. Consequently, positive youth development outcomes (5Cs: Competence, Confidence, Character, Connection, and Caring) will be more probable, and risky behaviours less frequent. Since involvement in risky behaviours in adolescence (e.g., substance abuse) can lead to several negative outcomes, it is crucial to understand the relationship between possible protective factors (e.g., 5Cs) and risky behaviours to provide support for at-risk youth. An emphasis was put on the national contexts of Norway, Kosovo, and Slovenia in answering a research question: does this relationship vary across countries? The sample included 218 participants from Slovenia (70.6% girls; $M_{age} = 17.18$), 220 participants from Norway (47.7% girls; $M_{age} = 17.30$) and 916 participants from Kosovo (Albanians living in Kosovo; 66.3% girls; $M_{age} = 16.32$). 5Cs were assessed by the PYD questionnaire (Geldhof et al., 2013) and additionally, participants answered several questions about risky behaviour (substance abuse, skipping school, etc.). MANCOVA and Factorial ANCOVAs were used. Results show that the 5Cs differ across countries. In addition, a series of Factorial ANCOVAs revealed an interaction effect between countries and alcohol use for Competence, Confidence, and Connection. Guidelines for practice and future research are discussed.

Keywords: *Positive youth development, 5Cs, risky behaviour, international comparison.*

1. Introduction

The Positive Youth Development (PYD) framework is based on the Relational Developmental System Theory, which views positive development as an outcome of the interaction between an active, engaged and competent individual and a supportive and nurturing context (i.e., family, school, community, society; Damon, 2004). Thus, in this interaction, positive youth development outcomes (e.g., 5Cs) are more probable while risky behaviours (e.g., substance use, skipping school) are less frequent (Lewin-Bizan et al., 2010).

PYD indicators, operationalized as 5Cs, represent Competence as a positive view of one's actions in specific areas while Confidence is defined as an inner sense of positive self-worth and self-efficacy). Character, the third C is described as possession of standards for appropriate behaviour with respect to societal and cultural norms. Connection represents positive bonds with friends, family, and institutions, while Caring is a sense of sympathy and empathy for others. A large body of evidence consistently shows that the 5Cs are positively related to adolescent's contribution to self, family and society (e.g., Lewin-Bizan et al., 2010) as well as negatively related to risky behaviours and emotional difficulties (e.g., Jelicic, Bobek, Phelps, Lerner, & Lerner, 2007).

Due to the negative impact of risky behaviours on adolescents, it is of particular importance to understand the relationship between possible protective factors and risky behaviours in order to design effective interventions. Our aim is to address this relationship in three countries: Slovenia, Norway, and Kosovo to get a deeper understanding of positive youth development outcomes, substance use, and skipping school.

2. Method

2.1. Participants

The sample included 218 participants from Slovenia (70.6% girls; $M_{age} = 17.18$; $SD = 1.36$), 220 participants from Norway (47.7% girls; $M_{age} = 17.30$; $SD = 1.12$) and 916 participants from Kosovo (Albanians living in Kosovo; 66.3% girls; $M_{age} = 16.32$; $SD = 1.67$).

2.2. Instruments

The short form of the PYD questionnaire (Geldhof et al., 2013) was used to measure the 5Cs. It consists of 34 items answered on a 5-point Likert scale (with responses ranging from 1 = strongly disagree to 5 = strongly agree, for example). Sample items that measure the 5Cs are: Competence (e.g., I do very well in my classwork at school); Confidence (e.g., All in all, I am glad I am me); Character (e.g., I hardly ever do things I know I shouldn't do); Connection (e.g., My friends care about me); and Caring (e.g., When I see another person who is hurt or upset, I feel sorry for them). Reliability measures (Cronbach's alphas) of the 5Cs are adequate: Competence (Slovenia: .65; Norway: .86; Kosovo: .68); Confidence (Slovenia: .89; Norway: .93; Kosovo: .67); Character (Slovenia: .68; Norway: .83; Kosovo: .64); Connection (Slovenia: .73; Norway: .88; Kosovo: .75); Caring (Slovenia: .83; Norway: .90; Kosovo: .85).

Additionally, the participants answered several categorical questions about risky behaviours, from which substance abuse (i.e., Have you used alcohol once or more in the last 30 days? and Have you smoked cigarette once or more in the last 30 days?) as well as skipping school (i.e., Have you skipped school once or more in the last 4 weeks?) were included in the analysis.

3. Results

To examine differences in PYD outcomes (i.e., 5Cs) across countries, MANCOVA was employed ($A = 0.88$; $F = 16.31$; $p < .001$; $partial \eta^2 = 0.06$). In Table 1, the means of the 5Cs are presented together with standard errors. The post hoc tests revealed that countries significantly differed in all 5Cs; except for Character. Participants from Slovenia reported lower levels of Competence and Caring in comparison with participants from Norway and Kosovo (all $ps < .001$), lower levels of Confidence with regard to participants from Kosovo ($p < .001$), and lower levels of Connection compared to participants from Norway ($p = .029$). The latter reported lower levels of Confidence in comparison with participants from Kosovo ($p < .001$).

Table 1. 5Cs by Country: MANCOVA.

Variable	Country			SS	df	MS	F
	Slovenia M (SE)	Norway M (SE)	Kosovo M (SE)				
Competence	3.37 (.05)	3.61 (.05)	3.57 (.02)	6.86	2	3.43	7.58*
Confidence	3.62 (.05)	3.74 (.05)	4.05 (.02)	32.15	2	16.08	36.53**
Character	3.89 (.04)	3.97 (.05)	3.87 (.02)	1.36	2	0.68	1.95
Caring	4.02 (.05)	4.37 (.06)	4.23 (.03)	11.94	2	5.97	11.61**
Connection	3.71 (.04)	3.87 (.05)	3.78 (.02)	2.67	2	1.33	3.37*

Note. Gender, age and parents' educational background were controlled for; M (SE): Mean (standard error), SS: Sum of Squares; MS: Mean Square; * $p < .05$; ** $p < .01$.

Due to differences in the 5Cs across countries, we expected the relation between the 5Cs and risky behaviours (i.e., alcohol use, smoking cigarettes, and skipping school) to differ across countries as well. A series of Factorial ANCOVAs were conducted to examine interaction terms between countries and risky behaviours on the 5Cs (Table 2). Only one interaction effect (between countries and alcohol use) was observed on the 5Cs. In particular, participants from Slovenia who have been drinking in the last month were more confident and connected to their society, friends, and parents than those who did not. On the contrary, participants from Kosovo who were drinking in the last month felt less confident and connected than those who did not drink alcohol. For Competence, participants from Slovenia and Norway who have been drinking in the last month felt more competent than those who did not, while participants from Kosovo who have been drinking reported feeling less competent than those who did not drink alcohol.

Table 2. 5Cs and risky behaviours by Country: Series of Factorial ANCOVA Analyses.

Factorial ANCOVA Summary				
Source	SS	df	MS	F
Competence				
Country*Alcohol	2.93	2	1.47	2.90*
Country*Cigarettes	0.80	2	0.04	0.09
Country*Skipping school	1.34	2	0.67	1.47
Confidence				
Country*Alcohol	3.85	2	1.93	4.39*
Country*Cigarettes	0.28	2	0.14	0.32
Country*Skipping school	2.15	2	1.08	2.45

Character					
	Country*Alcohol	0.38	2	0.19	0.54
	Country*Cigarettes	0.63	2	0.32	0.91
	Country*Skipping school	1.45	2	0.72	2.07
Caring					
	Country*Alcohol	2.00	2	1.00	1.97
	Country*Cigarettes	1.95	2	0.97	1.91
	Country*Skipping school	0.77	2	0.38	0.76
Connection					
	Country*Alcohol	5.12	2	.2.56	6.60*
	Country*Cigarettes	0.03	2	0.01	0.03
	Country*Skipping school	1.07	2	0.54	1.39

Note. Gender, age and parents' educational background were controlled for; SS: Sum of Squares; MS: Mean Square; * $p < .05$; ** $p < .01$.

4. Discussion

The aim of the paper was to examine differences in the 5Cs across countries, as well as how the relations between PYD outcomes and risky behaviours differed across countries. The results showed that youth reported different levels of 5Cs, especially participants from Slovenia reported lower levels of the 5Cs with respect to the two other countries. Participants from Norway and Kosovo differed only in Confidence, where Norwegians reported lower Confidence. Regarding risky behaviours, the only significant interaction effect occurred for alcohol use. The main differences were between Slovenia and Kosovo, since drinking alcohol in Slovenia is connected to higher levels of Confidence, Competence, and Connection, while participants from Kosovo reported exactly the opposite. Norwegians reported being more competent when drinking alcohol as well.

To our knowledge, comparisons between countries and 5Cs are lacking, especially those regarding the interaction between 5Cs, countries, and risky behaviour. However, in an earlier study, Arbeit et al. (2014) found similar results where a group drinking more alcohol had higher Confidence and Competence than other groups involved in risky behaviours. Moreover, using alcohol does not mean a young person will develop poorly, as Dworkin (2005) reported that experimentation with alcohol could also be an opportunity for positive development, allowing youth to figure out who they are and where they belong. Differences among Slovenia, Norway, and Kosovo appear to reflect cultural and religious contrasts between the countries, since Slovenia and Norway are largely individualistic and Christian countries, while Kosovo is mainly Islamic and collectivistic country.

Despite addressing important youth issues, two of our samples were not large enough. Thus, in addition to larger representative samples, future research could consider more countries and other risky behaviours, such as aggression. Nonetheless, understanding the relations between PYD outcomes and risky behaviours, as well as the contexts in which they occur, may provide additional information on how to tackle pathological drinking and other risk behaviours in youth.

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WORK-RELATED STRESS, PERSONAL RESOURCES AND MENTAL HEALTH IN HIGH RISK PROFESSIONS: CROSS-SECTIONAL SURVEY

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Abstract

The importance of work-related stress and its consequences for mental health is underlined by the increasing prevalence of absence from work due to stress-related illnesses. Psychosocial stress, depression, burnout and anxiety are the third most common causes of absenteeism and fluctuation of staff in the European workplaces. The aim of this study was to explore how work-related stress and personal resources associate with perceived anxiety and depression in high-risk professions. The study sample consisted of 276 police officers, prison guards, customs officers and physicians (72.1% men, average age 36.6 years) who filled out questionnaires focused on sociodemographic variables (age, gender, working time), work-related stress (occupational roles, personal resources OSI-R), anxiety (STAI X-1) and depression (SDS). Hierarchical multiple regression analysis was performed to analyze the data. A model consisting of gender, occupational roles and personal resources explained 39.5% of the variance in anxiety, and 48.7% of the variance in depression in the total sample. Gender ($\beta=.22$, $p\leq.001$), recreation ($\beta=-.26$, $p\leq.001$), social support ($\beta=-.17$, $p\leq.01$) and rational/cognitive coping ($\beta=-.17$, $p\leq.01$) were significant predictors of anxiety. Gender ($\beta=.26$, $p\leq.001$), insufficiency ($\beta=.11$, $p\leq.05$), ambiguity ($\beta=.13$, $p\leq.05$), recreation ($\beta=-.19$, $p\leq.001$), social support ($\beta=-.19$, $p\leq.001$) and rational/cognitive coping ($\beta=-.24$, $p\leq.001$) were significant predictors of depression. This model supports the role of personal resources in reducing of perceived anxiety and depression in the studied sample. Higher levels of recreation, social support and rational/cognitive coping strategies in the work of high-risk employees are important in diminishing perceived anxiety and depression, and potentially protect against work-related stress.

Keywords: *Work-related stress, anxiety, depression, personal resources, mental health.*

1. Introduction

Work has been identified as a significant predictor of mental health problems. Mental disorders are the leading causes of disability in Slovakia. In some high-income countries, nearly 40% of disabilities are caused by the occurrence of mental disorders (Baumann et al., 2010). The importance of work-related stress and its consequences for mental health is underlined by the increasing prevalence of absence from work due to stress-related illnesses. Research in the field of work-related stress is still insufficient in Slovakia, although occupational physicians and employers estimate an increasing trend in disability due to mental disorders (NCZI, 2018).

Psychosocial work factors may affect negatively mental well-being of employees. Work-related stress may trigger developing of anxious disorders or depression (Madsen et al., 2017). Anxiety and depression have become the most common mental disorders nowadays, and are manifested in varying intensity. The anxious employees consider day-to-day events as threatening, although they are not necessarily serious. This can lead to avoidance of tasks instead of use of effective skills to solve the tasks. Depressed employees may express emotional, motivational, physiological and cognitive symptoms. Some of them experience suicidal thoughts or actions (Bennett, 2011).

Responders included in this study worked in the emergency services in the government and health care. They have dynamic work environment with various psychosocial work stressors. The stressors responsible for poor mental health in customs officers, prison guards or policemen are long hours at work and overtime, conflicting demands, poor social support, badly-designed organizational structure, employee reward system, working with dangerous clients. Furthermore, many physicians are notoriously reluctant to seek help. There is an increased level of psychological morbidity among high risk employees, such as anxiety, depression, or substance abuse (Schneider, Weigl, 2018).

2. Design and objectives

The aim of the cross-sectional survey was to find out how work-related stress and personal resources predict perceived anxiety and depression in high risk professions. It was expected that variables of work-related stress predict higher rates of anxiety and depression, while higher levels of personal resources predict less anxiety and depression in the study sample. Dependent variables were anxiety, depression, while independent variables were gender, occupational roles and personal resources.

3. Methods

3.1. Sample

The study sample consisted of 276 responders. They were predominantly men (72.1%) working in risk positions, such as policemen, prison guards, customs officers and physicians. 51.4% of them worked in shifts, 75.7% worked at night, 62.3% worked overtime, and 48.2% worked in the emergency services. Their average age was 36.6 years, with range 18-77 years.

3.2. Measures

Responders filled out questionnaires focused on sociodemographic variables (age, gender), and working time. Work-related stress was measured by the Occupational Stress Inventory Revised (OSI-R), particularly by the questionnaires Occupational Role (ORQ, 60 items) and Personal Resources (PRQ, 40 items). Anxiety was detected by the State Trait Anxiety Inventory (STAI X-1, 20 items), and depression by the Zung Self-Rating Depression Scale (SDS, 20 items).

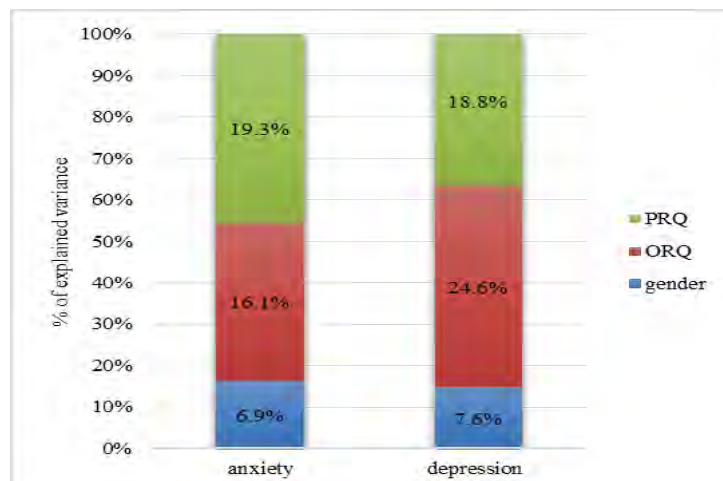
Hierarchical multiple regression analysis, the stepwise method, was performed to determine predictors of anxiety and depression in this study.

4. Results

Two models consisted of gender, occupational roles ORQ (overload, insufficiency, ambiguity, boundary, responsibility, physical environment), and personal resources PRQ (recreation, self-care, social support, rational/cognitive coping). Significant predictors of anxiety were female gender ($\beta=.22, p\leq.001$), lower levels of recreation ($\beta=-.26, p\leq.001$), social support ($\beta=-.17, p\leq.01$) and rational/cognitive coping ($\beta=-.17, p\leq.01$). R^2 was 42.3% in the final model explaining variance of anxiety.

Significant predictors of depression were female gender ($\beta=.26, p\leq.001$), higher insufficiency ($\beta=.11, p\leq.05$), ambiguity ($\beta=.13, p\leq.05$), and lower levels of recreation ($\beta=-.19, p\leq.001$), social support ($\beta=-.19, p\leq.001$) and rational/cognitive coping ($\beta=-.24, p\leq.001$). R^2 was 48.7% in the final model explaining variance of depression.

Figure 1. Explained variance of anxiety and depression.



Notes: ORQ=Occupational Role Questionnaire (role overload, role insufficiency, role ambiguity, role boundary, responsibility, physical environment); PRQ=Personal Resources Questionnaire (recreation, self-care, social support, rational/cognitive coping)

Figure 2. Multiple regression analysis: gender, occupational roles and personal resources on anxiety.

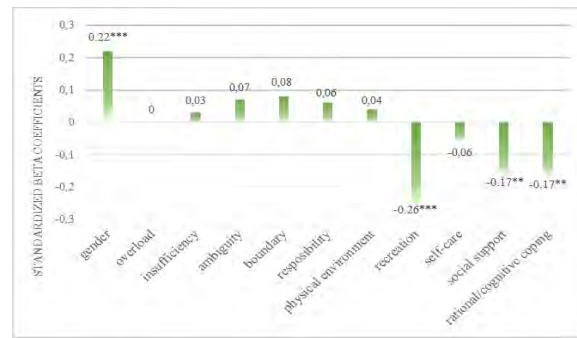
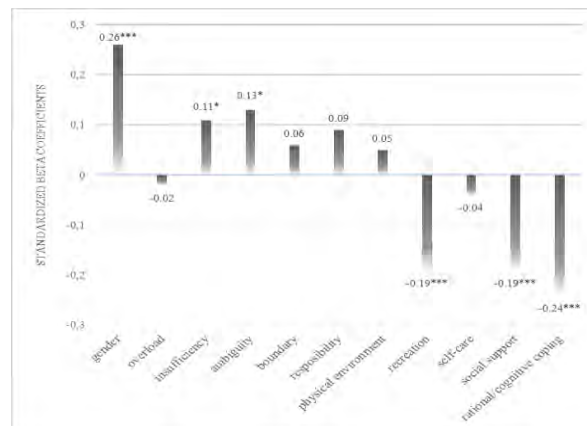
Notes: * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

Figure 3. Multiple regression analysis: gender, occupational roles and personal resources on depression.



Notes: see Figure 2

5. Conclusions and practice implications

Results revealed that female gender was risk factor for anxiety and depression. Role insufficiency and role ambiguity were risk factors for depression. The outcomes support the importance of personal resources in reducing of anxiety and depression. Higher levels of recreation, better social support and good rational/cognitive coping strategies in the work of high risk employees were significant predictors for decreasing of perceived anxiety and depression.

This study may predict similar findings in other high risk professions that are predominantly male ones, such as soldiers, rescue workers, firefighters, dispatchers and others. The examined groups were specific and closed, therefore obtaining of their responses was difficult.

There is a paucity of interventions that target psychosocial work factors in high risk professions. Therefore, design of effective interventions to promote employees' psychological well-being is very important. Since Slovakia does not have any specific regulations on work-related stress, another general legal framework should refer to psychosocial risk factors that may enhance work-related stress.

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GRANDIOSE AND VULNERABLE NARCISSISM AND SUBJECTIVE WELLBEING – DOES GENDER MATTER?

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Abstract

The aim of the study was examination of the relationships between grandiose and vulnerable narcissism and subjective well-being (SWB) from a global perspective and in the area of close romantic relationships, as well as investigation whether gender moderates these relationships. The project was based on the person-environment fit theories, which suggest that personality is of great importance for the well-being of an individual in a given situation (Emmons, Diener and Larsen, 1986). A tripartite model of SWB was adopted, including positive affect and negative affect, and cognitive well-being (Diener, 1984). The subjects were 208 males and 207 females. Narcissistic Personality Inventory NPI, The Hypersensitive Narcissism Scale, The PANAS scale, Satisfaction With Life Scale, The Rosenberg Self-Esteem Scale, and ENRICH Marital Satisfaction Scale were applied. Hierarchical multiple regression analysis was performed. The effect of demographic variables and self-esteem were controlled. A positive correlation was observed between grandiose narcissism and overall satisfaction with life and positive affect, which was significantly stronger in the group of females than males. In the group of males, a negative relationship was found between grandiose narcissism and marital satisfaction and Idealistic Distortion. Vulnerable narcissism was positively correlated with negative affect in the group of males, and negatively correlated with marital satisfaction in the groups of males and females. While seeking an explanation for the differences in the importance of narcissism for wellbeing, it was assumed that males and females may differ with respect to the preferred self-esteem regulation strategies, resulting from differences in the socialization process.

Keywords: *Grandiose narcissism, vulnerable narcissism, subjective well-being, marital satisfaction, gender.*

1. Introduction

It is considered that personality is of great importance for the wellbeing of an individual (Diener and Lucas, 1999, McCrae and Costa, 1991). At present, narcissism, understood as personality trait, attracts the attention of many researchers. Grandiose and vulnerable narcissism are distinguished (Wink, 1991; Miller, Hoffman, Gaughan Gentile, Maples & Campbell, 2011). These two forms of narcissism are manifested in various ways; however, they have the same background. The aim of the study is examination of the relationships between grandiose and vulnerable narcissism and subjective well-being (SWB) from a global perspective and in the area of close romantic relationships, as well as investigating whether gender moderates these relationships.

2. Methods

The subjects were 208 males and 207 females. Narcissistic Personality Inventory (NPI), The Hypersensitive Narcissism Scale, The PANAS scale, Satisfaction with Life Scale, The Rosenberg Self-Esteem Scale, and ENRICH Marital Satisfaction Scale were applied.

3. Results

A series of a three-stage hierarchical multiple regression analyses was conducted with wellbeing indices (Tab. 1- 5). The effect of demographic variables (type of relationship: marriage - 1/common law partnership - 2; having children: Yes - 1/No - 2), duration of relationship and self-esteem were controlled.

Table 1. Summary of Hierarchical Analysis for Variables predicting satisfaction with life.

Variable	Females			Males		
	β	R^2	ΔR	β	R^2	ΔR
Step 1						
Type of r.	-.14	.01	.01	.05	.005	.005
Duration of r.	-.05			.06		
Children	.09			-.05		
Step 2		.26***	.25***		.34***	.33***
Type of r.	-.18*			.06		
Duration of r.	-.05			.11		
Children	.11			-.01		
Self-esteem	.50***			.58***		
Step 3		.37***	.11***		.37***	.03**
Type of r.	-.19*			.03		
Duration of r.	-.03			.12		
Children	.08			.02		
Self-esteem	.38***			.49***		
vulnerable n.	-.004			-.09		
grandiose n.	.36***			.20**		

Table 2. Summary of Hierarchical Analysis for Variables predicting negative affect.

Variable	Females			Males		
	β	R^2	ΔR	β	R^2	ΔR
Step 1						
Type of r.	-.08	.02	.02	.06	.008	.008
Duration of r.	-.17*			.001		
Children	-.02			.12		
Step 2		.26***	.25***		.19***	.18***
Type of r.	-.03			-.07		
Duration of r.	-.16*			-.04		
Children	-.05			.09		
Self-esteem	-.49***			-.43***		
Step 3		.28***	.02		.24***	.05**
Type of r.	-.03			-.08		
Duration of r.	-.14			.01		
Children	-.05			.06		
Self-esteem	-.48***			-.46***		
vulnerable n.	.12			.19**		
grandiose n.	.04			.08		

Table 3. Summary of Hierarchical Analysis for Variables predicting positive affect.

Variable	Females			Males		
	β	R^2	ΔR	β	R^2	ΔR
Step 1						
Type of r.	.07	.004	.004	.001	.02	.02
Duration of r.	-.01			-.16		
Children	-.03			-.11		
Step 2		.34***	.34***		.27***	.25***
Type of r.	.01			.02		
Duration of r.	-.02			-.11		
Children	.01			-.08		
Self-esteem	.58***			.50***		
Step 3		.49***	.15***		.28***	.04**
Type of r.	.01			-.03		
Duration of r.	.02			-.09		
Children	-.02			-.06		
Self-esteem	.45***			.42***		
vulnerable n.	.05			-.08		
grandiose n.	.39***			.23***		

Table 4. Summary of Hierarchical Analysis for Variables predicting marital satisfaction.

Variable	Females			Males		
	β	R^2	ΔR	β	R^2	ΔR
Step 1						
Type of r.	.14	.03	.03	-.02	.001	.001
Duration of r.	-.001			.003		
Children	.06			.05		
Step 2		.30***	.27***		.14***	.14***
Type of r.	.08			-.01		
Duration of r.	-.01			.03		
Children	.09			.08		
Self-esteem	.52***			.37***		
Step 3		.31***	.02*		.24***	.10**
Type of r.	.08			.02		
Duration of r.	-.03			-.03		
Children	.09			.11		
Self-esteem	.51***			.46***		
vulnerable n.	-.13*			-.20**		
grandiose n.	.06			-.23**		

Table 5. Summary of Hierarchical Analysis for Variables predicting idealistic distortion.

Variable	Females			Males		
	β	R^2	ΔR	β	R^2	ΔR
Step 1						
Type of r.	.12	.009	.009	.02	.001	.001
Duration of r.	.05			.003		
Children	-.01			-.01		
Step 2		.23***	.23***		.13***	.13***
Type of r.	.08			.03		
Duration of r.	.04			.03		
Children	.02			.02		
Self-esteem	.48***			.36***		
Step 3		.24***	.01		.17***	.04*
Type of r.	.07			.06		
Duration of r.	.03			-.01		
Children	.01			.02		
Self-esteem	.46***			.45***		
vulnerable n.	-.09			-.06		
grandiose n.	-.002			-.21**		

A positive correlation was observed between grandiose narcissism, and overall satisfaction with life and positive affect, which was significantly stronger in the group of females than males. In the group of males, a negative relationship was found between grandiose narcissism and marital satisfaction and Idealistic Distortion. Vulnerable narcissism was positively correlated with negative affect in the group of males, and negatively correlated with marital satisfaction in the groups of males and females.

4. Discussion and conclusions

While seeking an explanation for the differences in the importance of narcissism for wellbeing, it was assumed that males and females may differ with respect to the preferred self-esteem regulation strategies, resulting from differences in the socialization process.

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ATTRIBUTIONS FOR CHANGE AMONG YOUNG ADULT BINGE DRINKERS

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Abstract

Introduction: Problem drinking has been shown to increase through adolescence, peak from ages 18-22, and decrease thereafter (Jackson & Sartor, 2016). Research on natural recovery suggests that reasons for reduction may be associated with factors such as social capital, marital status, parenthood, employment, and religious and academic involvement (Vik, Cellucci & Ivers, 2003; Dawson, Grant, Stinson & Chou, 2006; Misch, 2007; Lee & Sher, 2018).

Methods: The current study analyzed the 8-month follow up data of 444 participants from Project BETA, an ongoing study aimed at longitudinally examining trajectories of alcohol misuse in emerging adults (ages 21.5-24.99 at enrollment) over the course of 3 years. Participants were 57.3% female, 46.4% White, and 42.3% Black. They reported the change in their drinking level over the past month and the extent to which a variety of factors helped them to change their drinking. Furthermore, change in self-reported drinking was assessed in relation to the specific factors participants had selected.

Results: Regarding drinking level, 15.7% reported an increase, 40.4% reported no change and 43.8% reported a decrease. The most prevalent factors endorsed for decreased drinking levels were change in employment situation (55.9%), change in diet to eat healthier foods (49.7%), limiting access to money (47.7%), change in financial situation (46.7%), and change in social group (44.6%). Chi square analyses were conducted for gender, race, alterations in drinking level and factors associated with the change. Independent samples t-tests were conducted to compare the change in average drinks per week from baseline to 8-months for White and Black participants in association with the specific factors they had selected.

Discussion: Further research is needed to investigate how drinking behavior can be influenced if participants are given accurate feedback on their level of drinking and the efficacy of factors associated with changes in that target behavior.

Keywords: *Binge drinking, young adult, natural recovery, factors for changes in drinking level, differences between genders and ethnicity.*

1. Introduction

An estimated 38.4% of young adults aged 18-25 reported binge alcohol use in the last 30 days (Substance Abuse and Mental Health Services, 2017). This is problematic yet unsurprising, as problem drinking has been shown to increase through adolescence, peak from ages 18-22, and decrease thereafter (Jackson & Sartor, 2016). Research on natural recovery suggests that reasons for reduction may be associated with factors such as social capital, marital status, parenthood, employment, and religious and academic involvement (Vik, Cellucci & Ivers, 2003; Dawson, Grant, Stinson & Chou, 2006; Misch, 2007; Lee & Sher, 2018).

Sociodemographic characteristics such as gender and ethnicity can play a significant role in risk for alcohol use and alcohol use disorders. Caucasian among different ethnicities has a superior tendency to be associated with alcohol abuse and dependence. Dependence on drinking alcohol took less time for both female and male Caucasians compared to African Americans (Alvanzo, Storr, La Flair, Green, Wagner & Crum, 2011). Not only shown in ethnicities, but also in respect to gender, males have higher chances to consume excess alcohol and develop alcohol dependence than females (Wilnsack, Wilnsack, Kristjanson, Vogeltanz-Holm & Gmel, 2009; Alvanzo, Storr, La Flair, Green, Wagner & Crum, 2011).

The current study uses the data from Project BETA, which mainly applies behavioral economics to predict alcohol trajectories during the transition to adulthood. This study mainly focuses on changes drinking level between baseline and 8 months; moreover, the differences between genders and ethnicities, predominantly white and black within various factors of drinking behavior will be investigated.

2. Method

2.1. Participants

A total of 602 Project BETA participants were enrolled at baseline however, our sample was limited to those who provided responses to the change in drinking measure at the 8-month follow up (n= 444), which asked, “Over the past month has your overall drinking level changed?”. The participants were between 21.5-24.99 years old at enrollment, and ethnicity of the participants was fairly equally divided between white and black as well as student or non-student. All participated sample were diagnosed as binge drinker which is defined as four or more drinks for women and five or more for men on one occasion.

2.2. Procedure

Participants were administered a computer questionnaire at baseline and at subsequent occasions every 8 months. Among them, only baseline and 8-month follow up were analyzed. The questionnaire gathered basic information about the participants such as age, gender and ethnicity, and drinks per week measured with the Daily Drinking Questionnaire (DDQ; Collins, Parks, & Marlatt, 1985). Self-reported subjective change in drinking level was assessed at 8 month follow-up, with answers ranging from increased substantially to decreased substantially. Chi square analyses were conducted for gender, race, alterations in drinking level and factors associated with the change. Independent samples t-tests were conducted to compare the change in average drinks per week from baseline to 8-months for White and Black participants in association with the specific factors they had selected.

3. Result

We first compared the baseline and 8-month follow-up self-reported drinking level, with responses of Decreased Substantially, Decreased Moderately, Stayed the Same, Increased Moderately, and Increased Substantially. Based on average drinks per week, the percentage change was calculated.

If any change in drinking was self-reported, participants were then presented with 23 factors and instructed to select whether or not the factor played a role in the change. The top ten factors endorsed as contributing to increased levels of drinking were: increased stress/ anxiety(67.1%), positive mood, more celebrations(54.3%), change in your financial situation(50.0%), increased access to alcohol(48.6%), changing your living situation(44.3%), increased sadness(44.3%), boredom, inability to participate in hobbies or things you used to enjoy(41.4%), relationship or family issues/ conflict(41.4%), change in your employment situation(40.0%), and increased craving(38.6%). The factors were analyzed for differences gender and ethnicity. On average, participants selected 12 factors as associated with their increasing their drinking level. Males selected on average 8 different factors while females selected 13 factors on average. Black participants (16 factors) selected twice as many factors as White participants (8 factors). As a factor that associated with increased drinking, females were more likely to select change in financial situation ($\chi^2 (1) = 11.20, p = .001$) than males. Comparing to different ethnicity, the factors which are Increased Sadness ($\chi^2 (1) = 6.901, p = .009$), Change in Living Situation ($\chi^2 (1) = 8.276, p = .004$) and Change in Employment Situation($\chi^2 (1) = 6.90, p = .009$) were shown significant differences. Top ten factors associated with decreased drinking were change in your employment situation(55.9%), changing your diet to eat healthier foods(49.7%), limiting access to money(47.7%), change in your financial situation(46.7%), change in your social group(44.6%), change in exercising(41.0%), changing your living situation(39.5%), developing a new hobby or reinvesting in previous hobbies(39.0%), practicing positive self-talk(37.9%) and spending more time with your family(37.4%). Total number of factors which were selected by the participants were 10. Number of factor (10) both gender who selected factors were same. Black participants (12) chose more factors than white participants (8). Only ethnicity was presented significant difference in following factors: Change in exercising ($\chi^2 (1) = 5.51, p = .019$), Spending more time with family ($\chi^2 (1) = 10.202, p = .001$), Developing a new hobby or reinvesting in previous hobbies ($\chi^2(1) = 7.343, p = .007$), Practicing positive self-talk ($\chi^2 (1) = 10.20, p = .001$), and Addressing relationship or family issues/conflict ($\chi^2 (1) = 4.57, p = .032$).

Figure 1. Average Drinks per Week & Percent Change from Baseline.

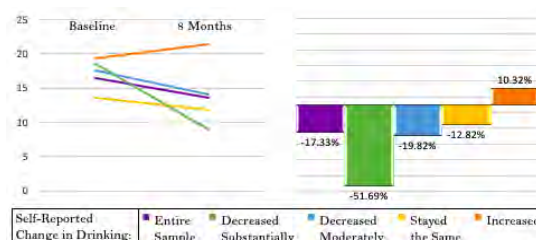


Figure 2. Over the past month has your overall drinking level changed. (self-reported).



4. Discussion

The results of our study support findings from previous studies that demonstrate that young adults typically reduce their drinking without any formal treatment, which has been termed maturing out. Especially, actual drinking level over the past month from 8-month follow-up was an overtly reduced drinking level compared to self-report from the baseline. Ethnicity differences were explicitly shown by the different factors that were associated with either decreased or increased drinking. The only significant gender difference was for the factor change in financial situation, when associated with increased drinking. Change in financial situation could mean more money to buy alcohol or less money leading to more stress and drinking to cope. This could be consistent with prior studies showing financial problems promote excessive alcohol consumption (Khan et al., 2002, Peirce et al., 1994, Peirce et al., 1996). The provided results support that young adults generally reduce their drinking during their 20s, although drinking levels remained relatively high even after reductions and most still exceed NIAAA recommendation for moderate drinking.

The presented study sought to identify the specific factors that elicit either decreased or increased levels of drinking. The number of participants for increased drinking level was an inadequate sample's pool compared to the number of participants for decreased drinking level. Valid interpretation and generalization can only be given by a larger sample's pool size for increased drinking level.

Self-reported changes in the 8-months follow-up can be a debatable confound. Self-reported questionnaires, especially the question asking, "over the past month, has your overall drinking level changed," are greatly impacted by the participants' past week experience. For example, a participant had a party or celebration last week, then the drinking level is more likely to be increased. Contrastingly, another participant had a government exam or any official exam, then the drinking level is less than usual. Depending on the recent past event, responses can be given that do not truly reflect the participant's typical alcohol consumption.

Further research is needed to investigate how drinking behavior can be influenced if participants are given accurate feedback on their level of drinking and the efficacy of factors associated with changes in that target behavior.

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DISTRESS IN PREGNANT WOMEN

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Abstract

Pregnancy is the most important stage in a woman's life, accompanied by the need to adapt not only at the physiological, but also psychological level. In this study, pregnancy is considered as a macro stress event that carries a certain stress load with different outcomes. The study reveals the specifics of distress at women in the dynamics: during pregnancy and after childbirth. Data was collected in antenatal clinic No.33 of the city of St. Petersburg, Russia. The total of 86 women were enrolled, aged 18 to 43 years (M=29.47). The normal course of pregnancy was observed in 84 women. The methods based on transactional theory of stress were used for realization of scientific tasks. When analyzing the data obtained in the study, standard mathematical statistics methods were used using the computer programs "Excel" and "R Studio". It was found that a pregnancy of modern women is accompanied by lasting distress. Not only personal but also environmental factors take part in distress formation. Results testify statistically significant higher level of distress during pregnancy in contrast to a period after childbirth. Correlation analysis showed that the level of perceived stress correlates at a high significance level with each scale of the symptomatic questionnaire. Perceived stress is also associated with the coping strategy "Avoidance" and with the personality trait "Emotional stability", with an inverse correlation. The identification of psychological factors of distress during pregnancy indicates the need for psychological interventions to accompany pregnancy. The study is supported by the RFBR grant № 19-013-00417a.

Keywords: *Pregnancy, distress, personality traits, perceived stress, coping-strategies.*

1. Introduction

Pregnancy is the most important stage in a woman's life, accompanied by the need to adapt not only at the physiological, but also psychological level. In this study, pregnancy is considered not as a general psychological condition associated with psychopathology, but as a macro stress event that carries a certain stress load with different outcomes. Pregnancy is a special long-term stress, therefore, many women can experience various symptoms, mainly of a neurotic range. Usually, pregnancy support is carried out at the level of antenatal clinics and other special medical centers, that is, at the clinical level. There is definitely a need for psychological support, including the necessary intervention, which at present is clearly not enough. Solving this problem can help to improve mental and physical health of both women and their offspring (Perrez M., Baumann U., 2000).

The stress state of a woman during pregnancy is a predictor of emotional and cognitive difficulties, including the likelihood of a child developing attention deficit and hyperactivity disorder, as well as speech development delay. Prenatal stress in the mother affects the predisposition to diseases during the first year of life, which persists until the child is 6 years old (Zijlmans M.A. et al, 2017).

2. Design, methods and sample

The research goal is to study the characteristics and level of distress in pregnant women. This, among other factors, can contribute to the development of effective preventing and psychocorrectional measures aimed at reducing the distress severity in pregnant women.

The research design involves a longitudinal study with several measurements: when a pregnant woman is registered in the antenatal clinic; in the period from 2 to 6 months after delivery (with all respondents).

To implement the research goal, the following methods were selected (based on the transactional theory of stress): 1. Clinical and psychological method (observation and conversation). 2. Clinical method (obstetric-gynecological: implemented by doctors). 3. Interview for collecting socio-demographic information. 4. Questionnaire "Scale of perceived stress-10". 5. The methodology "Methods of coping behavior". 6. Symptomatic questionnaire SCL-90. 7. The personal technique "Big Five". 8. "Pregnant relationship test".

When analyzing the data obtained in the study, standard mathematical statistics methods were used using the computer programs "Excel" and "R Studio", the packages "ez", "psych", and "ggplot2".

Data was collected in antenatal clinic No.33 of the city of St. Petersburg, Russia. The total of 86 women were enrolled, aged 18 to 43 years ($M=29.47$), 85 were married (for 70 it was their first marriage), 43 had higher education, all women worked in different spheres, the income level per family member was average for this population. The normal course of pregnancy (without toxicosis) was observed in 84 women. Mental disorders in the respondents were not identified.

3. Results and discussion

The personality features of the respondents were studied. The results represent the general distribution of personality traits in this group of subjects.

The results of the "Pregnancy relationship test" showed a lack of a single determinant of attitude towards pregnancy. Most respondents are dominated by a combination of optimal and euphoric types. Depressive type was not found in the current sample.

The analysis of the results obtained for the symptomatic questionnaire showed the differences between the measurements are significant on each scale: $p<0.0001$. The results of the first measurement showed that the values on all scales of the symptomatic questionnaire fall into the range of high indicators when compared with the norm. The results of the second measurement demonstrate a statistically significant decrease in the performance of all scales of the symptomatic questionnaire, which at this stage are in the range of average values. Attention is drawn to a high level of general severity in the first measurement, which may indicate an adverse effect of the experience and course of pregnancy.

The general level of stress perceived by respondents was studied. The results of the initial measurement demonstrate a significantly ($p<0.0001$) higher level of stress ($M=25.05\pm 6.86$) than the indicators obtained in the following measurement ($M=23.43\pm 5.06$).

The respondents' coping strategies used cover the entire possible range at a moderate level of severity. An analysis of the data obtained using the "Methods of coping behavior" methodology shows statistically significant changes for all coping strategies, with the exception of the self-control strategy, which does not endure any changes and is at the level of the first measurement. These data should be taken into account when planning and conducting psychological interventions in pregnant women.

A correlation analysis, revealing a large number of connections, was carried out. In particular, the level of perceived stress correlates at a high level of significance ($p<0.0001$) with each scale of the symptomatic questionnaire, with the exception of the "Phobia" scale. Moreover, perceived stress is associated with such coping behavior strategy as "Avoidance" ($r=0.530$; $p=0.000$) and with a personality trait "Emotional stability", with the opposite correlation ($r=-0.730$; $p=0.000$).

The relationship between the age of respondents and all other parameters studied were also observed with no significant results found. An analysis of the relationship between gestational age and the studied clinical and psychological features also did not demonstrate any significant connections.

4. Conclusions

In conclusion, it can be noted that such significant changes in the state of respondents in dynamics are due primarily to successful births with an improvement in their physical and psychological state. Moreover, it can be assumed that a change in physical condition after childbirth actualizes the contrast effect. In general, the results justify and confirm the feasibility of using the mentioned theoretical approach (transactional theory of stress) to the phenomenon of pregnancy in general.

According to the study results, it is possible to develop the program of psychocorrectional and preventing measures, which should be implemented during pregnancy in order to improve the condition of women.

The study is supported by the RFBR grant № 19-013-00417a.

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DOES ATTACHMENT TO GOD PREDICT MINDFULNESS?

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Abstract

In the past decade, a plethora of research has focused on examining the relationship between mindfulness and a variety of psychological constructs. In general, research has indicated that mindfulness is positively associated with health and well-being (see Nagy & Baer, 2017). Simply defined, mindfulness is attentiveness in the present moment (Baer, 2003). Further, Linehan (1993) noted that the object and the quality of attentiveness are essential components of mindfulness. Attachment to God is a construct that also has an “object” of the individual’s attention (i.e., God) and individual differences in the “quality” of that attention (i.e., varying levels of attachment security). Given that individual differences in attachment to God have also been examined in relation to psychological constructs and were predictive of well-being (e.g., Freeze & DiTommaso, 2014, 2015), an association between attachment to God and mindfulness may be hypothesized. However, few, if any, studies have examined mindfulness in relation to either religious belief or attachment to God. The aim of the present study was to determine whether individual differences in attachment to God predict five facets of mindfulness (i.e., observing, describing, acting with awareness, non-judgmental inner experience, and non-reactivity). It was hypothesized that insecure attachment to God would be negatively associated with mindfulness. Five hundred and sixty-nine undergraduate students at a secular university completed questionnaire packages that included demographics, questions about their religious belief, the Social Readjustment Rating Scale, the Attachment to God Scale, and the Five Facet Mindfulness Scale. Five Bonferroni-corrected hierarchical multiple regression analyses were conducted. After controlling for stress and belief in God, higher levels of anxious and avoidant attachment to God predicted lower levels of the describing facet of mindfulness. Higher levels of anxious attachment to God predicted lower levels of both acting with awareness and non-judgmental inner experience. Neither anxious attachment to God nor avoidant attachment to God significantly predicted the observing and non-reactivity facets of mindfulness. Implications of these findings and directions for future research will be discussed.

Keywords: *Mindfulness, attachment to God, religion.*

1. Introduction

In the past few decades, researchers have separately examined both mindfulness and attachment to God as predictors of well-being (e.g., Nagy & Baer, 2017; Freeze & DiTommaso, 2014, 2015). However, few, if any, have examined the relationship between attachment to God and mindfulness, despite the fact that both share “attentiveness” as a component (Linehan, 1993; Granqvist, Mikulincer, & Shaver, 2010). Linehan (1993) suggested that the object and the quality of attentiveness are essential components of mindfulness. Attachment theory also examined the object and quality of an individual’s attentiveness, with God as the “object” and individual differences in the security of that relationship as the “quality” (Granqvist et al., 2010). The purpose of the current study was to examine the relationship between individual differences in the attachment to God relationship and the various facets of mindfulness.

Attachment to God is an extension of attachment theory that examines the close emotional bond that some human beings have with God (Kirpatrick & Shaver, 1990). Following the two dimensions of adult human attachment, anxious attachment to God is a form of an insecure relationship in which God’s responsiveness to human need is experienced as inconsistent, and there is anxiety about abandonment (Granqvist et al., 2010). Similarly, avoidant attachment to God is also a type of insecure relationship but, in this case, God is seen as distant and uncaring, and intimacy with God is avoided (Granqvist et al., 2010). As with attachment theory in general, research on attachment to God has indicated clear links between the

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quality of the relationship and psychological outcomes. For instance, insecure attachment to God in people of faith has predicted psychological outcomes. For instance, insecure attachment to God in people of faith has predicted emotional distress (Freeze & DiTommaso, 2014, 2015), and secure attachment to God has predicted psychological health (Leman, Hunter, Fergus, & Rowatt, 2018).

Recently, research on mindfulness has also indicated links between facets of mindfulness and psychological health (e.g., Nagy & Baer, 2017; Marzabadi, Mills, & Valikhani, 2018). Baer (2003) defined mindfulness as attentiveness in the present moment and subsequently developed the Five Facet Mindfulness Questionnaire (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). The five facets identified were: Observing (being aware of internal/external stimuli; e.g., bodily sensations, sounds, smells), Describing (the ability to put one's experience into words and describe the emotions experienced), Acting with Awareness (awareness of actions without the mind wandering), Non-Judgement of Inner Experience (allowing internal thoughts/feelings without negative/positive evaluations of the thoughts/feelings), and Non-Reactivity to Inner Experience (not reacting to internal thoughts/feelings).

In both mindfulness and attachment to God, the inadequate "object" and "quality" of attentiveness predicts lower levels of well-being. Therefore, the purpose of the current study was to examine the associations between attachment to God and mindfulness facets. We hypothesized that, after controlling for stress and belief in God, higher levels of insecure attachment to God would be associated with lower levels of the five facets of mindfulness.

2. Method

2.1. Measures

Participants completed a questionnaire package that included demographic questions as well as a question about their current belief in God. The questionnaire package also included the Social Readjustment Rating Scale (SRRS; Holmes & Rahe, 1967), the Attachment to God Inventory (AGI; Beck & McDonald, 2004), and the Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2006). The AGI is a 28-item scale that measures the domains of anxious attachment to God (AGX) and avoidant attachment to God (AGV). The FFMQ is a 39-item questionnaire that measures five facets of mindfulness (observe, describe, act with awareness, nonjudge, and nonreact). Cronbach's alpha for all of the measures ranged from .76 to .91.

2.2. Participants

Five hundred and sixty-nine undergraduate students were recruited via the SONA recruitment system. Students received one bonus point for completing the study. Participants ranged in age from 18-58 with a mean age of 20.98 ($SD = 5.65$). The participants were primarily white or Caucasian (84.7%) and female (72.1%). Participants identified their belief about God as: "I know that God really exists, and I have no doubt about it" (Belief 1; 22.1%); "While I have doubts, I feel that I do believe in God" (Belief 2; 24.5%); "I find myself believing in God some of the time, but not at other times" (Doubt - reference group; 17.3%); "I don't know if there is a God, and I don't believe there is any way to find out" (Agnostic; 20.2%); "I do not believe in God" (Atheist; 14.6%).

3. Results

Five Bonferroni-corrected hierarchical multiple regression analyses were conducted. The control variables were stress (SRRS) and belief about God. Belief about God was coded with the mid-point (reflecting the most doubt) as the reference group. The control variables significantly predicted the Observing facet of mindfulness ($F(5, 551), p < .001$). Higher levels of stress in the past year predicted higher levels of Observing ($t = 4.40, p < .001$). Stress, along with Belief 1 also predicted Non-Judgemental Inner Experience ($F(5,551), p < .001$). Higher levels of Belief 1 (participants who believe in God without doubt) compared to the reference group (Doubt) predicted higher levels of Non-Judgemental Inner Experience ($t = 4.40, p = .002$). Higher levels of stress predicted lower levels of Non-Judgemental Inner Experience ($t = -5.38, p < .001$). Finally, the control variables significantly predicted acting with awareness ($F(5,551), p < .001$). Higher levels of Belief 1 predicted higher levels of Acting with Awareness ($t = 4.89, p < .001$).

After controlling for stress and belief in God, higher levels of ANX ($t = -5.03, p < .001$) and AGV ($t = -4.03, p < .001$) predicted lower levels of the Describing facet of mindfulness ($F(2, 549) = 16.33, p < .001$). Further, higher levels of AGX predicted lower levels of both Acting with Awareness ($F(2, 549) = 21.40, p < .001$); $t = -6.54, p < .001$) and Non-Judgemental Inner Experience ($F(2, 549) = 6.97, p = .001$); $t = -3.61, p < .001$). Neither AGX nor AGV significantly predicted the Observing and Non-Reactivity facets of mindfulness.

Table 1. Hierarchical Multiple Regression Analyses of Attachment to God Predicting Facets of Mindfulness.

	Observe		Describe		Aware		Nonjudge		Nonreact	
Step 1	β	sr^2	β	sr^2	β	sr^2	β	sr^2	β	sr^2
Stress	.185**	.034	-.011	.000	-.110	.012	-.223**	.049	.054	.003
Belief1	-.040	.001	.148	.012	.270**	.041	.174*	.017	.115	.007
Belief2	.005	.000	.048	.001	.108	.006	.080	.003	.082	.004
Agnostic	.049	.001	.006	.000	.089	.004	.070	.003	.001	.000
Atheist	-.031	.001	.110	.008	.028	.000	.042	.001	-.037	.001
R^2	.040**		.021		.058**		.063**		.023	
Step 2										
AGX	.006	.000	-.237**	.042	-.299**	.068	-.169**	.022	-.052	.002
AGV	-.050	.001	-.227**	.027	-.090	.004	-.007	.000	-.021	.000
$R^2\Delta$.002		.055**		.068**		.023**		.002	

$N=557$ ** $p \leq .001$, * $p \leq .01$

4. Conclusions

After controlling for stress and belief in God, insecure attachment to God predicted the Describing, Acting with Awareness, and Non-Judgmental facets of mindfulness. These findings support theoretical work suggesting that insecure attachment has a deleterious effect on emotion regulation (Bowlby, 1980). Further, it supports empirical work (Pickard, Caputi, & Grenyer, 2016) indicating that mindfulness-based interventions may lead to better psychological outcomes for individuals with insecure attachment relationships. Future research should focus on examining mindfulness-based interventions and their potential ability to attenuate the impact of insecure attachment to God.

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PSYCHOLOGICAL WILLINGNESS FOR MATERNITY AS A FACTOR CONTRIBUTING TO THE HEALTHY BEHAVIOR OF WOMEN

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Abstract

The health protection of a child and a mother is one of the priority tasks with reproductive health of a woman being central. Thus, identifying the factors that have a negative impact on reproductive activity is of a great importance. The aim of the research is to study the psychological willingness for motherhood (conscious motherhood) in connection with the health-saving behavior of pregnant women. This study is one of the first in the Russian sample, examining various aspects of health-saving behavior during pregnancy. The selected and developed materials and methods of research take into account the peculiarities of the state of the pregnant woman. Realization of applied value in practice is the implementation of preventive measures (active and passive informing of women) at each stage and further evaluation of the effectiveness of the measures implemented. A total of 100 pregnant women of childbearing age take part in the study. Pregnant women do not have full correct knowledge and adequate attitudes about aspects of health-saving behavior, thereby demonstrating problem behavior (alcohol, smoking, the risk of alcohol-exposed pregnancy, that is, the risk of fetal alcohol syndrome). Under the influence of the implemented preventive measures, the behavior of pregnant women becomes more health-saving, knowledge and attitudes in this area change. Preventive materials developed in the framework of the project and implemented measures prove their effectiveness and can be recommended for application in the field of health related to the reproductive sphere of women. The study is supported by the RFBR grant № 20-013-00759a.

Keywords: *Conscious motherhood, willingness for maternity, pregnancy, health-saving behavior, prevention.*

1. Introduction

Nowadays in world science there is a tendency to increase the number of studies devoted to the research of health saving behavior in the reproductive sphere (Innamorati M., Sarracino D., Dazzi N., 2010; Slade et al., 2005; Chiu-Mieh Huang et al., 2011; Suen H.M., et al., 2017; Atkinson L., Shaw R.L. et al., 2011; Williams et al., 2011; Lawrence W.T., Haslam C., 2007; Judith H.M., John B.L.; Stene-Larsen K. et al., 2009; Gajewska E., Mojs E., 2008; Andersen M.R. et al., 2009; Balachova T.N., 2008; Borisenko L.V., 2003; Yermkina E.P., Tyurina N.A., 2015; Shcherbakov A.V., Vasilyeva E.N., 2015; Zhuravlev A.L., 2004; Olfert V.V., 2004). At the same time, in part of the research, trends in risk behavior, leading to potential impairments and complicated pregnancy, are considered first (Gray J. et al., 2005; Morrison A. et al., 2007; Teasdale C.A., Abrams E.J. et al., 2017).

Moreover, the study of maternal awareness, psychological readiness for motherhood, and its influence on behavior in the reproductive and health-saving sphere is actively developing. Pregnancy can be a moment for positive change in health behavior, since this is a period when women are motivated for health and are in constant contact with health care professionals. It is assumed that raising awareness of the mother during pregnancy can be an effective way to improve her health as well as the health of the newborn (Akerjordet K., Severinsson E., 2010; Atkinson L., Shaw R.L. et al., 2011; Joss, J., Howell M., 1989; Sigal Zilcha-Mano, Langer E. 2016; Maher J.H., Lowe J.B., 2015; Abrams L.S., Curran L., 2011; Martell L., 2001; Rassi A., Wattimena J., Black K., 2013; Hofmann S.G., Sawyer A.T., Witt A.A., 2010; Mommersteeg P.M., Van Beugen S. et al., 2013).

It is also important to note the presence of disparate studies in relation to prevention, awareness and their effectiveness in manifesting health-saving behavior in women of childbearing age and during pregnancy (Akerjordet K., Severinsson E., 2010; Lennon S.L., 2016; Greyson D.L., Johnson J.L., 2016;

Abrams L., Curran L., 2011; Carolan M. 2007; Roth B., Robbins D., 2004; Dhillon A. et. Al., 2017; Suena H.M. et al., 2017; Maher J.H., Lowe J.B., 2015; Sakharova G.M., Antonov N.S.).

However, the study of reproductive health and maternity sphere is quite young, the theoretical model is still in its infancy and requires further confirmation of the experimental material, the development of preventive measures seems extremely relevant.

2. Design

The proposed research design complies with international standards for conducting preventive measures and evaluating their effectiveness. The materials developed for the implementation of the program of individual information for pregnant women can later be widely used in the professional activities of doctors, psychologists and social workers.

The obtained results can be applied to more effective psychological support for pregnant women, as well as within the framework of psychological counseling on a wide range of issues of reproductive health.

The aim of the research is to study the psychological readiness for motherhood (conscious motherhood) in connection with the health-saving behavior of pregnant women.

In connection with the goal, the following research objectives are formulated:

- 1) analysis of theoretical concepts and relationships between them (psychological readiness for motherhood, the subjective meaning of pregnancy, conscious motherhood, etc.);
- 2) the study of socio-demographic characteristics of pregnant women;
- 3) the study of the personal characteristics of pregnant women;
- 4) analysis of knowledge, attitudes and behavior of pregnant women in relation to various aspects of health-saving behavior (alcohol use, fetal alcohol syndrome, HIV and sexually transmitted infections, tobacco smoking, etc. in the framework of the "health beliefs" model);
- 5) the study of attitudes towards pregnancy and readiness for motherhood;
- 6) a comparative study of aspects of the health-saving behavior of a woman, her psychological readiness for motherhood and personal characteristics;
- 7) preventive measures (active and passive information) in the field of women's health, especially during pregnancy and immediately after childbirth;
- 8) evaluation of the effectiveness of preventive measures;
- 9) psychological support for pregnancy of women participating in the study.

3. Expected results

General expected results of the project:

1. Pregnant women of childbearing age do not have complete correct knowledge and adequate attitudes regarding aspects of health-saving behavior, thereby demonstrating problematic behavior (alcohol, tobacco smoking, the risk of alcohol- exposed pregnancy, that is, the risk of fetal alcohol syndrome).

2. The features of the components of the "health beliefs model" (knowledge-attitudes-behavior) are interrelated with the type of attitude towards pregnancy, psychological readiness for motherhood, as well as with the personality characteristics of pregnant women. The results extend the scope of this preventive model.

3. Under the influence of implemented preventive measures (active and passive information), the behavior of pregnant women becomes healthier, knowledge and attitudes in this sphere change.

4. The preventive materials developed by the project and the implemented measures prove their effectiveness and can be recommended for use in the area of health related to the reproductive sphere of women.

4. Conclusions

Applied importance can be determined by the possibility of using the results obtained in the framework of prevention and correction of behavior of pregnant women in order to give birth to a healthy baby, and in general, to maintain a high level of women's health, including the conditions of women's consultations and other medical and psychological institutions of the country, in particular in the sphere of reproductive health. Moreover, the results of the study can contribute to improving the performance of specialists in obstetric-gynecological and clinical-psychological profiles.

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CROSSROADS TO MORE POSITIVE ATTITUDES TOWARDS IMMIGRANTS: STUDENTS' EMPATHIC ABILITIES AND PERCEIVED CLASSROOM CLIMATE

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Abstract

As important socialization agents, schools can provide an open climate as a contextual framework for the development of tolerant attitudes (Gniewosz & Noack, 2008). Building positive attitudes towards immigrants can be addressed at the individual and school level. On an individual level, empathy is negatively connected to the development of prejudice (Miklikowska, 2018) and on the school level, classroom climate plays a role (Gniewosz & Noack, 2008). On a class level, exposure to hate speech leads to desensitization and increasing prejudices (Soral, Bilewicz, & Winiewski, 2018) whereas perceived equality and inclusion are positively associated with a sense of school belonging (Schachner, et al, 2018). The teachers are important as well, more specifically, students who perceive teachers as fair, report more tolerant views of immigrants (Gniewosz & Noack, 2008). In the present study we have analysed the associations between students' attitudes towards immigrants with their empathic abilities, perceived relations with teachers and teachers' attitudes towards different cultural groups on a sample of 271 Slovenian 8th grade students ($M = 12,91$, $SD = 0,44$; 56,3% female) who participated in the European Erasmus KA3+ Hand in Hand project. We analysed the predictive power of empathy, perceived quality of student-teacher relations and inclusive classroom climate on students' attitudes towards immigrants. Results show that perspective taking and perceived teachers' attitudes towards different cultural groups are important predictors of students' attitudes towards immigrants. Results are discussed in light of guidelines for school practice.

Keywords: *Attitudes towards immigrants, empathy, classroom climate, students.*

1. Introduction

As important socialization agents, schools can provide an open climate as a contextual framework for the development of tolerant attitudes (Gniewosz & Noack, 2008). Reducing prejudice and building positive attitudes towards outgroups, can be addressed on an individual and school level. On an individual level, empathy is negatively connected to the development of prejudice (Miklikowska, 2018) by enabling us to perceive similarities between ourselves and others (Davis, Conklin, Smith, & Luce, 1996). On the school and class level, classroom climate influences on adolescents' attitudes towards immigrants (Gniewosz & Noack, 2008), where exposure to hate speech leads to desensitization and increasing outgroup prejudices (Soral, Bilewicz, & Winiewski, 2018). On the other hand, perceived equality, inclusion, and cultural pluralism are positively associated with a sense of school belonging (Schachner, Schwarzenhal, van de Vijver & Noack, 2018) and students who perceive teachers as fair, report more tolerant views of immigrants (Gniewosz & Noack, 2008). The present study aimed to analyse the associations between students' attitudes towards immigrants with their empathic abilities, perceived relations with teachers and teachers' attitudes towards different cultural groups.

2. Method

2.1. Participants

The randomized sample consisted of 271 Slovenian 8th-grade students from 12 primary schools ($M = 12,91$ years, $SD = 0,44$; 56,3% female) who participated in the European Erasmus KA3+ Hand in Hand project, which aimed to increase the social, emotional (e.g. self-awareness, self-management) and intercultural competencies of students and school staff.

2.2. Instruments

Interpersonal Reactivity Index (IRI; Davis, 1980) was used as a measure of empathy. It consists of four scales; two of them labelled as emotional empathy (empathic concern, personal distress) and the other two as cognitive empathy (perspective taking, fantasy). In our study two scales (empathic concern and perspective taking) were included, where students assessed how well the items described them. Each had 7 items on a 5-point Likert scale (1 – “Not at all like me”, 4 – “Very much like me”), Cronbach's alpha was .72 for perspective taking and .62 for empathic concern. *Perceived quality of student-teacher relations* (positive relations; Fischer et al., 2017; negative relations; OECD, 2018a) was used as a measure of classroom climate. In the positive relations, students assessed the number of teachers the statements apply to. It includes 8 items on a 4-point Likert scale (1 – “To none or almost none of them”, 4 – “To all or almost all of them”), Cronbach's alpha was .87. The negative relations were assessed by the frequency of the negative experience between the teachers and students. It includes 7 items on a 4-point Likert scale (1 – “Never or almost never”, 4 – “Every day or almost every day”). Cronbach's alpha was .77. *Inclusive classroom climate* (OECD, 2018b) measures student's perceived quality of student-teacher relations with a focus on teacher's sensitivity towards cultural and ethnic groups. Students assessed the number of teachers the statements apply to. The scale consists of 6 items on a 4-point Likert scale (1 – “To none or almost none of them”, 4 – “To all or almost all of them”), Cronbach's alpha was .81. *Attitudes Towards Immigrants* (ATI; Schleicher & Ramos, 2016) was used to evaluate student's attitudes towards people from different cultural background. The scale is comprised of 6 items, four original and additional two self-developed items. Students assessed their agreement with the statement on a 4-point Likert scale (1 – “Strongly disagree”, 4 – “Strongly agree”), Cronbach's alpha was .71.

2.3. Procedure

In September 2018 students completed a paper version of questionnaires tapping SEI competencies, classroom climate, and demographic variables. We only present data for the selected measures. Reliability tests, descriptive statistics, correlations and hierarchical multiple regression analysis (method: Enter) were calculated with IBM SPSS Statistics 21.

3. Results

In Table 1, we can see all the correlations between the scales are significant. Attitudes towards immigrants have the largest positive correlation with inclusive classroom climate, where students assessed their teacher's sensitivity towards cultural and ethnic groups, followed by the perspective taking scale, while a significant negative correlation is found with the frequency of negative relations with teachers.

Table 1. Descriptive statistics and correlations between the scales.

Scale	<i>M</i>	<i>SD</i>	1.	2.	3.	4.	5.
1. Empathic concern	3,57	0,54					
2. Perspective taking	3,09	0,57	,48**				
3. Quality of S-T relations (+)	2,94	0,65	,27**	,31**			
4. Quality of S-T relations (-)	1,55	0,52	-,13*	-,18**	-,36**		
5. Inclusive classroom climate	3,46	0,52	,18**	,13*	,25**	-,46**	
6. Attitudes towards immigrants	2,90	0,48	,26**	,28**	,20**	-,26**	,33**

Notes: ** $p \leq 0.01$; * $p \leq 0.05$. S-T=student-teacher

In Table 2, a hierarchical multiple linear regression is presented, with two empathy subscales (Step 1), quality of student-teacher relations (positive and negative; Step 2) and inclusive classroom climate (in form of intercultural attitudes of teachers; Step 3) included as predictors of attitudes towards immigrants. Empathy scales are important predictors of attitudes towards immigrants, they alone explain almost 10% of the variance. They also stay important positive predictors when adding quality of student-teacher relations into the regression model, whereas only the frequency of negative relations with teachers (and not positive) significantly predicts more negative attitudes of students. Model 2 explains 14% of the variance in attitudes towards immigrants. In the last step, when we add the students' perceived intercultural attitudes of their teachers, as one of the inclusive classroom climate components, the frequency of the negative experiences loses its predictive significance. In Model 3, where all constructs are included, out of empathy subscales, only perspective taking is an important predictor while the teachers' intercultural attitudes add 4% to the explained variance of students' attitudes. When we only include these two into a regression, they alone explain 15,4% of the variance.

Table 2. Hierarchical multiple regression analysis of variables that predict Attitudes towards immigrants.

	Attitudes towards immigrants					
	Model 1		Model 2		Model 3	
	B	β	B	β	B	β
Step 1:						
Empathic concern	0,15	0,17*	0,14	0,15*	0,11	0,13
Perspective taking	0,16	0,19**	0,13	0,15*	0,13	0,16*
R^2		0,097***				
Step 2:						
Quality of S-T relations (+)			0,04	0,05	0,023	0,03
Quality of S-T relations (-)			-0,19	-0,20**	-0,09	-0,10
ΔR^2				0,046**		
Step 3:						
Inclusive classroom climate					0,21	0,23*
						*
ΔR^2						0,039
						**
R^2		0,097***		0,143**		0,182**
F for ΔR^2		14,14***		10,86***		11,50***

Notes. *** $p \leq 0.001$; ** $p \leq 0.01$; * $p \leq 0.05$ (significant β 's in bold); B = estimated value of raw regression coefficient; β = estimated standardized value of regression coefficient; R^2 = percentage of explained variance; ΔR^2 =change in the percentage of explained variance; S-T=student-teacher.

4. Conclusions

Our study shows that on the individual level perspective taking, a cognitive component of empathy, representing the ability to see and understand the situation from the perspective of others, is an important predictor of attitudes towards immigrants. This is consistent with studies (Stephan & Finlay, 1999) that show perspective taking is especially crucial when diminishing prejudices because it helps to acknowledge and understand diversities. At school or class level, our study shows inclusive climate is important, especially teachers' intercultural attitudes. Therefore, when trying to address the attitudes of students, the teacher's attitudes should also be considered. This supports the development of a programme, aiming at improving the empathic abilities of students (and teachers), especially focused on perspective taking. As the teachers' influence on the students is widely recognized, a whole-school approach should be considered, when creating an intervention.

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THE RELATION BETWEEN PERSONALITY AND LEARNING PREFERENCE

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Abstract

In this study, 106 women (M age = 23 years) completed a series of questionnaires online assessing personality traits and facets (subscales), learning preferences (Activist, Reflector, Theorist, Pragmatist), and attitudes toward learning preferences. The results of several hierarchical regression analyses found that a large proportion of variance in learning style was accounted for by personality traits or facets. For example, 43% of the variance in the Activist Learning Style was accounted for by higher scores on Extraversion, and lower scores on Conscientiousness and Negative Emotionality. When personality facet scores were used as predictors, the proportion of variance jumped to 55%. Similarly, between 27-31% of the variance in Reflector, Theorist and Pragmatist Learning Style was accounted for by personality facet scores alone. The results are discussed in terms of attitudes and the need for evidence-based practices.

Keywords: *Personality, learning styles, attitudes.*

1. Introduction

The concept of learning styles has been around for some time. Despite a large body of evidence that learning styles are unrelated to educational outcomes (Pashler, McDaniel, Rohrer, & Bjork, 2008), many people still believe that information is best learned when it is presented in a way that matches their style. In a number of older studies, researchers have found that learning styles (more accurately called learning preferences) can be explained in terms of personality traits. In other words, learning preferences are a subset of personality types (Jackson & Lawty-Jones, 1996). These older studies, however, focused on Extraversion, Neuroticism and Psychoticism. In recent years, newer and updated measures of personality – measuring all “Big Five” traits and facets – have become available.

1.1. Purpose of the present study

The purpose of this study was to replicate and update the literature by examining the relation between all Big Five personality traits and facets (Soto & John, 2017), learning preference (Activist, Reflector, Theorist, Pragmatist; Honey & Mumford, 1992), and attitudes toward learning preferences.

2. Method

2.1. Participants

The sample consisted of 106 women (M age = 23; SD = 7.6, range = 19-54 years) who completed an online survey. The majority of women were university students who were made aware of the study on SONA, an online recruiting platform. However, members of the general public could access the survey online and participate. In terms of education, 14.2% of the sample had a high school diploma, 70.8% had some university or community college courses, 14.2% had a university or community college degree, and .9% had some graduate studies training. In terms of marital status, 85% of the women were single; 12% were married or common law; and 3% were divorced. The majority of the sample was Caucasian (92% White or Caucasian, 3% Asian, 1% Black or African Canadian; 4% Other). As an incentive to complete the survey, participants could choose to be entered into a draw for a \$50 Amazon gift card. As well, students attending university could earn a bonus point toward their final grade in their course.

2.2. Measures

Demographic Questionnaire. Participants completed a brief demographic measure that assessed age, gender, marital status, education level, and race/ethnicity.

The Big Five Inventory – 2 (BFI-2; Soto & John, 2017). This inventory assesses personality in terms of five common universal traits or factors. As well, each factor is comprised of three subscale scores known as facets. The scale provides scores for Extraversion (with facets Sociability, Assertiveness, Energy Level), Agreeableness (with facets Compassion, Respectfulness, Trust), Conscientiousness (with facets Organization, Productiveness, Responsibility), Negative Emotionality (with facets Anxiety, Depression, Emotional Volatility), and Open-mindedness (with facets Intellectual Curiosity, Aesthetic Sensitivity, Creative Imagination). In the present study, the measure had excellent internal reliability (Extraversion Cronbach's $\alpha = .86$; Agreeableness = .78; Conscientiousness = .85; Negative Emotionality = .90; Open-mindedness = .82).

Learning Styles Questionnaire (Honey & Mumford, 1992). This questionnaire consists of 80 items that assesses preferred learning styles in four domains. The Activist style characterizes someone who likes to jump right into learning activities and enjoys group problem-solving. They are often leaders in discussion groups. The Reflector style is someone who is an introvert who likes to give careful thought to his/her approach. They like to observe and gather evidence before drawing conclusions. Theorists are analytical and logical. They like to test theories and ask the big questions. Finally, Pragmatists like concrete, real world problems with hands-on practical solutions. This measure is commonly used in research. However, in the present study, the internal reliability was questionable (Activist Cronbach's $\alpha = .75$; Reflector = .63; Theorist = .58; Pragmatist = .68).

Attitudes Toward Learning Styles. Participants completed 6 questions (designed for this study) to assess their attitudes toward learning styles. For each item, they rated their response on a scale from 1 = *strongly disagree* to 5 = *strongly agree*.

2.3. Procedure

Participants had access to the survey via their smart phone, tablet or computer, by accessing a link to Qualtrics, an online survey tool. The survey began with a description of the study that included a consent form. Once participants provided consent, the survey began with the demographic measure, and then the remaining measures were presented in random order. The survey took about 30 minutes to complete.

3. Results

3.1. Attitudes toward learning styles

See Table 1 for responses to these items.

Table 1. Attitudes toward Learning Styles by Response Percentages.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Students are more likely to achieve academic success when their learning style matches the instructor's teaching style.	0	2.8	2.8	32.1	62.3
Students learn best when they know what their learning style is and use strategies to match their style.	0	0	2.8	33.0	64.2
Information is best learned when it is presented in a way that matches the student's learning style.	.9	0	1.9	36.8	60.4
If students use study strategies that match their learning style, they are more likely to have academic success.	.9	.9	1.9	33.0	63.2
Learning style matters more than motivation when learning difficult information.	2.8	41.5	21.7	26.4	7.5
Learning style matters more than effort and persistence when learning difficult concepts.	6.6	50.0	16.0	18.9	8.5

3.2. Hierarchical regression analyses

A series of hierarchical regression analyses were conducted predicting each of the four learning styles. In each case, age was added on the first step for control for its effects. On the second step, the 5 personality factor scores were added. Similarly, the regressions were also conducted substituting the personality factor scores with the facets. In all regression analyses, Tolerance and VIF were well within acceptable levels.

The Activist Learning Style. The overall model was statistically significant and accounted for 43% of the variance in Activist Learning Styles ($F_{(6,99)} = 12.56, p < .001$, multiple $R = .66$). Age was not a statistically significant predictor, but the personality factors produced a statistically significant change in the model (R^2 change = .41, $F_{inc(5,99)} = 14.30, p < .001$). Significant predictors were Extraversion ($\beta = .52$), Conscientiousness ($\beta = -.45$) and Negative Emotionality ($\beta = -.20$). The adjusted R^2 value of .40 in the overall model indicates that a large proportion of the variability in the Activist Learning Style was predicted by the personality traits, namely higher scores on Extraversion and lower scores on Conscientiousness and Negative Emotionality.

When facet scores were substituted for the personality factor scores in a separate analysis, the proportion of variance accounted for in Activist Learning Style jumped to 55% ($F_{(16,89)} = 6.68, p < .001$, multiple $R = .74$). Significant predictors were Respectfulness ($\beta = -.28$) Trust ($\beta = .20$), and Responsibility ($\beta = -.22$). The adjusted R^2 value of .46 in the overall model indicates that a large proportion of the variability in the Activist Learning Style was predicted by lower scores on Respectfulness and Responsibility, and higher scores on Trust.

The Reflector Learning Style. The overall model was statistically significant and accounted for 23% of the variance in Reflector Learning Styles ($F_{(6,99)} = 5.00, p < .001$, multiple $R = .48$). Age was not a statistically significant predictor, but the personality factors were. Significant predictors were lower Extraversion ($\beta = -.22$), and higher Conscientiousness ($\beta = .44$).

When facet scores were substituted for the personality factor scores in a separate analysis, the proportion of variance accounted for in Reflector Learning Style increased to 27% ($F_{(16,89)} = 2.10, p = .015$, multiple $R = .52$). Significant predictors were higher scores on Organization ($\beta = .29$) and Responsibility ($\beta = .30$).

The Theorist Learning Style. The overall model was statistically significant and accounted for 24% of the variance in Theorist Learning Styles ($F_{(6,99)} = 5.27, p < .001$, multiple $R = .49$). Age was not a statistically significant predictor, but the personality factors were. Significant predictors were lower Agreeableness ($\beta = -.41$), and higher Conscientiousness ($\beta = .63$).

When facet scores were substituted for the personality factor scores in a separate analysis, the proportion of variance accounted for in Theorist Learning Style increased to 31% ($F_{(16,89)} = 2.45, p = .004$, multiple $R = .55$). Significant predictors were lower Compassion ($\beta = -.31$), and higher Organization ($\beta = .26$).

The Pragmatist Learning Style. The overall model was statistically significant and accounted for 13% of the variance in Pragmatist Learning Styles ($F_{(6,99)} = 2.55, p = .025$, multiple $R = .37$). Significant predictors were Extraversion ($\beta = .23$) and Agreeableness ($\beta = -.32$).

When facet scores were substituted for the personality factor scores in a separate analysis, the proportion of variance accounted for in Pragmatist Learning Style jumped to 28% ($F_{(16,89)} = 2.13, p = .013$, multiple $R = .53$). Significant predictors were lower Respectfulness ($\beta = -.40$) and lower Aesthetic Sensitivity ($\beta = -.34$).

4. Discussion

Over 90% of women in this study believed that students are more likely to have academic success when teaching and learning strategies match their learning style or preference, despite vast amounts of literature debunking this myth (Pashler et al., 2008). Furthermore, a large amount of variance in learning styles was accounted for by personality scores.

5. Conclusion

There is a need for evidence-based practice in the learning styles literature.

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IMPACTS OF BIMODAL INSTRUCTION THAT ASSOCIATES PHONEMIC SKILLS WITH MUSIC SKILLS ON PRESCHOOLERS PHONEMIC AWARENESS

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Abstract

Phonemic awareness has been observed to be a strong predictor of later reading skills (Ziegler, 2018, Ecalle & Magnan, 2015). Increasingly, recent studies specialized in orthophonic reeducation show that phonemic awareness can be trained by musical programs (Patscheke, Degé & Schwarzer, 2016). Few studies, according to the scientific literature, have developed a combined method that associates musical skills and phonemic awareness at the same time, for French speakers. In contrast with training programs, the originality of the present study consists in ecological conditions which fit in with teaching practices. If phonemic awareness and music skills share common information treatment mechanisms, the effect of a combined learning method should enhance phonemic awareness skills compared to a traditional one. The present experiment evaluated the effect of bimodal instruction that associates phonemic awareness with musical education on phonemic skills. Fifty-three children from four different classes (25 girls, 28 boys) aged 5 years old and 8 months (3.36) were assigned to two groups. We compared bimodal instruction to phonemic awareness (experimental group, $n=33$) to a traditional one (control group, $n=20$). Each learning conditions lasted 7 weeks and included two 30 minutes learning sessions per week. Children prerequisites to phonemic awareness have been measured with rhyme recognition and syllable suppression tasks. Four tasks divided in 12 items (3 increasing levels of difficulty) measured phonemic skills in recognition and suppression (initial, final). The same test was applied before and after the learning session. Each item's answers were rated from 0 to 1. Results analyses (ANOVA) show better improvement on epiphonemic skills in posttest from the experimental group than from the control one ($F(1.52)=14.440$, $p=.00038$). These positive results may be explained by a multi-sensory and multimodal instruction.

Keywords: *Phonemic awareness, music instruction, bimodal pedagogic sequence.*

1. Introduction

Learning to read in an alphabetic system is based on the alphabetic principle. This includes the ability to identify graphemes (smaller writing language units) and associating them to corresponding sounds, phonemes (smaller oral language units). Then, sounds are linked up in order to form syllables, words (Piquard-Kipffer & Sprenger-Charolles, 2013). Reading skills development needs a priori the conscious identification and manipulation of phonemes, namely phonemic awareness. Phonemic awareness has been observed to be a strong predictor of later reading skills (Ziegler, 2018, Ecalle & Magnan, 2015). However, this ability does not develop naturally in childhood and needs a specific learning (Goswami & East, 2000). The scientific literature demonstrates that, multi sensori learning (visual, auditory, haptic) shows better improvement on phonemic awareness learning (Labat, Magnan & Ecalle 2011). Thus, as a teaching domain, musical instruction shares several features with phonemic awareness such as information treatment mechanisms and common functional basis (Platel, 2003). Perceptive music skills are closely linked to phonemic skills (Bolduc, Montésinos-Gelet & Boisvert, 2014). In that sense increasingly, recent studies specialized in orthophonic reeducation show that phonemic awareness could be trained by musical programs (Patscheke, Degé & Schwarzer, 2016). Few studies, according to the scientific literature, have developed a combined method that associates musical skills and phonemic awareness at the same time, for French speakers. In contrast with training programs, the originality of the present study consists in ecological conditions which fit in with teaching practices.

2. Objectives

If phonemic awareness and music skills share common information treatment mechanisms, the effect of a combined learning method should enhance phonemic awareness skills compared to an unimodal one. The present experiment evaluated the effect of bimodal instruction that associates phonemic awareness with musical instruction on preschoolers phonemic skills.

3. Method

3.1. Participants

53 preschoolers (25 girls, 28 boys) from three different Center France schools aged 5 (5.8, SD 3.6) participated to this experiment. They were assigned to two groups: the bimodal instruction (experimental group, n =33) and the unimodal one (control group, n=20).

3.2. Learning programs

Each learning programs lasted 7 weeks and included two 30 minutes learning sessions per week (14 learning sessions). The preschoolers received sessions in their usual classroom in groups of 6 to 8 children. The programs implemented by the teachers for their pupils were guided by those designed by the authors.

3.2.1. Bimodal program: Music and phonemic skills. The originality of the present program is to combine music skills and phonemic skills at the same time. This program was created by the authors, based on corresponding skills between music and language established by Sloboda (2005). A typical learning session included a first task based on listening skills (identify, locate phonemes and sounds), and a second task based on manipulation skills (suppression, permutation, encoding phonemes and sounds). For instance, children listened to a song, then guessed which sounds they heard as well as recognized which phonemes were present in it. Other typical sessions involved encoding sounds and phonemes to create short songs.

3.2.2. Unimodal program: Single phonemic skills. The control group program was based on “Access Phono” method (Dorner, 2013), a phonological skills program specifically designed to teach phonological awareness. This program has been chosen because of its widespread in French classes. It contained phoneme recognition exercises and encoding exercises. Typical sessions contained listening tasks that involved phoneme recognition in words, then encoding tasks. For example, children closed their eyes, listened to a word and guessed if the target phoneme is present, then they were asked to write the phoneme on a slate.

3.2.3. Learning programs comparison. Both programs involved epiphonemic and metaphonemic skills by the use of listening and encoding exercises. The aim differences consisted in teaching materials and curriculum. The bimodal program associated visual and auditory aids (letters, music scores and songs) while unimodal one only used auditory aids (phonemes, sounds). Finally, the bimodal program involved phonemes that have been worked on throughout each learning session compared to the unimodal program which worked on phonemes separately.

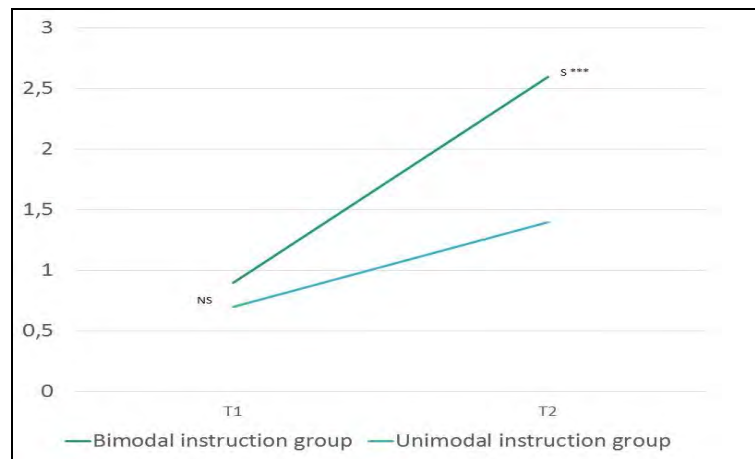
3.3. Measures

Children prerequisites to phonemic awareness have been measured with rhyme recognition and syllable suppression tasks. Then, phonemic awareness was assessed by a test designed by the authors adapted for previous test (Doyen, Noyer-Martin, 2016). It consisted to four tasks divided in 12 items (3 increasing levels of difficulty) measuring phonemic skills in recognition (identify the intruder in four words lists) and suppression (remove a phoneme from a word) in initial, then the final phoneme position in words. The same test was immediately applied before and after the learning session. Each item answers foresaw scores ranging from 0 to 1.

4. Results

Analysis of the variance (ANOVA) was performed with time factors (T1 vs. T2) and instruction factors (bimodal vs. unimodal). First, the scores on large units prerequisites (rhyme, syllable) revealed no group difference ($F(2,50)=1.4504$, $p=.24416$). Three way interaction (time*difficulty levels*instruction) did not reveal significant difference ($F(2,104)=1.1957$, $p=.30660$) but showed that both group improved their epiphonemic skills. At the pretest, epiphonemical awareness scores did not significantly differ between experimental and control group ($F(1)=2.902013$, $p=.094439$). Finally, results show better improvement on epiphonemic skills in posttest from the experimental group that from the control one ($F(1,52)=14.440$, $p=.00038$) (Figure 1).

Figure 1. Epiphonemical awareness scores at pre-test and post-test in the experimental group and the control group.



5. Discussion / conclusion

The purpose of the present experiment was to assess the effect of bimodal learning program which associates phonemical and musical skills in preschoolers. Thus, this effect was compared to an unimodal phonemical skills program. The pretest results show that there are no significant differences between the experimental group and the control one. This demonstrates that the group assignment did not impact the results. Both groups improved in phonemic awareness. The design showed an enhancing effect of combined method which gathered music and phonemic skills at the same time on phonemic awareness, especially on epiphonemical abilities. These positive results may be explained by a multi-sensory and multimodal instruction (Ecalte & al, 2011). Indeed, musical instruction enabled preschoolers to develop phonemic skills by the use of multi-sensory tools (songs, instruments, musical scores). In accordance with previous findings of Bolduc (2014), the design shows that perceptive musical skills are linked to a phonological one even on small units. In a next study, assess bimodal instruction effects in longitudinal study may underlying and identifying predictors to later phonemic skills in combined instruction.

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WHAT VALUES DOES THE SCHOOL PROVIDE FOR STUDENTS AND TEACHERS?

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Abstract

School is one of the important factors influencing the values of adolescents. In addition to education, the aim of the school is also to educate students on values that, if adopted, will help them shape their personality, lead a quality life saturated with healthy social relationships, and also the ability to take care of themselves through education and work. The paper presents a confrontation between students' and teachers' views on the values provided by the school. Qualitative research (semi-structured interviews) was carried out on students (N = 50) and teachers (N = 16) of three secondary schools. Most students reported that the school is trying to pass on values related to relationships and social engagement. The most common values presented by the school were friendship, independence, self-worth, propriety, fellowship, independent opinion, knowledge, freedom, justice, persistence, and moral behaviour. Students appreciate teachers being enthusiastic about their subject and their ability to teach correctly didactically, and at the same time appreciate the human side of the teachers' personality. Teachers reported they are most committed to passing on values related to personal (respect and wisdom) and social (tolerance and decency, faith, justice and friendship) qualities. According to the students, the open and friendly atmosphere of the school positively affects the transfer of values to students. The study was supported by grant VEGA 1/0191/19.

Keywords: *Values, school, students, teachers.*

1. Introduction

The term 'value' can be understood in three different ways – a quality of things that are related to satisfaction of human needs; a positive evaluation of human relationships; a and general criterium based on which other objects are evaluated (Prunner, 2002). From the pedagogical viewpoint, the most important meanings of value are the following: adolescent value systems; education as a social value; and values and attitudes as a part of content and goals of the educational system (Průcha, 2008).

The school represents the second most important social factor after the family. The school is a space where a young individual forms new relationship with peers, gets to know the workings of social life, integrates into the collective, and creates new values. A schoolchild confronts and assesses the values, goals, and attitudes collected from different sources – parents, extended family, school, peers, other social groups, and media. These value sources influence the formation of the value structure of the child's personality, as well as the value structure of the adolescent, of the group, and of the society in general. The longer and the more intensive the influence, the higher its effect on the value structure. The school is a place where a person spends a significant part of their formative years, and thus it has many opportunities to influence the values of the students. However, since children and adolescents are easily impressionable, it is important to give them sufficient attention and help them with adopting appropriate and socially and subjectively acceptable values.

2. Research aim and methods

The main aim of this study was to investigate students' and teachers' perception of values the school presents to its students. Qualitative semi-structured interviews were conducted with students and teachers. The interviews were done individually, recorded with a voice recorder, and subsequently transcribed. The interviews were then analysed using open coding based on an adapted version of the grounded theory.

Students were asked the following questions: *Q1: How would you define the term 'value'?*; *Q2: What does school mean to you?*; *Q3: What values do you receive from school?*; *Q4: How would you describe a good teacher?*

Teachers were asked the following questions: *Q1: What values does school (teachers) pass on to the students?*; *Q2: What methods do you use to pass on the values to the students?*

3. Research sample

Students (N=50, N=29 girls, N=21 boys, AM=17,4 years) and teachers (N=16, N=11 women, N=5 men, AM=45,7 years) were selected from three secondary schools in Bratislava, Slovakia. All secondary school years were represented (i.e., year 1-4).

4. Results

4.1. Interview with the students

Q1: All interviewed students had a definition of 'value'. Most of the students used a definition along the lines of *"It is something that is important to me."* (P2, F). Some participants defined it as *"...the way of how I live my life, or something based on which I make my decisions"* (P8, M), *"...something based on which I want to behave and make decisions"* (P17, F), or *"...something I draw from, something I can benefit from, thanks to which I can lead a quality life."* (P3, M).

Q2: Students perceived school as an institution that provides them with good education and opportunities for personal growth. Many of the participants saw the education part as essential, illustrated by the following answers: *"I'd say the education I get from it gives me an entry ticket to university"* (P12, M), *"I think school gives us knowledge and teaches us how to confront different opinions"* (P3, M), *"They teach us to value education."* (P50, F). Students also noted the difference in school's attitude towards students in different years: *"...in lower years we learned a lot about relationships, with other people and with ourselves, and now it is more focused on education, knowledge, and future."* (P42, F). Most of the students also highlighted school's important role in their personal development: *"It helps us to find ourselves."* (P3, M), *"...a preparation for life, teaches us to be more independent"* (P23, M), *"School offers me space for confronting my moral opinions, forging relationships, and participating in social activities."* (P8, F). Many participants related this role of school to relationships and social engagement: *"Apart from the basic stuff we get during classes, it also helps us with our development in the social area."* (P43, F), *"...gives us opportunity to create friendships and learn to cooperate"* (P12, M), *"Encourages our public engagement."* (P4, M). Moreover, students pointed out the development of concrete personality traits or skills: *"I can say with certainty that school teaches us independence."* (P17, F), *"They teach us to think about things in a broader context."* (P8, M), *"It teaches us critical thinking."* (P23, M). Students recognized that school guides them towards values: *"...it doesn't just give us knowledge, but it also brings us up as individuals with values."* (P23, M).

Q3: For the most common values passed on by the school, the students mentioned values related to other people, for instance, *friendship* (P26, F), *fellowship* (P9, M), *propriety* (P45, F), *moral behaviour* (P42, F), *family* (P8, F), but also values related to their own person, such as *independence* (P33, M), *self-worth* (P38, F), *independent opinion* (P23, M), and *persistence* (P17, F). Oftentimes, values tied to school's educational role were stated (*education* (P8, M), *knowledge* (P16, F)), as well as humanistic values, like *freedom* (P39, F) and *justice* (P1, F).

Q4: Most of the interviewed students appreciated teachers who are enthusiastic about their subject and are able to teach it in an intelligible and practical manner. On top of the pedagogical quality, students mentioned craving humanistic approach: *"A person who knows what they're teaching and how to teach it."* (P34, F), *"Who is can talk to the student in a way that doesn't give the impression of someone being superior."* (P9, M), *"They should be able to motivate us, to spark a fire in us, not just fill us like goblets."* (P45, F), *"Teacher should, first and foremost, want to teach something and show interest in their students."* (P26, M), *"A good teacher is not just a teacher, but also a human being who doesn't just sit in the classroom, but teaches us who we should be, has an individual approach, is everywhere, and knows how to teach other stuff, no just their subject."* (P2, F). Additionally, students appreciated didactic and rhetoric qualities of a good teacher: *"They should also have rhetoric and didactic skills because it's important to be able to present a subject to the students in a way that catches their attention."* (P33, M).

4.2. Interview with the teachers

Q1: Teachers stated that apart from the value of *education (13)*, they mostly strive to pass on values related to the development of personal and social qualities. The most present values in this area were the following: *respect (9)*, *tolerance (9)*, *propriety (8)*, *justice (7)*, *wisdom (6)*, *friendship (6)*, *faith (5)*, *help and protection of the weak (3)*. Less mentioned values were, for instance, *sense of humour (2)*, *interest in public affairs (1)*, *empathy (1)*, *diligence (1)*, *freedom (1)*, *truth (1)*, *optimism (1)*, *spiritual values (1)*, *morality (1)*, *health (1)*. Materialistic values were not present at all.

Q2: Most teachers stated *discussions with students (14)* as the most common method of passing on values. Both formal discussions during lessons and informal talks during breaks or after classes belong under this category, and they can be held in a group or with individuals. The next most-cited method was *servicing as an example (12)*. Less common methods were related to activities typical for their school or specific subjects: *mentoring (2)*, *co-organizing extracurricular activities (1)*, *facilitating volunteering (1)*, *working with primary sources during classes to learn from the history (1)*, *analysing texts or studying literature during foreign language classes (1)*, *solving problem exercises (1)*, *project teaching (1)*.

5. Conclusions

The purpose of this study was to investigate students' and teachers' perception of values provided by the school, via the method of qualitative semi-structured interviews with students and teachers at secondary schools.

According to the students, the school prepares them for life, gives them space to create relationships, to confront their opinions with opinions of others, and to get to know themselves. Additionally, it teaches them many personal qualities, values, and attitudes. Many students perceive the school's role in personal development through the area of interpersonal relationships and social engagement in society. The most commonly cited values taught by the school are linked to other people and social ties, such as friendship, fellowship, propriety, moral behaviour, and family. In addition, the following values that are related to their own person, are also considered important: independence, self-worth, independent opinion, and persistence. The value of education and knowledge is thought of as a natural part of school, but humanistic values like freedom and justice on the part of school and teachers also resonate with students. Positive atmosphere in school influences many processes taking place in school, including the process of passing on and receiving values. Students stated that they usually perceive the atmosphere in school as positive, friendly, and open. They appreciate that they can talk to their teachers openly about many topics and not just those related to education. The interviews uncovered the fact that students do not mind higher demands put on them as long as they are treated respectfully by the teachers.

Teachers state that apart from the value of education, they strive to pass on values related to personal and social qualities, such as tolerance, respect, propriety, justice, wisdom, friendship, faith, help and protection of the weak. Looking back at the student interviews, it appears that many of the values declared by the teachers are also perceived by the students as values they receive from school. Furthermore, the methods used by teachers to pass on these values can be divided into two categories: humanistic approach and professional approach. The first category represents teachers' efforts to serve as a good example for the students, to spend time with them not just during classes but also outside of them, and to be available for a talk. The second category relates to various classic and innovative methods of teaching which push students to think and express their opinions.

Education should be a process of personality cultivation. And as the findings of this study show, the formation of values and value orientation of students undoubtedly represents an important part of education.

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ADOLESCENTS' GENDER IDENTITY AND ATTITUDE TOWARDS PARENTS

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Abstract

The focus of the project is on the adolescents' perception of the roles of a mother and a father in the family, and specifically on adolescent boys' attitude towards their fathers and adolescent girls' attitude towards their mothers. There has been a noticeable shift in interests that used to be primarily associated with a certain gender. For instance, men are increasingly more concerned with the body image, which used to be a predominantly female domain. Moreover, the role of a father has been changing recently, to the point of so-called fatherhood crisis. The role of a father is built around strong social, cultural, and historical constructs of hegemonistic masculinity. Our research based on qualitative design (discourse method) uncovered attitudes of adolescent boys (N=25) towards their fathers, and attitudes of adolescent girls (N=26) towards their mothers. Adolescent boys were shown to have a more problematic relationship with their fathers, and a significantly positive relationship with their mothers. Mothers not only represent an essential part of their lives, but also provide an emotional and mental support. Adolescent girls identified more with their mothers, highlighting mothers' ability to handle a vast number and diversity of family matters. The key factor in the positive rating of a mother was represented by safe emotional ties between the mother and daughter. However, in cases where these ties were missing, mother was perceived through the lenses of stereotypically female depictions, largely perpetuated by the mass media and agendas of certain political parties. The present study is a part of the project VEGA 1/0191/19.

Keywords: *Gender, identity, adolescents, stereotypes.*

1. Introduction

“What is and what will be my place in society?” is an identity question strongly linked with the period of adolescence (Erikson, 1968). This period in life is characterised by the creation of foundations of person's individual and social identity. One part of identity is gender identity, which is a social and cultural construct that distinguishes between female and male characteristics. The development of gender identity in a child is largely influenced by their mother and father. Parents represent the most crucial social institutions helping the child with orientation in and identification with specific gender characteristics. The nature and quality of the relationship between a parent and a child determines the course of the psychosocial development of the child, and whether the child will or will not see themselves as a person worth of love (Laible, Carlo & Roesch, 2004). The formation of gender identity is often influenced by the different attitudes of a mother towards her daughter and son – daughters are “trained” to continue on with the female role, whereas sons are given more freedom and independence (Hirsh, 1981). The presented paper focuses on gender roles and adolescents' attitudes towards their mother and father.

2. Gender role

Formation of role identity represents an important part of adolescence when questions such as “Who am I?”, “What is my place in society?”, “What is my future role as an adult?”, roam around the young mind of an adolescent. In the process of formation of role identity, the following institutions play key roles: family, school, media, and peers. The presented paper focuses on the identity formation of girls and boys during the sensitive period of adolescence, with emphasis on the role of a father in relation to his son, and on the role of a mother in relation to her daughter.

The mother-daughter relationship is considered to be essential in the identity formation of an adolescent girl. A higher degree of control and critical attitude from the mother's side can lead to cracks in the mother-daughter relationship, especially when an explanation of this behaviour and open

communication are missing. Every so often, the mother does not distinguish between her identity and her daughter's identity and projects her own identity onto her daughter (Poncet-Bonissol, 2015). The mother's attitude towards her child has a considerable influence on how the child perceives the world and provides the foundations to the child's ability to create interpersonal relationships. The nature of this mother-child relationship, the degree of acceptance and emotional ties, impacts the child's subsequent journey through life. Since the mother identifies more with her daughter, she sees her as her successor, as a way of continuing her legacy. Problems in the mother-daughter relationship may arise when the mother does not give the daughter enough space for personal development. According to S. Beauvoire (1968), the image of the woman the daughter is supposed to become originates from the mother. However, this image is complicated by the reality of the daughter's observation of the mother's interactions with her partner. The ideas about the world and the future are based on these observations, which, instead of leading to self-discovery and catering to own desires, results in behaving in a way that caters to men's ideals.

On the other hand, the case of masculinity is absent of clarity and instead full of controversy and confusion. Masculinity has always been characterised based on the standards of a specific historical period. Media often present male characters as decisive, competent, and having everything under control. Thus, women appreciate sensitive men who are not afraid of showing weakness, but at the same time, want men who are unyielding and refuse to bend to the circumstances. However, it is difficult for real men to adhere to both sides of these standards (Lindsey, 2016).

Recently, we are witnessing a change in the role of the father in the family. It is important to note, however, that the so-called norms of what is admissible, desired, and refused, in a society, depends not only on a specific period but also on a specific society. Looking at our society (i.e., 21st century Europe), the role of a father is no longer so strongly linked with rationality, goal-orientation, and providing financial security for the family (Oláh, Kotowska & Richter, 2018). In the current world where both of the parents are working full-time, it is necessary that the father is involved in the parental care, which transforms the typical hegemonistic model of masculinity into a new model of fatherhood (Miller, 2011). Societal pressure, as well as the father's need to take part in taking care of the children, does not manifest only in fathers taking parental leave (which used to be a domain of the mothers) but also in partaking in free-time activities with their children. Media usually depicts this "transformed" type of father as a of positive, self-confident, decisive, and responsible male model.

However, on the political level, a so-called fatherhood crisis is being increasingly discussed. The most discussed questions on the topic of the fatherhood crisis and the change in the family structure in general, are tied to the high number of divorces, parents living outside of the wedlock, single parents, and so on. Some authors point to the emergence of a new phenomenon, de-gendering of the parenting role (Silverstein et al., 2002), which is tied to a certain level of uncertainty in the gender roles in parenting, as well as to a decreasing value of the father's role in the upbringing of the children. This can result in fathers being unprepared for the fatherhood, and in the mounting tension between the father and the son. Similar to the aforementioned mother-daughter relationship and its impact on the daughter's female role formation, the father-son relationship also determines the son's identification with the male role and the future father role.

Therefore, our aim in this study was to discover the nature of the father-son and of the mother-daughter relationship, as well as how the adolescents perceive the roles of a mother and a father.

3. Methods

A qualitative discourse method was used to uncover attitudes of adolescent boys (N=25) towards their fathers, and attitudes of adolescent girls (N=26) towards their mothers. Both groups were aged between 18 and 19 years old. A focus groups discussions (N=5 for girls, N=5 for boys) with the same moderator were conducted (Krueger & Casey, 2000). Each discussion lasted for about 2 hours, was recorded on audio tapes, and subsequently transcribed. During each focus group discussion, the moderator introduced the following core set of questions (note that boys were asked the first option and girls were asked the second option): "How do you perceive yourself in the role of a boy/girl?"; "What is your perception of fatherhood/motherhood?"; "What is your relationship with your father/mother?"; "What do you not like about your father/mother?"; "What do you admire in your father/mother?"; "What kind of a father/mother would you like to be?"; "What kind of a mother/father should your partner be?". The primary data sources were transcripts, together with field-notes and brief summaries taken during or immediately after the discussions. We interpreted the data as discursive utterances of individuals in a semi-public context. After that, we focused our attention on the thematic contents which are constituent parts of a constructed role identity.

4. Results

The analysis was focused on identifying the key themes that define the role of a father (according to adolescent boys) and the role of a mother (according to adolescent girls).

The discourse method of role identity pointed to the 3 following areas: 1) *physical appearance* (for boys: attractive, groomed, good looking, strong; for girls: pretty, slim, good looking); 2) *mental qualities* (for boys: brave, wise; for girls: nice, kind, perceptive); 3) *utilitarian needs* (for both boys and girls: rich).

The question on how the adolescents perceive their mother (girls) or their father (boys), both groups adopted a rather critical stance. Both adolescent girls and boys expressed high level of criticism of their parents, and in certain cases even refusal. Statements like “my mum is constantly unsatisfied with me”, “my mum only criticizes me” appeared in the girl group, however, more prevalent were statements uncovering acceptance and social support from the mothers’ side (“my mum is my best friend”, “I can tell my mum everything”). On the other hand, boys’ critical statements about their fathers were more dominant (“my dad just swears”, “we would fare better without him, he just yells all the time”). Adolescent boys confessed to having a better relationship with their mother who is considered to be an emotional and moral pillar of the family. Concerning the future role as a father/mother, boys were inclined to a role of a caring, loving, dutiful, and responsible family member who insures financial stability of the family, whereas girls favoured emotional saturation in the role of a mother (“playing with the kid”, “showing love is important”). The question of what kind of a father (for the girls) or mother (for the boys) should their partner be, uncovered stereotypical views, especially in boys. Boys adhered to a more traditional gender differentiation of the parent roles (“father should be the money-maker, mother should take care of the children and household”), whereas girls adopted a more feministic-oriented stance aiming towards equality of both parents (“I don’t see anything bad about a scenario where the woman works and the man takes care of the child”).

5. Conclusions

Findings pointed to adolescent boys having a more problematic relationship with their fathers, and a significantly positive relationship with their mothers. Mothers not only represent an essential part of their lives, but also provide an emotional and mental support. Adolescent girls identified more with their mothers, highlighting mothers’ ability to handle a vast number and diversity of family matters. The key factor in the positive rating of a mother was represented by safe emotional ties between the mother and daughter. However, in cases where these ties were missing, mother was perceived through the lenses of stereotypically female depictions, largely perpetuated by the mass media and agendas of certain political parties, even despite the increasingly present social campaigns highlighting equality between both genders.

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CRITICAL THINKING SKILLS AMONG MOROCCAN PHD STUDENTS OF HEALTH SCIENCES

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Abstract

The significant weakness in problem solving and innovation continues to affect scientific production in Morocco. To this end, many strategies and reforms have been put in place to address the various problems raised.

In this perspective, the national strategy for the development of scientific research by 2025 indicates, among other things, the proper conduct and methodological integrity of research work.

The theory states that critical thinking is the intellectual basis of the scientific research method, furthermore it was been empirically demonstrated that students with strong critical thinking skills perform well in research methodology. Therefore, the close relationship between critical thinking skills and performance in research methodology application, stipulates highlighting the potential of young researchers in this area.

The present work is the subject of an exploratory study that opts to reveal the critical thinking skills, considered an essential foundation for any research methodology, in 25 apprentice researchers in the health sciences.

The salient findings of the study were, a moderate overall score of critical thinking skills, and a significant correlation between the overall score of the set of skills and the scores of their Master's monographs, furthermore, In addition, the correlation indicates that the success of their dissertation work was related to the deduction, evaluation and inference subscales of the HSRT.

Keywords: *Scientific research, critical thinking skills, health science, HSRT.*

1. Introduction

Scientific research involves thinking and critical thinking to confront the various challenges of acquiring knowledge, understanding reality and promoting quality of life in a constantly changing world.

Ennis (1985), mentions that critical thinking is "asking and answering questions, defining terms and identifying hypotheses", Facione (1990) stated that critical thinking is "interpreting and explaining" on the other hand Halpern (1998), Paul (1992), Willingham (2007), added that critical thinking consists of "making conclusions using inductive or deductive reasoning".

Moreover, Case (2005) showed that critical thinking embodies judgment and evaluation, and decision making or problem solving; while Benítez and Canales (2013) have also added that critical thinking is considered a resilience factor that chooses to increase the capacity of people to identify, challenge, solve problems and become stronger to face new challenges.

Moreover, critical thinking is one of the most important skills that a researcher must possess in order to reach an optimal solution (Indrawatiningsih, N, Purwanto, As'ari, A. R., Dwiyan, Sudirman, & Rahardi, R, 2019).

The critical thinking has been defined as skills (Facione, 1990) (Halpern, 1998), which include analysis, inference, evaluation, inference, and induction.

Harvey W. Wallmann, Donald I. Hoover (2012) indicate that advanced critical thinking skills are necessary for students preparing for and/or enrolled in professional programs. In particular, in health science, critical thinking skills are increasingly needed in academic and clinical settings to ensure evidence-based practice, (Harvey W. Wallmann, Donald I. Hoover, and 2012) (Meherali, 2016).

In addition, critical thinking skills ensure a quality approach that fosters a certain methodological integrity, which ultimately provides useful results for research users. (Roller and Lavrakas, 2015).

The present study is descriptive and exploratory, it consists of a diagnosis of critical thinking skills among doctoral students in health sciences, highlighting their abilities to apply and interpret their research methods, and identifying which skills are in use and which need to be developed in order to promote their research process.

2. Method

2-1 / Participants: There are 25 PhD students in health sciences, selected using a simple random sampling technique, the study setting is Casablanca Faculty of Medicine, 79% of the participants were female, 82% are aged between 24 and 30 years old,

2-2: Instrument and procedure: After receiving permission from the committee, a pre-test has administered to 09 students to see its adaptability and validity in our target population,

Students took the Health Sciences Reasoning Test (HSRT), It is considered the most reliable and widely used instrument for measuring critical thinking skills in the health sciences (Insight assessment, 2019). The test provided a holistic measure of critical thinking (overall score) and individual scores for the range of cognitive skills identified as critical skills in the critical thinking process, such as induction, deduction, analysis, inference and evaluation. The test is specific for health context, and it consists of 33 multiple-choice questions on a California Insight assessment platform, the time required to complete the test is 50 minutes.

3. Results

The overall score of (HSRT) among the participants is just moderate, and the percentile for this group is 35, based on the distribution of overall score percentile for the participants in this group, as compared to an aggregate sample of four-year HSRT students.

In addition, there is a significant correlation between the overall score and the average score obtained from the participants' research work, which is (0.73). And this correlation is related on deduction, inference, and evaluation.

However, there is no correlation between the skills related to analysis and induction and their thesis rating.

The present study reveals a moderate score on the set of critical thinking skills among the study participants, and a significant correlation between the overall score and their thesis rating, furthermore, the skills of induction and analysis require rigorous development.

4. Discussion

The overall score is just moderate, with a significant correlation between the overall score and participants' final dissertation scores, these results are corroborate to those of a meta-analysis of studies evaluating critical thinking test scores and academic achievement of health profession students (Reale MC, Riche DM, Witt BA, Baker WL, Peeters MJ, 2018; Touri B. & al., (2016).

However, the results on analysis and induction skills show that there is underperformance in this area, moreover; this is similar with numerous studies and reports witch state that graduates students have not the critical thinking and problem-solving skills in the classroom and in their jobs (Nold, 2017).

Because, conclusions, assumptions, recommendations, or decisions based on inaccurate analysis can bias the study, even if they have been using excellent inference skills.

In addition, Harvey W. Wallmann and Donald. Hoover, (2012) indicate that those students who have given up on continuing their work in the health sciences are the ones who do not have the critical thinking skills necessary for success, moreover , the graduates student with less critical thinking skills have higher unemployment rates,(Kelsch,M and Friesner,D ,2014)

By the way, the students must be trained by the professor who have been trained in the concepts of critical thinking and the methods necessary to develop critical thinking skills (Nold, 2017)

Furthermore, Willingham (2019) announces that in order to strengthen critical thinking skills among students, a continuous practice of critical thinking remains essential.

In the Moroccan context, and in order to improve scientific production, it is essential to focus on academic circles and strengthen their analytical skills and to implement a teaching-learning approach based on critical thinking to enable students to be independent, capable of making in-depth decisions, building new knowledge and dealing with professional and societal problems.

5. Conclusion

This study reveals a moderate overall score of the set of critical thinking skills among an elite group of health science students, and there is a significant correlation between the final projects rating and the overall score of the different skills. Moreover, there is a deficit in analysis and induction skills requires some intervention to build capacity in this area.

Furthermore, the apprentice researchers must perform well on the set of critical thinking skills and especially the evaluative and analytical skills that ensure useful results in health sciences research.

Thus, it will be useful to integrate the critical thinking approach into the training curriculum, particularly in university studies, so it remains essential to merge critical thinking into the various education programs from an early age, for more practice. Because, Smart method will definitely lead to smart results that will serve societies in general.

In addition, an evaluation of research methods for graduation work in the health sciences will be the subject of a future study.

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NON-COERCION BEYOND VIRTUAL ENVIRONMENTS: CAN STUDYING BE PLEASANT?

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Abstract

In Brazil, school dropout exceeded the limits of public schools and can no longer be understood as an unfolding of social factors. One of the explanatory hypotheses for this fact relates boredom, lack of concentration and learning difficulties in the classroom to the constant experiences of children and teenagers in virtual environments. An alternative solution consists of using new technologies at school. However, it is likely that methodological changes are counterproductive if the disciplinary bases of the school system are maintained, as the negative effects of coercion are incompatible with the freedom experienced virtually. This study aims to present relationships between non-coercion and staying in school. For this purpose, it presents the theoretical assumption that underlies an action research implemented at the University of Amazônia, in Belém: spontaneous and pleasurable engagement in activities and recognition of personal and social value are positive effects of non-coercive interactions. Therefore, we investigate whether the formation of small groups with non-coercive characteristics in schools favors among students the development of a pleasurable engagement in academic activities. University students present literary texts to groups of about fifteen students, opening space on a weekly basis for shared reading, reflections and dialogue with the absence of performance evaluations. We have obtained positive results in areas such as assertiveness, empathy, resilience, creativity, autonomy and pleasure in reading, which unfolds in pleasure in studying. We expect that historically naturalized coercion in schools is brought to the center of attention, so that learning can be dissociated from fear and avoidance.

Keywords: *School dropout, non-coercion, new technologies, literature.*

1. Introduction

In Brazil, the education field reflects the huge differences between socioeconomic classes. Guzzo and Euzébio Filho (2005) summarize the situation: “the educational system, which results from a historical process, is configured in the midst of social and production relations that divided and still divide society into distinct economic groups and, even more, establishes a relationship between antagonistic social classes” (p. 40).

Sibilia (2012) draws attention to “the transmutation of the school into a company that sells services, with the concomitant chasm that opened up between public and private establishments [...] [so that those] sink into an irrecoverable mediocrity” (p 152). We have poor children in public schools and outside them, who are exposed to the dangers of the streets (Cardoso, Fernandes, Bastos, & Sousa, 2015). Silva Filho and Araújo (2017) consider that the following factors are decisive for school dropout: “drugs, time at school, successive failures, lack of encouragement from family and school, need to work, excessive school content, alcoholism, location of school, vandalism, lack of formation of values and preparation for the world of work” (p. 36).

In a school characterized as a disciplinary institution based on a mix of continuous hierarchical surveillance and normalizing sanctions, low grades are just clear and punctual examples of other daily difficulties, such as sitting for several hours while trying to assimilate contents that are far from the known reality. What was unexpected is that school dropout started to affect children of the dominant classes, whose media subjectivities would bring with them boredom, demotivation and loss of focus in

classes, justifying the most varied diagnoses of mental disorder. In such cases, disinterest is identified as the main reason for dropping out of school (Sibilia, 2012).

Faced with the possibility that the characteristics of students familiarized with technology since early age are incompatible with the traditional school, alternatives have been devised to ensure that children (we can assume, from the dominant classes) remain studying. This is the case with proposals for the use of new technologies in classrooms, which Veiga-Neto (2003) ironically identifies as “the good old modern school” (p. 123). Sibilia (2012) indicates that we do not yet have concrete solutions for the current crisis, and it is necessary to reinvent the school - “against boredom and dispersion, it is necessary to add density to the experience, arousing enthusiasm and the will to learn” (p. 210).

In order to understand how the new spaces that could solve the generalized problems that afflict the school would be, we distinguish, like Sidman (1989), coercive from non-coercive interactions. Therefore, we aim to present relations between non-coercion and permanence in school.

2. Experiential groups: Non-coercion and pleasure in studying?

Imposition and obedience through the threat of punishment characterizes coercive relationships (Sidman, 1989). If we consider the school, the student is provided with content to be learned and the possibility of advancing over school years if the necessary grades are reached and the number of absences does not exceed a certain limit. These general rules are accompanied by requests to keep silence and attention to the teacher in class. In this way, the traditional school is a perfect example of coercion. As the emotional effects generated by coercion are negative, it is expected that many will students try to distance themselves from study-related activities.

Non-coercion is as difficult to explain as the word freedom, perhaps because they are in fact close. We say that we like something when we reach for it spontaneously and whenever possible. Using school as an example of non-coercion is challenging, but Coy Mathis, an American elementary school student, has succeeded, stating: “I want to go to school. We play at break” (Favilli and Cavallo, 2016, p. 45).

Public schools are twice as coercive because students display skills that have no value among what is assessed and that, sometimes, even get in the way of what needs to be learned. That is why it is said that education is a form of exclusion and perpetuation of social disparities in which a large part of the population is. Thus, as for social exclusion, “the educational system figures as the main actor” (Guzzo & Euzébio Filho, 2005, p. 43).

Faced with such a scenario, this study derives from an action research, conducted with a qualitative approach, that has been implemented by the Universidade da Amazônia (UNAMA), in Belém, in northern Brazil, since 2016. In its second phase (2020 to 2022) it is entitled “Poetry in Daily Life: Experiential Groups and Resilience”. The ten meetings from each group are coordinated by undergraduate and graduate students and take place weekly at schools, NGOs and the UNAMA’s clinic-school of Psychology (CLIPSI) and bring together about fifteen participants.

Experiential method, as described by Del Prette and Del Prette (2017), supports the group dynamics that aim to promote social skills and resilience through dialogue, shared reflections, drawings and paintings. In addition, the use of literary texts aims to provide an opportunity for the development of pleasure in reading, increasing the likelihood of studying also become a pleasurable act. It is expected that the construction of non-coercive interpersonal relationships allows one’s realization of their social and individual importance, which contributes to joyous partaking in academic activities (Darwich & Garcia, 2019).

Comparing pre-test and post-test measures, participants' reports and observations made during the meetings, we have obtained positive results in areas such as assertiveness and empathy, important for the prevention and overcoming of problems, as well as resilience, verified in the face of difficulties in the group and outside it. Creativity, autonomy and pleasure in reading observed in the groups are, through interviews with parents and teachers, also verified in the classroom and in the effort to carry out homework. We found that the pleasure of reflecting and exchanging ideas in groups is also measured by the participants’ excellent attendance in the meetings. The school environment turns into a space that welcomes diversity and multiplicity, in which changes can happen. Instead of fear and avoidance of low grades and failures, they find pleasure in small advances, because social support is expected to protect and reading is to free.

3. Conclusions

Pará is a state in northern Brazil, far away from the most developed centers. Since it's the second largest state in the country, there are huge internal distances. River paths, crossing the Amazon rainforest, for instance, are challenging routes between home and school (Almeida, 2010; Ruiz & Domingues, 2008). Considering social inequality issues that prevail in this scenario, the inhabitants of the interior of Pará look for better living conditions in the capital, where they end up finding always new problems and, unfortunately, few solutions (Cardoso et al, 2015).

According to Sibilía (2012), “many current opinions, including the most official ones, seem to agree in one point: to 21st century students, you need to offer fun” (p. 81). In this regard we can say that the less coercive the learning situation is, the funnier it will naturally be, and the closer to the student's reality, the more significant (Sidman, 1989). What resilient people have received in childhood is also very helpful: trust and support (Fischer & Fröhlich-Gildhoff, 2019). Nor can we forget Paulo Freire, who imagined a school where “learning to read, writing, literacy is, first of all, learning to read the world, understanding its context not in mechanical manipulation of words, but in a dynamic relationship that links language and reality” (Freire, 2006, p. 8). That is the kind of education that truly stimulates students to seek knowledge and dialogue.

The central question presented in this work - can studying be pleasant? - is broad and complex, but reflection regarding its answer is necessary. The human being repeats sounds tirelessly to be able to communicate; crawls on the floor, falls and gets up as many times as necessary to walk; asks questions, invents answers; enters school and becomes more and more persistent, curious, critical, sensitive to the others, inventor of new possibilities. Part of the previous sentence is already true and the implementation of the other part depends on each one of us.

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THE DESIGN OF THE RESEARCH METHOD IN GRADUATE RESEARCH WORK

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Abstract

Regardless of the discipline or institution in which the scientific research was carried out, the "method" section is present. However, many research works lack relevance and suffer from methodological problems. However, method remains the foundation of all research work that can inevitably influence results that can affect problem solving, national development, and threaten our quality of life in general.

This work is an exploratory study of research methods used in graduation projects in the following disciplines (health sciences, engineering, biological and agronomic sciences, economic and social sciences).

The method used in this work is based on three investigative tools: (a) comparison of national scientific production according to a few references (b) semi-structured survey by interviewing supervisors of final dissertations and theses in different selected disciplines (b) systematic analysis of fifty final dissertations. The works were obtained from the libraries of the University Hassan II of Casablanca in different disciplines, submitted between 2014 and 2018. The method part was analyzed, taking into account the key processes and concepts of each discipline, to highlight the elements of the research method, namely the type of research, sampling, procedure or conduct of research, mode of data collection, data analysis, results, and discussion.

Among the key findings of this study, (a) a decline in national scientific output compared to previous years and (b) shortcomings in research design. Our contribution lies in remedying the standardization of the method and adapting it to the contexts of the needs of different disciplines.

Keywords: *Scientific research, research method, dissertation work.*

1. Introduction

Some factors influence scientific judgment and decision-making, and can bias and corrupt research (Steneck 2004; Shamoo and Resnik 2015), so many strategies are developed to promote scientific integrity, which include the "integrity of results" and "integrity of process".

The «integrity of outcomes» is concerned the achievement of goals and the production of results that are empirically adequate; and integrity of process is the commitments to the standards that promote those goals (Shamoo and Resnik 2015). However, this scientific integrity can be at risk throughout the research process.

Regarding the method, it is one of the sections of the research process and contains sample, type of study, instruments, procedure, data analysis... (Fortin, 2010).

Furthermore, from a methodological point of view, if such subsections are not applied accurately, and if they do not follow the standards, they can lead to empirically inadequate results (Shamoo and Resnik, 2015).

In addition, when the researcher has used inappropriate method to obtain his or her results, and if he or she does not follow the standards, he or she may violate scientific integrity. (Douglas, 2014).

Several researchers have agreed that methodological integrity in research is a priority; it is an approach that must be applied to all areas of scientific research in order to produce empirically adequate conclusions.

Moreover, the lack of prerequisites in the conduct of research is at the root of the difficulties in publishing quality papers, and the delay in promotion of many African researchers (Firman and all, 2015).

For this, the research method must be adjusted and based on the norms and standards, to reach the research objectives and to provide useful results and conclusions to serve societal sectors.

The purpose of this study is to explore the research design on the empirical studies of the five disciplines (engineering sciences, health sciences, biological and agricultural sciences, economic and social sciences) of the scientific production of the University HASSAN II DU CASABLANCA in order to compare and contrast them with the norms and standards.

2. Method

2.1. National scientific production according to a few references

The indicator number of theses introduced as a performance indicator in the development contract 'State University of the Emergency Program'. However, at the national level, the number of doctoral students is accumulating, without the same graduation rate. In 2014, the number of students reached nearly 18600 while the number of doctorates supported was less than 1200, with a graduation percentage of 6.4. This rate is relatively low compared to Tunisia, which is 7.2%, South Africa 12.6 and France 19.3.

In addition, the number of doctoral degrees awarded, all disciplines combined, is very low (676 in 2009) and (392 in 2018) (sources: CRUH2C AND Statistical direction).

There are several reasons related to the system and/or process that constrain research in Morocco. The Higher Council of Education, Training and Scientific Research (2017) indicated that 60% of PhD students have not received training in bibliographical research and there is any access to knowledge without methodological preparation and an initiation to bibliographical research. However, no study is interested on research design.

2.2. The interview survey

The interview involved teacher-researchers supervising theses and dissertations work, all the interviews were recorded in audio to be processed on "Nvivo" after having received their consent through an explanation of purpose and orientation of the study.

2.3. Analysis of dissertation work

Fifty theses were obtained from the libraries of Hassan II University; we included engineering sciences; health sciences, biology and agriculture, social and economic sciences.

The conceptual framework is the design of the research, which includes the type of study, the sample, the instruments, the data collection, the data analysis, the results and the discussion.

The triangulation of the three survey methods, which involves the collection of a few indicators at the doctoral level, the semi-structured interview of teacher-researchers and the analysis of the research work of master's students, was undertaken in order to compare and reinforce the results and objective of the study.

3. Result

3.1. Interview results

A textual analysis of the interviews with "Nvivo" revealed some repeated concepts. And a "Method" is the predominant factor affecting the students' research work. Furthermore, the data analysis and collection is the one component that can threaten the integrity of the research method in research work of students.

3.2. Results of the research analysis

The results of the study showed that in medicine: the type of study and ethical considerations were indicated in all work. 60 % of the studies emphasized the number and characteristics of the sample and only 40% mentioned their sampling techniques, however, the fidelity and validity of the data collection instruments were highlighted in only 40% of the studies. In addition, all studies described their procedure, their statistical analysis and their results. However, the discussion section considers the other writings in only 40% of the cases, and the conclusion section appears in only 40% of the works.

In biology and agriculture, just 30% of the studies declared the type of study, the predominant criterion in the sampling section is the study environment in 100% of the cases. In addition, the sampling technique, the number and characteristics of the sample appear in only 40% of the studies, and the precision and validity of the measuring instruments were not explicit in 40% of the cases. Moreover, just 40% explain their significance level; however, in the discussion section all studies indicate that the results are consistent with other publications through comparative studies.

In sociology, the type of study appears in only 10 % of the cases. The study environment and the number and characteristics of the sample appear in 60% of the cases. 70% of the writings create their instruments, however, their validity was not emphasized. The statistical analysis reveals the results in all of studies, and only 10% of the cases carry out a discussion part.

In economics, 40% of the studies indicate their type of study, and the study environment is present in all of them. However, 50 % indicate the characteristics of sample, furthermore, 80% use instruments created for the purpose of the study and just 10% clarified their validity, and only 30% of the cases described their procedure in detail, 40% pronounced their significance of the results. Moreover, 20% of the works used other literature in the discussion, and just 30% cited their study limitations.

In engineering sciences, the total of work mentions their study environment, but the type of study is not reported in all of paper. The instruments are all imported with their validities, while 20% have not given results; by the way, 30% of the studies reported their study limitations.

4. Discussion

This survey is necessary because it highlights the practice of research method, which is described as the guarantor of methodological rigor, as it contains subsections, and because they influence each other.

This diagnosis makes it possible to raise the gaps in the practice of the research method for improvement purposes.

Given the results of the interviews with teacher-researchers, it was found that the sections most at stake are data analysis and data collection. In addition, analysis of research works indicates the deficiency in all method sections.

Because, most studies do not describe their procedures for either data collection or data analysis, which limits their transparency (Fortin, 2016). Moreover, the statistical analysis is the main component that allows research to be empirical rather than abstract, it allows us to confirm our findings, furthermore, Assar (2015) stipulate that the artifact must meet the needs of the applicant, and it must be adapted to the context.

5. Conclusion

The aim of this study is diagnosis of the application of the research method by students in different disciplines, and, the results obtained show that, the rules and standards relating to the normative practices of the method are not respected in most of the works.

In order to remedy the standardization of the research method, and its adaptation to the contexts of the needs of different disciplines, there are some recommendations:

- The reinforcement of research methodology courses within training courses (bachelor's degrees, master's degrees, and doctorate) in all disciplines.
- The requirement for the development of a research work plan and the clarification of the method
- The characterization of each method section and linking all parts of the method in order to respect the epistemological act
- Teaching based on the universal standards of critical thinking to generate critical thinkers.
- At the strategic level, embedding the research culture and adherence to norms and standards to ensure the integrity of the research method
- The choice and/or design of data collection and analysis instruments must be justified, rational and clarified.

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CONNECTIONS OF REAL AND VIRTUAL SOCIAL STATUS OF INSTAGRAM USERS

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Abstract

Today, the transition of everyday communications to virtual space not only gives its participants endless opportunities for constructing their own self-presentations, but also constantly sets them the task of adequately “reading” the self-presentations of other users. Thus, we can talk about the formation of a person’s virtual social status, which can be defined as a combination of self-representative characteristics of a network communication subject and formed on their basis the social-perceptive consensus of other users.

The hypothesis of the study: the virtual social status of the user, based on an assessment by external "experts" of his network self-presentation, is associated with the personal characteristics of users.

Attribution parameters which were used to analyze the user's virtual social status were: the quantity and quality of social connections, experience with other cultures, physical and mental health, education and socio-psychological status in various groups. Personal features of users were assessed by questionnaires the “Big Five” and the “Dark Triad”, as well as the level of self-monitoring. During the study, 72 respondents rated 50 profiles of unfamiliar Instagram users who pre-filled personality questionnaires using a specially designed questionnaire.

The results indicate that the attribution of the user by an outside observer of his profile is associated with neuroticism, Machiavellianism, narcissism and high self-monitoring. The found interrelationships are generally consistent with the results of studies of the personal determinants of social status in real interaction.

It can be said that real and virtual social status represent a single phenomenon, presented in a different social context.

Keywords: *Self-presentations, social status, personal characteristics.*

1. Introduction

The social status of a person, being initially a sociological concept, today is one of the basic for the social sciences as a whole. However, despite the almost century-old tradition of use, it includes more and more meaningfully heterogeneous parameters (Folomeeva, Fedotova 2018). In socio-psychological optics, social status is understood as the unity of the objectively distinguishing characteristics of a person, defining his position in the social community and the result of his subjective assessment by other members of the group. The central issue in this case is the search for the ratio of objective and subjective parameters of social status, as well as mechanisms that implement this ratio. The erosion of objectivity inevitably complicates attributive schemes, strengthening the role of prototypical and narrative components in them (Folomeeva, Fedotova 2018; Anderson et al. 2015; Hays et al. 2015).

The transition of an increasing number of everyday communications to virtual space, on the one hand, gives its participants almost endless possibilities for constructing their own self-presentations and, on the other hand, constantly challenges them to adequately “read” the self-presentations of other users. In other words, we can talk about the formation of a person’s virtual social status. The latter, by analogy with the real one, can be defined as a combination of the self-presenting characteristics of the subject of network communication and the social-perceptive consensus of other users formed on their basis. And if a sufficient number of studies have already been devoted to the features of self-construction in network interaction (Belinskaya, Gavrichenko 2018; Astrid et al. 2006; Seidman 2013 et al.; Palmer, Tackett, 2018), there are not too much empirical studies of the processes of social attribution in the virtual space (Gosling 2011; Anderson et al 2015).

2. Problem

In this regard, a whole number of research questions arise, namely: how do the real and virtual social status of a person compare? How much can our virtual self-presentations affect the way we are perceived and evaluated in real interaction? How much personal characteristics of a user can be “read” through his network self-presentations.

2.1. Research hypothesis

The general hypothesis of the empirical study was the assumption that the virtual social status of the user, based on an assessment by external "experts" of his network self-presentation, is associated with the personal characteristics of users.

2.2. Procedure and research methods

At the first stage of the study, 65 respondents, active users of the social network Instagram, agreed to provide links to their profiles. They filled out a short socio-demographic questionnaire, as well as 3 standardized methods: 1) a brief questionnaire of the Big Five, (Kornilova, Chumakova 2016); 2) the questionnaire “The Dark Triad”, (Kornilova et al. 2015); 3) the questionnaire on the ability to manage self-presentation in communication, (Amyaga 1998).

The aim of the second stage of the study was to evaluate the profiles provided at the first stage by “experts”. The respondents of this stage filled in the author's questionnaire aimed at assessing the perceived social status of the user. All questions were rated on a scale of 1 to 7; each of the expert evaluated three profiles of people unfamiliar to him, guided by rating the photos that were presented in profiles the information about the number of publications, the number of subscribers and subscriptions. All personal information (name, surname, links to profiles on various social networks and personal sites) was hidden.

3. Results and discussion

After obtaining “expert” assessments of virtual social status, the degree of their consistency was determined, for which the Kendall concordance coefficient (W ; $p \leq 0.05$) was used. For profiles that have agreed expert evaluations, values were calculated by five selected parameters of social status corresponding to five blocks of questions developed by the questionnaire. Correlation analysis was carried out using the Spearman and Pearson criteria.

A connection was found between neuroticism and high virtual social status, expressed in the parameters of social connections and the socio-psychological status of a person in a group. It seems that in the conditions of virtual communication, this data can be a strategy to cope with the discomfort and anxiety associated with low control of social interaction, the reasons for which are the features of the virtual environment. At the same time, within the framework of virtual interaction in the Instagram social network, people with a high level of neuroticism can have advantages in maintaining and enhancing their virtual social status associated with their increased attention to the image of their self-image, perceived and evaluated by other participants.

A relationship has been revealed between the expressed level of user self-monitoring and attribution to him of high indicators of virtual social status. This relationship was based on such parameter as the quantity and quality of social connections. This data is consistent with the general patterns of perception and assessment of social status.

The results, indicating the absence of correlation dependencies between openness to experience and parameters of virtual social status, show that popular and mastered by many users social networks lower the social advantage of people with a high level of openness to experience, associated with creativity, a high diversity of interests and desire to risk. For people with a low level of openness to experience, social networks are familiar and, therefore, safe platforms for interaction.

The discovered positive relationship between users' Machiavellianism and some parameters of their virtual social status can be explained as follows. Any virtual social network is characterized by a much lower structure of the social hierarchy than in the real communication space, which allows users with high Machiavellian indicators to successfully apply specific self-presentation tactics for the purpose of social self-promotion.

The result obtained in our study about the connection between a high level of user narcissism and attribution of a high virtual social status shows that this relationship is strengthened in the social network Instagram because of the great ability to satisfy narcissistic users their need for attention and a positive assessment of others, as well as because of their increased sensitivity to social status

4. Conclusion

Attribution of the user by an outside observer of his profile of certain parameters of social status (virtual social status) is associated with such personal characteristics of the user as neuroticism, Machiavellianism, narcissism and self-monitoring. The found interconnections are consistent with the results of studies devoted to the investigations of personality determinants of social status in the space of real interaction, as well as studies of virtual self-presentation on the Facebook network. This fact indicates the dominant role of these personality traits in attributing a particular social position, regardless of forms of interaction. The revealed similarities confirm the point of view that real and virtual social status is a single phenomenon with universal motivational grounds. It is presented in a different social context: within the framework of a virtual and transitive space, which are united by at least two of their characteristics - variability and multiplicity (Belinskaya, Martsinkovskaya 2018). Moreover, the features of the environment within which social status is considered determine the features of its external presentation, as well as change the nature of the connection with personal characteristics, increasing or decreasing the effectiveness of various behavioral strategies associated with them.

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SOCIAL NETWORKS IN FRAME OF DIFFERENT GENERATIONS

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Abstract

Social networks now became an open space with huge opportunities for communication and obtaining the information. Although the Internet is used by people of different ages, the positioning structure of different generations in social networks is not uniform. The purpose of this work was to study social networks preferred by each group, the time spent online, the goals of Internet communication, and the degree of emotional comfort in online situation. It involved 176 respondents divided in 3 groups: I – 80 (17-19); II -60 (28-37), III-36 (38-45). The obtained data showed that social media is the leading channel for obtaining information for all groups and they often act as echo cameras. For young people most important are Instagram, Twitter, etc. For people 28-37 years Facebook remain the leader, while the third group is characterized by the absence of a preferred social network. An important advantage of “Stories” is the ability to adjust the time of the existence of information, the safety and the “transparency”. The results showed a significant discrepancy in the choice of social networks between users of different generations. With age the degree of trust in information decreases, as well as the time spent online. Young people are online all day long. For them most important is constant communication and transparency. For groups II and III – is the interesting information. The situation online is ambivalent for the emotional well-being of youth, stimulating on the one hand personal development and self-improvement, and on the other, phubbing and vulnerability to shaming and cyberbullying.

Keywords: *Social networks, virtual space, safety, transparency.*

1. Introduction

The space of socialization of modern people has noticeably transformed, expanded and become more complicated. The new digital lifestyle is determined by the many real and virtual worlds. A sharp leap in the development of digital technology has increased the number of information flows (Belinskaya, Martsinkovskaya, 2018; Golubeva, 2018). Along with the expansion of the information space, the process of socialization has changed (Ayanyan, Martsinkovskaya, 2016). The high intensity of digital streams and communication in the virtual space surrounding modern youth allows us to talk about the information lifestyle of megacities (Hays et al. 2015). The direction and content of information socialization can be determined on the basis of the process of self-categorization or group identity of a modern user (Anderson et al. 2015; Gosling et al. 2011). About the priorities and interests of a person, as well as about his identity group we can judge according to the choice of the most preferred and significant source of information (Seidman, 2013).

1.1. Problem

It can be stated that social networks represent a platform for self-expression and self-presentation. Social networks offer endless opportunities to conduct experiments with identity. That's why it is especially important to study social networks from the point of view of features of communication and self-presentation people of different ages.

1.2. Procedure and research methods

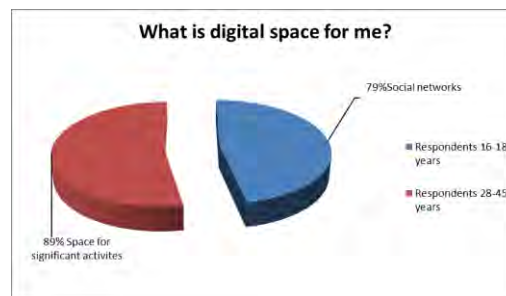
There was developed a questionnaire, aimed to investigate the main social networks and the goals of different users. The study involved 176 respondents divided in 3 groups: I – 80 (17-19); II -60 (28-37), III-36 (38-45). All participants were aware of its objectives and agreed to participate in the work.

2. Results and discussion

Obtained results gave the opportunity to see highlight, the main functions and trends in the communication with digital space and social networks by modern users. For young users the digital space

means primarily social networks, this is the opinion of 79% respondents. The older generation (89%) defines digital space as a field of professional activity. All users, besides the age, consider digital space as a continuation of off-line life, with a set of new features and opportunities. Young people don't divide their world on a virtual or real one (figure 1).

Figure 1. Relation to digital space.



Among the key advantages of the digital space, users aged 28-37 highlight the ability to independently select information that corresponds to their interests (95%). The key issue here is an ability to configure filters for search engines, applications and social networks so that one can select specific content, channels, subscriptions, and exclude anything else that doesn't match his or her sphere of interest.

The younger generation (17-25 years old), in contrast to the older one, highlight several important advantages of the digital space: 1. Fast communication. Instant messaging, the ability to quickly create communication (100%). 2. Domination of video content (91%). 3. Freedom of self-expression. The ability to create a new version of one-self (76%). 4. The opportunity to look at the lives and achievements of other people and get "someone else's experience" (70%).

Young the users prefer to receive quality information and to share information. Almost all participants (96%) noted that they try to monitor the quality of received content which should be systematized, structured and comprehensible. In other words, modern users value not only the quality of the received information, but also the way of how the information was submitted. They prefer an ability to tell simply about complex things.

The elder generations at the contrary don't simplify the information. They prefer scientific or hobby information. They also want mainly to receive, but not to share information. Only 5% of participants have high requirements for the content they share. It is essential for them to demonstrate their professional, personal qualities and achievements to other users.

Special attention should be paid to the analysis of attitudes toward social networks. There are striking differences in the functional meaning of social networks among the participants of three age groups. For the second groups (100%), Facebook is not only a service for establishing connections, but it is also a leading channel for getting information they are interested in. Such users do not receive totally new information on Facebook; they obtain well-known information in a more detailed form. In that way they get a confirmation of already established beliefs and attitudes. Unlike mainstream media, social networks give them what they want to hear. Users attribute similar function to Telegram channels, focusing on thematic diversity as well. As for the third group, it is characterized by the absence of a preferred social network and preferred content. Mainly they want to communicate and to receive the amazing information.

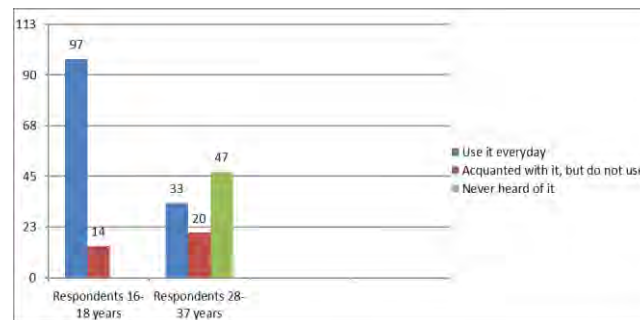
Users between 17 - 25 years old esteem Facebook in a different way. They all have their pages at this network, while 92% of respondents noted that they don't remember when they visited their page for the last time. Younger generations view social media as recreation. The main network's function is considered to be communication, mood boost and stress reliever (87%). Every second user has indicated that comfort is essential for him or her. For this reason, there is an increased demand for the social network Vkontakte (a popular Russian social network) where users do not create their own content, but share content from other resources in order to have fun and lighten the mood. Basically, Vkontakte is a platform for downloading music, communication and watching videos (97%).

YouTube (100% of the entire sample) and IGTV (77%) remain leader in video content. Services such as streaming video remain their leading positions among young people (97%). (figure 2)

Following the motto "Live this moment", the younger generation is ready to change, to take a risk and has a desire to experiment. Such network resources make it possible to experiment with emotions and humor. These networks reflect young people's life and help them to develop their own individual style. 61% of participants declare that a Snapchat makes it possible to show their real life due to live broadcast. Facebook and Instagram present "refined" images and best moments of life. On the other hand, streaming video services show a more realistic picture of the world, where one can share his mood whether it's good or bad. So, it can be said, that if elder people like mostly "best moments" younger ones prefer "transparency". Many young people answer that they are able to stream their life 24 hours a day,

show their entire life to other users online. Active users state that instant assessment of their actions and behavior during video streaming (likes, comments) makes them “better”. They try to eat healthy food, become sportsmen, attend events, share experience, lead a proper lifestyle, etc.

Figure 2. The popularity of video streaming usage.



3. Conclusion

The obtained data makes it possible to conclude that the digital space is perceived differently by various generations. For older generations digital space is important in obtaining interesting information. Younger generation is more interested in social networks which help to communicate, improve mood and relieve stress. So, we can say that modern social networks satisfy the young people’s need for information and communication. They also help them to share their emotions during communication.

For the all users digital space plays a big role in today’s transitive world, especially social networks and blogging. They are important because they remove many barriers including social ones; expand the world-image and help to pick different ideas about reality. Young people consider social networks as their subjective space, that’s why they are online all day long. As they say, social networks help to gain “virtual experience” and make a decision whether a person wants to get this kind of experience in real life; allow everyone to “live” many different lives.

With age the degree of trust in information decreases, as well as the time spent online. The situation online is ambivalent for the emotional well-being, stimulating on the one hand personal development and self-improvement, and on the other, phubbing and vulnerability to shaming and cyberbullying.

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GENDER CONDITIONALITY OF ENVY

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Abstract

Whether a man or a woman, it is very important into what culture, time and country you are born in order to live a happy and fulfilled life. Gender stereotypes in various cultures and social relationships often inhibit living according to one's own ideas which can affect the quality of life or health. Within the university psychology education (University of Ostrava, Faculty of Education, Czech Republic), we asked 20 study groups (approx. 600 people, out of which 100 were men) two questions: 1) Are men more envious of men than women of women? 2) What do you envy in the opposite gender? A discussion usually followed lasting throughout the whole gender-focused seminar and we recorded the answers. The results imply that women experience envy in more areas, recognizing that men have a greater level of freedom of expression in various environments, which causes women to experience negative emotions due to such findings. Unfortunately, we also recorded a trend of deep and primary biological-psychological topics departing from the substance given by gender, for example that women would give up their ability to give birth (in "favour" of men). The men usually came up with inspiring reflections on perceiving the men's and women's world than primarily with envy, or grudge. The survey provided plentiful topics for further lessons and research where we are currently improving the quality of quantitative data collected thanks to a more precise methodology.

Keywords: *Gender, education, envy, self-esteem, Czech Republic.*

1. Introduction

Gender is a term used to describe culturally and socially established differences between men and women. In short, gender stereotypes and prejudices assign different traits and life roles to men and women in relation to their sex. They differ and change (or persist) over generations in various cultures and in relation to the social relations. In the Czech Republic, for example, there is still a belief that women should take care of the household and children and the model of femininity is a meek and gentle being, satisfying the needs of others. Men are perceived as the breadwinners, technically competent, good drivers, and their role is based on success and competitiveness. These inappropriate gender stereotypes do not only deny people to live their lives according to their own notions, but they may lead to more serious health-related consequences, such as bulimia or mental anorexia (due to the stereotype that girls should be slim and look like the current ideal of beauty, often unreasonable) or other serious psychological or even psychiatric disorders, caused, for example, by not being able to express one's emotions without being mocked in case of men (especially sadness through crying) and release one's aggression or tension in this way. At the same time, there has been a pressure to change these stereotypes, which is also bringing a considerable level of stress. For instance, it is stressful for men to maintain the "status" of a breadwinner, protector, competent fighter, while transforming into a sensitive father who takes care of his wife and children, and participates in household chores. This is a very popular topic with which we go into greater detail in our seminar on *Family Psychology for Future Elementary and High School Teachers* bringing interesting and even heated discussion. Lately, the seminars are more and more visited by men and we notice highly satisfactory transformations of roles, or changes in the thinking of men and women, at least those in the university environment focused on humanities. In case of men, this transformation is in favor of more natural expressions of emotions without feeling ashamed, better self-awareness and focus on a more specific division of roles in the household. Paradoxically, it is often women who call for equality of roles – especially at home and at work – while actually conforming to the "male" (even a bit "sociopathic") traits, and when a man emancipates himself, he is often called by women (and society) to be "hen-pecked" because the women have acquired the image of an "ideal man" either from their original families, or from the media. This way, the stereotype of a "macho" (who will never help around the house or with children) is being preserved. And once again, women – mothers are those who provide their sons with the perfect service (unlike daughters who are taught to satisfy the needs of others, especially of men, before their own) in the form of keeping their closets and rooms neat and

serving warm dinners long into their adulthood and then they are surprised when they demand the same from their wives, or that their wives do not provide such a service to their sons. Such marriages are not usually very peaceful. In spite of that, the results of surveys of subjectively perceived quality of life state that there is no difference between the satisfaction of men and women – both at work and in their personal lives (such as Čadová, N. (2018). How can this contradiction be explained?

2. Design

Twenty study groups of the *Family Psychology* seminar from various fields of study, especially at the Faculty of Education (but also from the Faculties of Medicine, Sciences, Art and Social Studies) participated in the study. In total, we collected data from 600 students, out of which 100 were men. The students were asked two questions. The first one, establishing atmosphere, focused on a contemplation of the definition of envy and its types, what the students think about whether men are more envious of other men than women of other women and what they envied (and whom) when they were children etc. The second question focused on “what do you envy in the opposite sex?” The answers were recorded and later classified according to their frequency.

3. Objectives

The objective of the study was to present students with another topic for discussion regarding gender stereotypes based on the answers. We were interested in finding out whether or not the students can recognize what is determined and what is influenced by gender. And what are their attitudes?

4. Methods

The students were asked whether they think that men envy other men more or women envy other women and why. Then, we developed a discussion about the object of envy from their childhood. The key question followed: What do you envy in the opposite sex?

5. Results

We recorded all the answers and sorted them out according to frequency (from most common to the least represented). We obtained the following results.

Women (envy in men the following):

- Their lives are simply easier
- They do not have to birth children
- They do not menstruate
- They do not have to serve in the army anymore
- Type of friendships
- Carelessness
- They play all the time
- They do not have to deal with most household chores
- More free time
- Freer life (“I am afraid to go out after dark; I couldn’t go outside like my brother when I was a child”)
- They do not have to put on makeup (take care of their appearance as much)
- They can pee standing
- Peeing (everywhere)
- They argue and have a fight and then it’s okay but women are always trying to resolve problems
- Strength
- Better job opportunities
- I don’t know
- Nothing

Men (envy in women the following):

- NOTHING
- Empathy, sensibility (they are like that and they can express it)
- Natural approach to children (“I have to learn how to do it”)
- It’s easier for them, every man helps them when they smile
- They get what they want by manipulating men but I have to work hard to get what I want
- Women are taken into consideration more than men
- The child/mother relationship in the first year of life

6. Discussion

It is obvious that the list of women's "envies" is much more extensive and the frequency of answers was represented more equally than in men's answers where "nothing" prevailed and the remaining answers followed with a large gap. This is probably also given by the considerable dominance and eloquence of female students as men were in a minority at the seminars (the discussion had to be carefully moderated), however, the topics and the course of the seminar were similar with each group. There were even moments of high tension, or even resentment, especially on the part of women against men who tried to dispute some of the things that the women mentioned. On the other hand, the men often agreed with the women's conclusions and stated that women do have a more difficult life. An interesting finding was that the women found it difficult to differentiate between the biological and gender substance of the phenomena. They resigned to assign everything to biology, i.e. that a woman is predetermined to have a more complicated life. On the contrary, men in some humanity studies were able to reflect (we take into account that this was a specific university population) that the situation in equal opportunities should change and they were not as aware of the obvious impact of media (especially advertising) on the male (a man as a hero, breadwinner, or a "dummy" with a bit of a cold as lately proclaimed in advertisements) and female roles (a woman as a "shrew" against men, a sexual object, a child-minder, an ideal capable mother-wife-manager). On the other hand, the fact that men did not mention more things does not mean that men are not as envious of women, maybe they just did not say what they wanted to, which is in compliance with the gender stereotype of a "hero" who never complains. However, it was perplexing to hear women state that they envy men because they do not have to birth children and deal with menstruation. This fact deeply reflects the sociocultural perception of a woman (and a man), as well as the strong, inner imbalance and low confidence in femininity itself. The question arises whether and how would these answers change in the course of their lives, or whether or not they depend on the type and level of education and so on. Based on these examinations in our seminars, we continue to ask the following question: how is it possible that statistically women in surveys are as subjectively satisfied in various areas of life as men? Because if that is true, then the likelihood of a change is very low.

The methodological aspect of the study is a critical point and we are aware of the weaknesses. However, we have to take into account that the primary objective was educational and that the originally intended simple method was sufficient for this purpose. We decided to sort out and publish the answers of the participants with regard to the complex and topically recurring views and in the future, we will process the data in a more sophisticated way.

7. Conclusions

Young women and men, in the case of our sample of mostly future elementary and high school teachers, have a lot to say about gender stereotypes. It turned out that women's envy with regard to the perceived advantages of "being a man" is quite high and it often conceals remorse or anger, and definitely accumulated emotions. Gender is often confused with biological predetermination and the related powerlessness in changing anything. As a result, women disrespect their biological essence and consider their foundation to be a burden. Incidentally, could this be one of the reasons of Europe's low birthrate? Parenting, education in schools and the impact of media often promotes gender stereotypes – both in men and women. Elementary and high schools lack a subject on partnership and parenting, there is only sexual education. In families, there is often a lack of a model father figure and family relations disintegrate. It is quite obvious that we are going through a period of relationship transformation and that there is still a lot to do in the field of the roles of men and women.

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PARENT-CHILD RELATIONSHIPS AND THE FORMATION OF THE PERSONALITY OF CHILDREN FROM MIGRANT FAMILIES

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Abstract

The paper contains the results of a theoretical analysis of the problem of the influence of parent-child relationships on the formation of a child's personality. The main factors that activate the personal development of children in a situation of socio-psychological adaptation are described. The results of an empirical study related to the diagnosis of the image of the mother in children from migrant families are presented. The paper shows that the image of the mother is an important factor in the formation of the child's personality, an indicator of his or her success in socio-psychological interactions. It is empirically proven that the interaction with the mother in preschool children with a positive image of the Self is distinguished by emotional closeness and harmonious contacts. In its turn, the interaction with the mother in preschool children with a negative image of the Self is characterized by the ambivalence of manifestations, a restrained, disharmonious background of contacts. It is noted that these characteristics of parent-child relationships are the basic stimulus for the formation of the ideas of the Self and significant Others in preschool children.

Keywords: Migrant children, parent-child relationships, self-image, personality of the child.

1. Introduction

The problem of parent-child relationships is relevant regardless of time. The variety of conceptual studies allows us to suggest that parent-child relationships affect the child's self-awareness in the process of education. Undoubtedly, this problem is acute in the families of migrants since the unstable situation in the new society of parents is reflected in the socio-psychological well-being of their children.

The problem of migration of children and adults are studied by many Russian scientists. Thus, V.V. Konstantinov, E.V. Ryaguzova, R.M. Shamionov studied in their research the social tension in society and the specifics of the socio-psychological adaptation of adults and children in a new multicultural space.

The formation of the child's image of the Self and his or her self-consciousness is influenced by the peculiarities of upbringing, early relations of the mother and the child, personal characteristics of parents, recurring family conflicts, psychological problems of the child associated with family problems, the adaptation to new sociocultural changes in another society.

A. Freud singled out the relations between the child and the parents as the main source of the child's development. She pointed out that the child's experiences influence his or her development Frejd, (1990). A similar point of view was expressed by C. Jung. The scientist believed that the mental state of the child depends on the unconscious reactions of the parents Yung, (1994). In this connection, it is interesting to mention the point of view of E. Erikson who noted the role of social reality in the development of the child's personality Erikson, (1996).

The emotional aspect of the manifestation of parental love was considered by E. Fromm. The scientist believed that parental love acts as an activating component in the development of a personality Fromm, (1992). A similar point of view can be found in the research of D. Bowlby. The scientist came to the conclusion that the child's affection is accompanied by a need for protection and safety, and helps him or her successfully adapt to society Boulbi, (1996).

Thus, Western conceptual research is based on the fact that parental attitude and behavior have a strong influence on the formation of a child's self-awareness and, thus, on his or her successful socio-psychological adaptation in society. This can be especially acute in migrant families. This is due to the fact that migrants undergo pronounced changes in their lifestyle which entails a shortage of the resources of emotional and personal interaction.

Russian researchers consider both parent-child interaction and the identity of the parent affecting the development of the child. So, A.K. Rubchenko believes that parent-child relationships should be

considered through the phenomenon of maternal and paternal “instinct”, the image of the Self, Self-concept and personal characteristics Rubchenko, (2005). According to O.A. Karabanova, the formation of a child’s personality is influenced by the following parameters Karabanova, (2004): the specificity of emotional connections; the degree of involvement of subjects in parent-child relationships; meeting the needs of the child; a style of communication with the child; the resolution of problem situations; social control; the degree of consistency in family upbringing.

Thus, the data obtained during the analysis of the studies allows us to state that the personal characteristics of parents, their relationship to the child largely determines the dynamics of the development of the child’s personality.

In this connection, we suggested that the context of parent-child relationships, in particular the image of the mother, affects the formation of the personality of the preschool child, his or her self-attitude and the attitude towards significant Others.

We conducted a study to confirm the hypothesis. The respondents were preschool children from migrant families who attend preschool institutions.

2. Methods

As preparatory work using projective techniques, we studied the personal characteristics of children, on the basis of which we divided children into two groups: children with a positive image of the Self, and children with a negative image of the Self.

For diagnosing the children under test, the projective methodology “A drawing of a child (mother) in the image of an animal” in the modification of I.S. Chegina according to the “Drawing a Family” methodology in the interpretation of T. Zinkevich-Evstigneeva, D. Kudzilova. The respondents were 270 children of senior preschool age (120 boys and 150 girls).

The drawings were analyzed by the quantitative method of mathematical statistics (the Pearson chi-square) and the qualitative method (Table 1).

3. Results

Table 1. Statistical verification (a drawing of the mother in the image of an animal) using the Pearson chi-square.

The image of a child’s Self		The aesthetics of the image	The location of image	The decoration of the image	Generic assignment	Emotional attitude
The positive image of a child’s Self	x ² -value	7,385	22,615	37,385	59,769	0,462
	p-value	0,007	0,019	0,003	0,003	0,497
The negative image of a child’s Self	x ² -value	29,727	24,818	59,182	16,636	37,909
	p-value	0,025	0,026	0,005	0,004	0,007

The children with a positive image of the Self drew figures with clear details in the association of the image of the mother. In most of them, the animal images are distinguished by high aesthetics of the image, good drawing of details and parts of the image as well as the proportionality of the figure of the depicted animal with the sheet area, which is confirmed by the high level of statistical significance ($p \leq 0.001$) according to all the considered criteria. In the characteristics of the authors all the images of animals are called by diminutive and affectionate names (for example, a butterfly – “Laska”, a butterfly – “Zvyozdochka”, a kitty – “Liza”, etc.).

From the children’s stories it also follows that the depicted animals have extremely warm emotions and feelings for the children (for example, “... loves to praise me”, “loves me very much”). The listed characteristics in this case indicate full emotional acceptance by the child of his or her mother, as well as the harmony of child-mother relationships. According to the generic assignment, the drawn animals can be attributed to both the class of domestic and the one of predatory, wild animals. The description traces the change in the emotional background of the mood in relation to the depicted animal from positive to neutral and vice versa. In the description of an animal’s disposition, positive characteristics are often replaced by negative ones (for example, “likes to have fun ... gets angry when somebody prevents it from doing...etc.). The descriptions contain answers to the questions asked in the instructions.

The listed characteristics in this case indicate the child’s emotional acceptance of their mother, however, it is not possible to say about the complete harmony of mother and child relations since the above

mismatches in the drawings or descriptions of the animals by children may indicate the existence of psychological prohibitions or some emotional distancing in parent-child relationships.

The children with the negative image of the Self depicted the animals with missing details. The sizes of the figures are mostly small. There are a lot of drawings in which the animals are located below the centre of the leaf. The listed indicators were confirmed by a high level of statistical significance (at $p \leq 0.001$). According to the generic assignment, the drawn animals can be attributed to both the class of domestic animals and the one of predatory and wild animals.

In the characteristics of the authors the depicted images are often called by the names of their domestic animals (for example, a cat – “Vasya”), as well as by fictitious names (a grass-snake – “Bogdan”). There is often ignoring the question of the name (“this panther will be called ... Panther”, “... I don't know what to call it!”). A similar fact may indicate that the children practically do not identify the resulting image of the animal with the image of the mother, and therefore do not call the animal her name. The descriptions, as a rule, are short, monosyllabic, not fully revealing the characteristics of the mores and habits of the animals. The emotional attitude in the children towards the image is most often neutral, however, negative statements are not excluded.

In the characteristics the descriptions of the animal's actions are more prevailing than its qualities and properties (“... likes to watch TV”, “... scolds when my brother and I are bullies”). It is important to note that in the group of the children with the negative image of the Self, in contrast to the other group of the children, there are violations of the instructions, i.e. the children instead of representing and drawing the image of the animal drew the image of a person. Such a mismatch in this case may indicate either the presence of psychological prohibitions in the relationship of the child with the mother, or the authoritarian position of the mother in the parent-child relationship, which does not allow the child to depict or even present the mother in a different way.

Thus, it can be stated that the nature of parent-child relationships is expressed in the collective image of parents, in particular the image of the mother and acts as an indicator of the well-being / dysfunction of the child's personal development, his or attitude to the world and his or her own self. This characteristic is especially characteristic of the rooted ideas of the positive / negative images of the mother in children of migrants in the situations of socio-psychological adaptation.

4. Conclusion

The educational impact of the mother on the child is one of the most important components of the maternal relationship revealing the features of the disciplining foundation in family education through the measurement of key indicators. Mothers in the groups of preschool-age children with different specific characteristics of the image of the Self it has their own characteristics:

- in the group of the children with a positive image of the Self it is distinguished by gentleness, emotional closeness in relations with a child, acceptance of his or her personal qualities and behavioural manifestations.

- in the group of the children with a negative image of the Self the maternal attitude manifests itself as not sufficiently harmonious, which is a serious destabilizing factor in the development of the child's personality.

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SELF-REVIEW OF PARENTING STYLES: EXPERIENCES IN A GROUP OF SOCIALLY VULNERABLE MOTHERS IN NORTHERN BRAZIL

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Abstract

This study presents a proposal for a group intervention with mothers of children from six to twelve years old in a situation of social vulnerability. We aimed to encourage the participants to identify the parenting style they adopt and alternatives for action, test changes in behavior between group meetings and evaluate the results of their efforts. The qualitative field research described corresponds to one of the groups created in 2018 in the context of an action research implemented at the University of Amazônia (UNAMA), Belém, located in Northern Brazil. We selected five participants who were present in at least 60% of the ten weekly meetings held in a group of mothers formed at the UNAMA psychology school clinic. Verbal exchanges in meetings and individual interviews supported the realization of content analysis, based on the formation of analysis categories corresponding to three parenting styles: authoritative or democratic, authoritarian and permissive. We noticed a growing movement of the participants towards the adoption of assertive and empathetic attitudes, combining display of affection with the establishment of consistent rules and limits. We conclude that changes towards the adoption of an authoritative parenting style generated positive impacts on family relationships based on the understanding of the role of model identified by the participants in themselves. Social skills made a difference in the family and led to developments in the behavior of children at school, indicating that it is a way to overcome the situation of social vulnerability in which they find themselves.

Keywords: *Social vulnerability, parenting styles, social skills, group interventions.*

1. Introduction

Social vulnerability situations have specific features depending on the social contexts evaluated. Thus, the inequality of opportunity between different sectors of the population is not limited to the so-called Global-South. According to Fischer and Fröhlich-Gildhoff (2019), even in the case of Germany, a country that represents the Global North or the West very well, foreigners and their descendants are considered socially vulnerable, being the focus of different interventions since joining in preschool.

Childhood is usually seen as a fundamental period for a given individual development. Longitudinal studies started in the 1950s on Kauai, an island in Hawaii, explain the importance of protective factors for the healthy development of children. Even when exposed to risk factors since birth, the presence of a significant adult in childhood, supporting and trusting them, favors the development of resilience and the overcoming of different challenges throughout development (Werner & Smith, 1982).

Protection and risk factors are still being studied in different contexts. In this work, we highlight those related to parenting styles, considering that the way parents act in order to educate their children can have predictable positive and negative effects, although not always by themselves.

Parental styles were differentiated taking into account two dimensions of disciplinary practices - responsiveness to children's needs and parental demand. One of the styles is considered the most appropriate, as it represents the presence of the two dimensions (authoritative style). In the others, therefore, there is the absence of both (negligent style) or the most striking presence of one of them, such as responsiveness (indulgent style) or demand (authoritarian style) (Weber, Prado, Viezzer, & Brandenburg, 2004). It is worth noting that Baumrind (1966) previously categorized only three parenting styles. Indulgent and negligent styles are a development of what he identified as permissive style.

On the other hand, aggressiveness, passivity and assertiveness are broad classes of interpersonal performances (Del Prette & Del Prette, 2011) that allow the establishment of the following statements: authoritative parents would be more assertive, while authoritarian parents would tend to be more imposing and even aggressive, and indulgent and negligent parents would be closer to passivity in the face of their children's wishes and demands.

There is a vast literature that highlights the value of assertiveness for the quality of interpersonal relationships and even for the quality of life. The assertive individual would be better able to express his thoughts and feelings, respectfully sharing his internal world. Being assertive also involves gathering words and acting consistently with them, favoring an alliance between understanding and being understood. According to Teixeira, Del Prette and Del Prette (2016), one of the most used concepts of assertiveness defines it as an "ability to express feelings and desires appropriately, defend one's own rights and respect those of the other" (p. 57).

Considering that the authoritative parenting style favors relationships between parents and children (Weber et al., 2004), children who live with parents adopting it have assertiveness models at home since the beginning of life. Closing the argument, the positive exchanges would favor social skills, the support, and the confidence necessary for the development of resilience.

Resilience is a term that can be opposed to vulnerability (Fischer & Fröhlich-Gildhoff (2019), but social vulnerability implies disadvantages that are widely distributed to a certain segment of the population. Such people are exposed to the maintenance of the underprivileged situation in which they find themselves at the present moment and beyond, in the case of their descendants (Wünsche & Fischer, 2020). Although strengthening individuals is not enough to reverse generalized social injustices, it is easy to see the double destructive effect of the encounter between social vulnerability and emotional fragility, especially in the family environment, where the protection of children's healthy development is expected.

With this field study we describe procedures that are being investigated and refined in an action research that combines non-coercion, social skills and resilience. We present group interventions with mothers in situation of social vulnerability, aiming to encourage the participants to identify the parenting style they adopt and alternatives for action, test changes in behavior between group meetings and evaluate the results of their efforts. In the action research the procedures used are evaluated and improved in order to allow future advances.

2. Experiential groups

This qualitative field study corresponds to one of the groups created in 2018 in the context of an action research implemented at the University of the Amazon (UNAMA), in Belém, in the north of Brazil, entitled "Experiential Groups and Life in Society: An Interdisciplinary Intervention" (Darwich & Garcia, 2019).

Five participants from a group of mothers formed at UNAMA's school-clinic of psychology (CLIPSI) participated in the study. The children's ages ranged from 6 to 12 years; the mothers', between 20 and 40 years. The inclusion criterion was an attendance of at least 60% in the ten weekly meetings held.

The conversation circle started at each meeting with the shared reading of a poem, followed by reflections on themes brought up by the participants, for instance: general information on the positive effects of assertiveness and coping with problems through dialogue; negative effects of punishments, escapes and avoidances; relationships between actions, thoughts and feelings; and how to favor self-esteem and self-confidence (Del Prette & Del Prette, 2017; Guilhardi, 2002; Sidman, 1989, Skinner, 1965). Reading poems together turned out to be a form of greeting from which a first question was derived, initiating the exchange of impressions and information.

Using the content analysis methodology (Bardin, 2011), three categories of analysis were created, corresponding to the authoritarian, permissive and authoritative parenting styles. For the purpose of analyzing results, we consider that such styles represent, respectively, the adoption of mainly aggressive, passive and assertive attitudes in disciplinary practices.

When the meetings started, four out of the five participants described attitudes typical of the authoritarian parenting style, with several examples of adopting an aggressive posture and difficulty regarding responsiveness, in the sense of also pointing out situations in which they showed little empathy towards their children's demands. One of the participants, on the contrary, adopted the permissive parenting style, being frequently passive towards child's demands. Therefore, none of the participants adopted the authoritative style.

After the ten meetings, one of the participants, initially authoritarian, reported to adopt the authoritative style. Another participant, although she started to give examples of less aggressive and more assertive exchanges with her son, still shouted at him when being disobeyed. The other participants, two of which with previously aggressive posture and one with passive posture, started to talk more with the children, reproducing the dialogue and the assertive reflections characteristic of the group's meetings.

It is important to note that in all five cases there was more dialogue and flexibility, less shouting, more attention, greater affection and a greater focus on the child, accompanied by praise. We concluded that only one participant managed to change towards the adoption of the authoritative style because in her case there was a clear balance between the assertive presentation of rules and limits through active listening to the child and flexibility (when necessary). In other cases, rules and limits continued to be imposed in a less flexible or less consistent manner, although the positions adopted have become more affectionate and all participants have reported important advances in the family relationship quality.

3. Conclusions

With the exchanges established in the meetings and the gradual construction of greater self-knowledge and sensitivity in the face of different perspectives, changes towards the adoption of an authoritative parenting style were observed to varying degrees among the participants. If adults are role models for children, they are also for other adults. Thus, the experiential group became a place of speech and care; being part of it meant an opportunity to listen and be heard, to agree and disagree, and to receive the necessary support to apply the knowledge acquired in the family's daily life.

It is important to highlight the “domino effect” of the changes we have made. Assertiveness and empathy in the family environment generated positive impacts on the children's school life. The new attitudes of mothers also tend to favor children to develop resilience. Together, we can foresee the favoring of personal resources construction, with inevitable and necessary social consequences in the fight to overcome the situation of social vulnerability that a large portion of the population of Brazil finds itself.

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NEUROPHYSIOLOGICAL EVALUATION OF UNDERGRADUATE PORTUGUESE YOUNG ADULTS WITH READING DIFFICULTIES

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Abstract

Introduction: Reading is a complex cognitive process that requires a simultaneous activation of different brain systems. Power EEG has been used to study activation patterns in dyslexic subjects, but so far, studies lack result's coherence, including in adult dyslexic population. The Reading Age Test (TIL) is a screening assessment for dyslexia. TIL evaluates the processes of decoding and understanding. This test is adapted and validated to Portuguese language. **Objective:** To analyze neurophysiological differences in undergraduate adults with and without reading difficulties using power EEG, and compare the results with the ones found at younger ages. **Methods:** 209 college students were administered the TIL. EEG was collected with 26 students (21 within normal reading level; 5 with severe reading difficulties signalized with TIL). During the EEG, the participant was asked to follow a sequence of tasks, during a total of 15 minutes (Basal resting state, TIL, Pos-TIL resting state, Non-reading Task; final resting state). Subsequently, the Fourier Transform (FFT) algorithm was applied to the EEG signal from the Basal resting state and the two given tasks. Power spectra mean values of delta, theta and beta activity band, from electrodes F7, F8, T3, T4, T5 and T6 were analyzed performing Shapiro-Wilk tests. **Results:** No significant differences in mean variations ($\text{sig} > 0.05$) were observed between groups during the analyzed periods, regarding electrode and brain activity band frequency. **Conclusion:** This study provided inconclusive results concerning power EEG different findings at the lower frontal gyrus region and temporal region, between subject with and without reading difficulties.

Keywords: *Dyslexic students, TIL, power EEG.*

1. Introduction

Reading is a complex cognitive process, composed of actions of apprehension and understanding, which requires the simultaneous activation of several neurological systems, namely the visual, auditory, motor, and attention. The existence of any change or deficit in one of these systems will affect the functioning of the others, leading to difficulties that can manifest in imprecise and often slow decoding of the written language, resulting in inefficient reading. Dyslexia presents itself as a heterogeneous phenotype syndrome, with a pronounced and persistent difficulty in the acquisition of reading, despite normal intelligence, sensory acuity, motivation and educational. (Snowling & Hulme, 2011; Spironelli, Penolazzi, & Angrilli, 2008).

The reading activity is based on the left hemisphere, and implicates three circuits. These are located in the occipito-temporal region, responsible for visual processing and word recognition, in the temporo-parietal region, which encompasses the superior, supra-marginal and angular temporal gyres, responsible for phonological, orthographic and semantic processing and for grapheme-phoneme conversion, and in the region of the lower frontal gyrus, involved in phonological processing and speech articulation. It is suggested that dyslexia is related to structural changes in neuronal systems, i.e. specific cortical changes in the left peri-sylvian region, as well as inter-hemispheric asymmetries, which focus on the temporal planum. In diagnosed individuals, there's record of decreased activation of neuronal circuits in the temporo-parietal and occipito-temporal regions, followed by an increased activation in the inferior frontal region, during the performing of reading related tasks. (Evans & Park, 2005; Leonard & Eckert, 2009; Penolazzi, Spironelli, Vio, & Angrilli, 2010).

EEG is a method of easy execution, relatively innocuous and affordable, which allows a post recorded analysis of brain activity. The power EEG is the result of the application of the Fourier Transform (FFT) algorithm to the conventional EEG signal, allowing to quantify the brain activity registered in the scalp. (Kaiser, Lennert, & Lutzenberger, 2007; Kuba et al., 2001; Teixeira, 2015; Thornton & Carmody, 2012). Mental processes cause oscillations in the EEG that have to be taken into account for their interpretation. The thalamus-reticular nucleus inhibits the random firing of thalamocortical neurons and gadders these individual discharges, making them into one larger discharge, which spreads to the cortex, synchronizing the activity of the pyramidal cells. This synchronization can be detected in the EEG through wide variations. There is then a corticotalamic feedback that influences the

inhibition of the thalamus-reticular nucleus. When information processing occurs, this feedback will inhibit the inhibition of the thalamus-reticular nucleus itself, which leads to brain activity free of reticulate-thalamic influence, thus being able to respond to the processing. This process is titled EEG desynchronization.(Kaiser et al., 2007). The EEG desynchronization of an area reflects neuronal groups that work independently, with maximum responsiveness and information, meaning an increase in excitability of the cortex. EEG synchronization reflects neuronal groups that work simultaneously, mirroring reduced information processing, and decrease in cortical excitability.(Kaiser et al., 2007; Lemm, Müller, & Curio, 2009).

The majority of studies regarding analysis of EEG in dyslexic subjects leans over younger subjects and show a variance of results. Some studies report an increasing in spectral power of delta activity, associated with a slight increasing in spectral power of theta and activity, in frontal, central and temporal regions in dyslexic individuals. Was also observed an increasing in spectral power of beta activity in the left occipital region. In other hand, there were cases where no conclusive differences were observed between dyslexic subjects and normal readers.(Arns, Peters, Breteler, & Verhoeven, 2007; Duffly, Denckla, Bartels, & Sandini, 1980; Evans & Park, 2005; Fein et al., 1986).

The present research intended to analyze neurophysiological differences regarding power EEG between undergraduate young adults with reading difficulties and a normal reading level, by exploring brain activity at a resting state, during the performance of a reading task and during the performance of a non-reading task. The following electrodes, F7, F8, T3, T4, T5 and T6, were considered as a starting point in the study, and delta, theta and beta frequency brain activity bands were evaluated.

2. Methods

2.1. Reading Age Test (TIL)

The Reading Age Test (TIL) is a screening test for reading difficulties, evaluating the processes of decoding and understanding, two essential skills in the task of reading. This test, easy to apply and with the possibility of being administered in a group, adapted and validated to the Portuguese language, may be adopted as step one in dyslexia diagnosis. It consists of 36 sentences. The subject reads the sentences in silence and completes them, by choosing the correct word out of five given options. The college student's version takes 2,5 minutes to be completed. The final score is achieved by the formula: Final grade = (number of sentences completed correctly x 100) / 36. The score is then compared to population's reference values.

The test was applied during classes. Instructions were given by the investigator out loud, and all students started the test at the same moment, having two minutes and thirty seconds to complete it. After scoring, subjects with a twenty-five or below correct answers (subjects with reading difficulties, at or below the 5th percentile) and twenty-seven or above correct answers (subjects with normal reading level) were contacted by the investigators.

2.2. Non-reading task

The non-reading task (NRT) required the subject to order four pictures that mimic a daily life action, repeating the same task six times with six different groups of pictures, having fifteen seconds to each group. This was used as control task.

2.3. Participants

The study was conducted in the facilities of Escola Superior de Saúde do Porto. The first phase included volunteer bachelor's students, 18 years or more, and Portuguese language as mother language. In total, 209 subjects (169 females; 40 males; mean age: 20.21 ± 4.11) met the criteria and agreed to take the test. After scoring, subjects with a 25 or below correct answers (N=85) and 27 or above correct answers (N=106) were contacted by the investigators, in order to continue the study. To continue the study, subjects could not meet any exclusion criteria: mental illness and neurological disorder in person/familiar history, uncorrected visual/auditory deficit, and use psychotropic drugs. 31 subjects (25 female; 6 male) contacted the investigators. Two subjects met at least two exclusion criteria points, and were excluded. From the twenty-nine EEG performed, three were excluded because of signal's collection failure during the exam that compromised the results. The subjects were divided in two groups: Group A (2 female; 3 male; age mean: 19.80 ± 1.09 ; second TIL score ≤ 23 correct answers or 5th percentile) and Group B (17 female; 4 male; age mean: 20.29 ± 1.74 ; second TIL score ≤ 31 correct answers or 60th percentile).

2.4. EEG: Data acquisition and analysis

The EEG data were acquired the Deymed equipment – Software Truescan Acquisition, using the internationally System 10–20-electrode placement, Fpz as reference and FCz as ground. The impedance was kept bellow 10 kOhms. The acquisition took place in a room with controlled sound and minimal light. The EEG had a total duration of 15 minutes, and was compose by the followed sequence: 3 minutes

of recording basal activity (alternating eyes close/open every minute); performance of TIL during a maximum of 2,5 minutes and resting period with closing eyes; performance of NRT during 1,5 minutes; final resting period with closing eyes. All subjects were instructed to not talk during the EEG and to avoid sudden or repetitive movements.

From each EEG were analyzed 3 periods with 10 second length each in the beginning, middle and end of the basal, the TIL performance and the NRT period. The selected periods were the same time wise in all subjects, to the exception of presence of artefact that could compromised the results. The EEG signal selected was converted into power spectra. Investigators analyzed power spectra mean values of delta, theta and beta activity band, from electrodes F7, F8, T3, T4, T5 and T6 in the mentioned periods. Mean variations were analyzed performing Shapiro-Wilk tests. Mann-Whitney tests were applied in order to order compare the results between the two groups and different periods. The evolution of the subject's TIL score and the non-reading task score between groups was also analyzed.

3. Results

There were no observed significant differences in mean variations ($p > 0.05$) between Group A and Group B during resting state period, TIL performance period and Non-reading task period, regarding electrode and brain activity band frequency. Concerning the TIL score, all participants increased their score during the test taken upon the EEG data collection. However, participants with reading difficulties were not able to reach a score above the 5th percentile. The Non- reading task's results didn't show a direct correlation between reading and non-reading performance, showing no significant mean variations.

4. Conclusions

This study focused on neurophysiological characteristics concerning power EEG different findings at the lower frontal gyrus region and temporal region, between a group with reading difficulties and a group with normal reading level, in undergraduate students. Results were inconclusive, as there were no significant difference in mean variations between the two groups.

The EEG can be an error-prone method if the presence of artifacts is not taken into account, and the use of artefact removal algorithms can be seen as a vantage. In future studies, it is suggested the analysis of brain activity's amplitude variations. It is also recommended to increase the sample of participants with reading difficulties.

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DIFFERENTIATION OF SELF AND FUNCTIONING IN A CLOSE RELATIONSHIP – RESULTS OF STUDIES CONDUCTED IN POLAND

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Abstract

The concept of differentiation of self occurring in the M. Bowen theory expresses an interpersonal capability of an individual for maintaining closeness with others, without the loss of autonomy of own self. The objective of the presentation is to show experiences associated with analysis of the construct on the Polish ground. The study included 538 respondents. The results of a two-stage hierarchical multiple regression showed that the greater the trust in a partner in a close relationship, the lower the tendency towards the emotional cut-off and a greater tendency towards assuming the 'I' Position. The level of intimacy in a close relationship is higher, whereas a lower tendency towards the emotional cut-off, the higher the individual's emotional reactivity, as well as a greater tendency towards assuming the 'I' Position. The results of correlation analyses showed that the greater the tendency towards assuming the 'I' Position and the lower the tendency towards the emotional cut-off, the higher the scores according to the scales of balanced adaptability and cohesion dimensions in family interactions, the better the family communication, whereas the greater tendency towards the emotional cut-off, the higher the scores on the disengaged subscale. Relationships were examined between differentiation of self, and the individual's attachment styles: secure, avoidant, fearful-ambivalent.

Keywords: *Differentiation of self, close relationship, intimacy, interpersonal trust, attachment styles.*

1. Introduction

Differentiation of self (DoS) is the main concept of the Bowen family system theory (1978; Kerr and Bowen, 1988). According to this theory, two levels of DoS are distinguished: interpersonal and intrapersonal. DoS on the intrapersonal level concerns the ability of an individual to distinguish between feelings and thoughts, and balance emotional and intellectual functioning. DoS on the interpersonal level concerns the abilities of an individual to experience closeness with others, without the loss of autonomy of own self (Kerr & Bowen, 1988). In this theory, at least four indicators of the level of differentiation of an individual are adopted: the ability to take an "I"-Position (IP), the emotional reactivity (ER), emotional cut-off (EC) and the fusion with others (FO) (Skowron & Friedlander, 1998; Skowron & Schmitt, 2003).

The concept of differentiation of self allows prediction of the functioning of an individual. In the studies conducted to-date it has been found that – in accordance with Bowen's theory – a higher level of DoS is associated with a lower number of somatic and mental health disorders (Rodríguez-González & Schweer-Collins & Skowron & Jodar & Cagigal de Gregorio & Major, 2019; Skowron & Friedlander, 1998), and a higher marital satisfaction (Peleg, 2008).

2. Objectives

The aim of the study is investigation of the relationship between the level of DoS and the functioning of an individual in a close romantic relationship. Trust in the partner in a relationship and intimacy in the relationship were taken into account. The subsequent goal is examination of the relationship between the level of DoS and the attachment style of an individual, as well as between the level of DoS and cohesion and flexibility of intrafamilial relations and intra-family communication in the family of origin.

3. Methods

The study included a total number of 538 respondents in four groups: persons remaining in a romantic relationship ($n_1=166$; 505 females, mean age $M = 33.28$, $SD = 6.96$), 84 married couples ($n_2 = 168$ persons, mean age $M = 32.01$, $SD = 5.43$), females remaining in a romantic relationship

($n_3 = 100$, mean age $M = 25.40$, $SD = 4.14$), students ($n_4 = 104$, 53% of females, aged 18-26). Differentiation was determined using the Differentiation of Self Inventory-Revised DSI-R (Skowron and Schmitt, 2003) (first and third study), and the Differentiation of Self Inventory DSI (Skowron & Friedlander, 1998) (second and fourth study). Trust in the partner in a close romantic relationship was measured by means of the Polish version (Lachowska, 2019) of the Trust Scale (Rempel, Holmes, Zanna, 1985), intimacy in the relationship was assessed using the Personal Assessment of Intimacy in Relationships (Schaefer, Olson, 2007). Family interactions were determined by means of the Polish version (Lachowska, 2008) of The Family Adaptability and Cohesion Scale (Olson, Gorall, Tiesel, 2006). Attachment style was assessed using the Attachment Style Questionnaire (Plopa, 2005). Analysis of the data was performed using the IBM SPSS Statistics 25 statistical package. In order to define the predictors of the intimacy in a close relationship and the trust in the partner, hierarchical multiple regression analysis was conducted, allowing control of the influence of a group of independent variables on the dependent variable, and helping to decide whether adding a particular set of variables significantly enhances the statistical quality of a prediction in proportion to the typical ones in the field of predictors. A series of two-stage hierarchical multiple regressions were performed, first with interpersonal trust and then with the intimacy of close relationships. The first stage of the regression included the demographic variables. The four indices of differentiation of self (IP, ER, EC, FO) were entered at stage two. In addition, the correlation between the variables was analyzed (r Pearson's correlation coefficient).

4. Results

4.1. Differentiation of self and trust in the partner in a romantic relationship and intimacy of the relationship

A two-stage hierarchical multiple regression was conducted with trust in the partner as the dependent variable. The first stage of the regression included relationship of duration and type of relationship (marriage/common-law marriage). Analyses revealed that, at stage one, relationship duration ($\beta = -0.31$; $p < 0.01$) contributed significantly to the regression model. Together, the two independent variables accounted for 6% of the variation in trust. Introducing the DoS variables explained an additional 31% of variation in trust, and this change in R^2 was significant ($p < 0.001$). When all six independent variables were included in stage two of the regression model, the significant predictors of the trust were: the result according to the EC scale ($\beta = 0.39$; $p < 0.00$), IP ($\beta = 0.27$; $p < 0.05$) and relationship duration ($\beta = -0.31$; $p < 0.01$). Together, the six independent variables accounted for 37% of the variation in trust in the partner. A set of two-stage hierarchical multiple regression was conducted with global intimacy, and subsequently with its individual dimensions (emotional, intellectual, social and sexual intimacy) as the dependent variable. The first stage of the regression included gender, relationship duration, possession of children. Analyses revealed that, at stage one, in any case demographic variables did not contribute significantly to the regression model. Introducing the DoS variables explained an additional 45% of variation in global intimacy, and this change in R^2 was significant. When all seven independent variables were included in stage two of the regression model, the significant predictors of the global intimacy were EC ($\beta = 0.67$; $p < 0.00$), IP ($\beta = 0.23$; $p < 0.001$) and ER ($\beta = -0.22$; $p < 0.05$). Together, the seven independent variables accounted for 46% of the variation in global intimacy. The hierarchical multiple regression with emotional intimacy as a dependent variable revealed that introducing DoS variables explained an additional 24% of variation in emotional intimacy, and this change in R^2 was significant. When all seven independent variables were included in stage two of the regression model, the significant predictors of the emotional intimacy were only EC ($\beta = 0.53$; $p < 0.001$). Together, the seven independent variables accounted for 26% of the variation in emotional intimacy. The hierarchical multiple regression with intellectual intimacy as a dependent variable revealed that introducing the DoS variables explained an additional 27% of variation in intellectual intimacy, and this change in R^2 was significant. When all seven independent variables were included in stage two of the regression model, the significant predictors of the intellectual intimacy were EC ($\beta = 0.44$; $p < 0.001$) and IP ($\beta = 0.26$; $p < 0.001$). Together, the seven independent variables accounted for 27% of the variation in intellectual intimacy. The hierarchical multiple regression with social intimacy as a dependent variable revealed that introducing the DoS variables explained an additional 18% of variation in social intimacy, and this change in R^2 was significant. When all seven independent variables were included in stage two of the regression model, the significant predictors of social intimacy were only EC ($\beta = 0.43$; $p < 0.001$). Together, the seven independent variables accounted for 23% of the variation in social intimacy. The hierarchical multiple regression with sexual intimacy as a dependent variable revealed that introducing the DoS variables explained an additional 34% of variation in sexual intimacy, and this change in R^2 was significant. When all seven independent variables were included in stage two of the regression model, the significant predictors of the sexual intimacy were IC ($\beta = 0.58$; $p < 0.001$), IP ($\beta = 0.30$; $p < 0.001$) and ER ($\beta = -0.28$; $p < 0.01$). Together, the seven independent variables accounted for 46% of the variation in global intimacy.

4.2. Relationship between cohesion and flexibility of the relationship in the family of origin and attachment style, and the respondents' differentiation of self

Analyses of correlations using Pearson's a correlation coefficient r showed that balanced cohesion and balanced flexibility in the family of origin of the examined students were related with the result according to the EC scale ($r = 0.30$; $p < 0.01$; $r = 0.25$; $p < 0.01$, respectively) and the IP scale ($r = 0.31$; $p < 0.01$; $r = 0.21$; $p < 0.01$, respectively), as well as the FO scale ($r = -0.26$; $p < 0.01$; $r = -0.17$; $p < 0.1$, respectively). Disengagement was related with the result according to the EC scale ($r = -0.30$; $p < 0.01$) and the FO ($r = 0.40$; $p < 0.001$). Good family communication was related with the result on the IP scale ($r = 0.21$; $p < 0.05$); EC ($r = 0.39$; $p < 0.001$) and the FO ($r = -0.20$; $p < 0.05$). Secure attachment in the examined students was related with the result according to the IP ($r = 0.43$; $p < 0.001$) and FO ($r = -0.20$; $p < 0.05$). Avoidant style was related with the result according to the IP scale ($r = -0.56$; $p < 0.001$) and the FO ($r = 0.28$; $p < 0.01$). Fearful-ambivalent style was related with the result according to the ER ($r = -0.32$; $p < 0.001$); the EC ($r = -0.29$; $p < 0.01$) and the IP scale ($r = -0.31$; $p < 0.001$).

5. Discussion/conclusions

The strongest predictor of the functioning of the respondents in a close relationship was the lack of emotional cut-off, which favours trust in the partner and perception of the relationship with this partner as more intimate (from the aspect of emotional, social, intellectual and sexual intimacy). In addition, trust in the partner and the perceived intellectual intimacy with this partner are higher, the greater the tendency to assume 'I' position. The result is interesting in that it indicates that a greater sexual intimacy was also related with a higher emotional reactivity, which – contrary to expectations - could indicate a negative effect of low emotional reactivity with respect to specific situations associated with sexual relationship. Moreover, it was found that positive experiences associated with relationships within the family of origin were related with a higher level of differentiation of self. According to the concept of family systems by Olson, balanced cohesion and balanced flexibility are related with higher, whereas unbalanced cohesion (disengagement) with lower differentiation of self in young persons growing in a family. A higher differentiation is related with secure style, while a lower differentiation – with insecure styles (fearful-ambivalent and avoidant).

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