BEHAVIOURAL SELF-REGULATION AND EMPLOYEES' HEALTH

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Abstract

The main goal of this study was to examine the relationship between the type of behavioural self-regulation and psychophysical health of employees in the Republic of Serbia. Following the Self-Determination Theory (SDT; Deci & Ryan, 1985, 2002), Hodgins and Knee (2002) proposed that human beings possess an inherited organismic core self, which develops in a social context that fosters or precludes the fulfilment of any or all three basic psychological needs: relatedness, competence, and autonomy. The quality of social support during child's development are theorized to yield three broad types of ego-systems depending on how many needs are fulfilled. These three ego-systems include the integrated self (int-s), the ego-invested self (e-i-s), and the impersonal self (imp-s), differing in the level of autonomy and integration in behavioural self-regulation. Previous studies indicate that level of needs satisfaction and integration of self is related to a better health and health protective behaviour (e.g., Ntoumanis et al., 2021; Ng et al., 2012; Hodgins et al., 1996). The psychophysical health was considered here as the absence of health disorder symptoms within five domains: physical health, depression reactions, fatigue, fear and anxiety, and social functioning. The data were gathered from an at-hand sample of 331 employees, with different work tenure (13 years in average), gender (65% were women), and with the average age of 39. Two questionnaires were applied to gather data on self-regulation of everyday behaviour and data on five dimensions of health. The ego-functioning questionnaire (EFQ; Majstorović, 2007, $\alpha_{(int,e-i,imp)}$ = .75; .75; .88) is a 30-items tool administered to estimate the dominant type of self-regulation, while psychophysical health scale (SPFZ-1; Majstorović, 2011; α = .91) with 23 items asks employees to self-evaluate the frequency of health disorder symptoms. Based on scores greater than mean value on one EFQ subscale and below mean value on the remaining two, the sample size was reduced to 128 participants and three groups with one dominant type of self-regulation were formed. Univariate ANOVA revealed that employees with a dominant impersonal self-regulation, compared to integrated and ego-invested regulation, report significantly more frequent symptoms on all health domains. Work tenure, gender, and age of employees do not moderate this relationship. It was concluded that these results corroborate an organismic hypothesis of self with better health expected within more authentic and more integrated ego-system. Implications of SDT based health interventions in work setting are discussed.

Keywords: Self-determination, behavioural regulation, psycho-physical health, employees.

1. Introduction

The present study relies on a conceptualization of self that was devised by Holly S. Hodgins and Raymond Knee (2002) from the Self-determination theory of human motivation and personality (SDT; Deci & Ryan, 1985, 2002, 2012). SDT posits that humans are proactive beings inherently striving for psychological growth and integration. Here we wanted to examine if different types of self-regulation, originating from different levels of growth and integration, do correlate differently with the indicators of employees' psycho-physical health.

1.1. Self-regulation and health

Following the Self-Determination Theory, Hodgins and Knee (2002) proposed that human beings inherit an organismic core self, which develops in a social context that fosters or precludes the fulfilment of three basic psychological needs: need for relatedness with important others, need for competence, and need for autonomy. The developmental process is initiated by gratification of these needs within a given social environment. If beneficial to an individual, such an environment will foster the actualization of core self's potentials, such as a main motivation apparatus and cognitive developmental dispositions. Hodgins and Knee (2002) proposed that a supportive social environment

makes ego-functioning more open to life experiences, and more prone to the autonomous regulation of behaviour. On the other hand, stifling social conditions create self-regulation more dependent on how successful and adaptive the system is when encountered with barriers and novelties. Different social conditions during a child's development are hypothesized to yield three types of ego-systems; the integrated self, the ego-invested self, and the impersonal self. The integrated self represents a harmonious ego-system developed in a supportive social environment that fulfils all three basic psychological needs. Individuals with the integrated self-regulation value who they truly are, develop unconditional self-worth, and place importance on their authentic inner impulses. They are intrinsically motivated towards most of their actions, their perception is more objective, they enjoy social contact, they are open to change and novelty, and willing to explore reality. The ego-invested self is a system that develops when an individual lacks autonomy support during childhood. Instead of an authentic development led by inner impulses, the child internalizes external pressures and constraints. Consequently, a child adopts a sense of self-worth based on a constructed (artificial, false) self-image that becomes contingent on social approval. As a result, individuals with ego-invested regulation are energized by extrinsic goals such as money, power, and popularity. The impersonal self represents the system with the lowest level of self-integration in which three basic psychological needs have gone critically unmet. Individuals with impersonal self-regulation show a lack of intention to act or intention to finish action as soon as possible. This system may be easily aroused, overwhelmed by information, and flooded by negative thoughts and feelings. Therefore, these individuals are prone to avoid novelties, prefer routines and repetitive actions, and engage in social auto-isolation (Hodgins & Knee, 2002).

Previous studies indicate that both, the level of needs satisfaction and the level of integration of self, are related to the general health, health protective behaviour, social functioning, and moral integrity (e.g., Kasser and Ryan, 1993, 1996; Hodgins et al., 1996; Ng et al., 2012; Liu et al., 2020; Ntoumanis et al., 2021). Kasser and Ryan (1993, 1996) found that the level of intrinsic aspirations correlated positively with self-actualization and vitality, and negatively with depression, narcissism and physical health symptoms. Extrinsic aspirations, on the other hand, were negatively associated with measures of individual well-being. Hodgins, Koestner, and Duncan (1996) also discovered that controlled functioning probably led to more defensiveness in social behaviour. In terms of the integration of self, Hodgins, Liebeskind and Schwartz (1996) found that autonomous regulation of behaviour among adults was associated with readiness to take responsibility for their own wrongdoing. However, ego-invested and impersonal types of regulation were related to more frequent defensive behaviour (i.e., fewer apologies for wrongdoing, and more lies in order to avoid consequences). In terms of the application of SDT-based intervention in human health improvement, Ng et al. (2012) published the first review of such a kind. Their conclusion was that perception of psychological needs support was a predictor of better psycho-physical health. In particular, they found that a large positive effect on health was the gratification of the need for competence. Furthermore, these authors claimed that the importance of autonomous support alone for the psycho-physical health status was small. Gillison et al. (2019) reviewed the effects of 18 SDT-based intervention techniques (e.g. Provide optimal challenge, Explore reasons, Encourage social support seeking techniques) in 74 studies and find that combined techniques in a need-supportive environment improve autonomy, relatedness and competence satisfaction and motivation. Ntoumanis et al. (2021) reviewed 73 studies about the effects of SDT interventions on health and found a significant positive effect of increased need support for psycho-physical health. They explain this effect by increased 'self-determined motivation and support from social agents' (p. 214). Manganelli et al. (2018) analyse an organizational support in satisfaction of employees' psychological needs and they promote organizational program that is comprised of three elements: 1. job design change (more autonomy in work, task identity, feedback, and significance of their work), 2. interpersonal relationships/leadership style (adopting transformational leadership style and empowering employees), and 3. compensation policy (to avoid contingent pay and to use base pay instead, compensate on a fair and just manner). Previous empirical studies also indicate that satisfaction of basic psychological needs represents 'basic mechanisms contributing to the effects of perceived organizational support on hedonic and eudaemonic well-being' (Gillet et al., 2012, p. 447). Regulation that is more autonomous means less stress and better health in the presence of high job demands than did those low in autonomous motivation (Trepanier et al., 2013). There is no need to emphasize the significance of employees' health for their work motivation and achievements, and for the business performance of an entire organization.

Based on these findings, we may assume that measures of impersonal self-regulation, compared to other two systems, will be positively associated with indicators of deteriorated psycho-physical health. Also, following the theoretical conceptualization of the impersonal type of self-regulation, we hypothesize that employees with all three psychological needs deprived and with low integration and autonomy in the regulation of their behaviour, will report more symptoms of poor psycho-physical health.

1.2. Objectives

The main goal of this study was to examine the relationship between the type of behaviour al self-regulation and psychophysical health of employees in the Republic of Serbia. More specifically, we wanted to examine if employees with different types of self-regulation report different frequencies of psycho-physical health symptoms.

2. Methods

2.1. Participants

The data were gathered from an at-hand sample of 331 employees, with different organizational roles (17.5% were managers), work tenure (13 years on average), gender (65% were women), and with an average age of 39. Based on the criterion of scores greater than mean value on one EFQ subscale and below mean value on the remaining two, the sample size was reduced to 128 participants and three groups were formed with one dominant type of self-regulation. Therefore, all data analyses were conducted on a sample of 128 employees.

2.2. Variables and instruments

The type of self-regulation refers to an individual's orientation in everyday behaviour regulation that relies either on authentic personal impulses or on non-authentic impulses originating from internalized social pressures and constraints. The integrating self represents an autonomous mode of behaviour al regulation while the ego-invested self and the impersonal self represent two controlling regulation orientations. Psychological health was conceptualized as the absence of health disorder symptoms within five domains: physical health, depression reactions, fatigue, fear and anxiety, and social functioning. Two questionnaires were applied to gather data on self-regulation of everyday behaviour and to gather data on five dimensions of health. The ego-functioning questionnaire (EFQ; Majstorović, 2007, $\alpha_{(int,e-i,imp)}$ = .75; .75; .88) is a 30-item tool administered to estimate the dominant type of behaviour al self-regulation, while the psychophysical health scale (SPFZ-1; Majstorović, 2011; α = .91) with 23 items asks employees to report the frequency of health disorder symptoms in past several weeks.

3. Results

According to correlations presented in Table 1, the impersonal type of behaviour al regulation is significantly associated with more symptoms of disturbed health across all its dimensions. On the other hand, the integrated self correlates with fewer symptoms of depression reactions and social dysfunctionality. Interestingly, artificial self-regulation is not in correlation with symptoms of any health dimension.

Table 1. Pearson correlations between types of self-regulation and aspects of employees' health (N=128).

	Impersonal self	Ego-invested self	Integrated self
Physical health symptoms	.326**	-.098	-.105
Fear and anxiety	.403**	.054	-.153
Depression reactions	.465**	-.058	-.221*
Fatigue	.455**	-.005	-.129
Social dysfunction symptoms	.498**	-.121	-.214*

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Univariate ANOVA revealed a significant difference among three groups of employees regarding the frequency of general health symptoms they reported (Table 2, Figure 1). The Bonferroni post-hoc test indicated that employees with a dominant impersonal self-regulation, compared to integrated and ego-invested regulation, report significantly more frequent symptoms in general as well as on all health dimensions (F-values ranged from 4.048 for Physical health to 15.146 for Social dysfunction).

Table 2. Three types of self and general health symptoms (N=128).

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	387.021	1	387.021	2414.847	.000	
Self Category	4.401	2	2.201	13.730	.000	.180
Error	20.033	125	.160			

Figure 1. Health symptoms mean frequency and three types of self (N=128).

It was also found that demographics mainly do not moderate this relationship. Employees with the dominant impersonal self-regulation report significantly more health symptoms on almost all health dimensions regardless of their gender, level of education, work role or tenure. There are only two exceptions regarding the frequency of physical health symptoms. Namely, employees with a dominant impersonal self do not report more physical health symptoms if they are females ($F_{(2, 80)} = 1.98$, $p > .05$), and if they are of a B.A. degree or of a higher education ($F_{(2, 53)} = .63$, $p > .05$). Work tenure (up to 15 years or above 15 years of work) as well as, work role (manager, subordinate) does not moderate main relationship. Differences between the three groups of employees according to all other health dimensions remained significant, regardless of their demographics.

4. Discussion

The main objective of this study was to examine if employees with different types of self-regulation of everyday behaviour report different frequencies of psycho-physical health symptoms. Our results consistently indicate a difference between employees with impersonal self and two other groups in four of five health dimensions. The integrated self-regulation is independent from reported symptoms or negatively correlates with them, while the ego-invested regulation is clearly independent from the health status indicators. These findings confirm our hypothesis that behaviour al regulation based on amotivation state and thwarted needs for autonomy, competence and relatedness is significantly associated with the frequent symptoms of poor health. With the exception of the frequency of physical health symptoms, the self-regulation-health relationship seems to be very consistent regardless of employees' demographics. This is in accordance with previous findings (Ng et al., 2012) and it can serve as a ground for SDT-based interventions within organizations. Such interventions should have the goal of increasing employees' health by providing support in satisfying their needs for competence and relatedness. Activities such as providing an optimal work challenge to the individual's or group's potential, giving performance feedback, or providing support in identifying barriers to desired performance will gratify the need for competence among employees. In addition, the intervention that includes giving social support, public affirmation of personal interests of all in the group, or providing emotional support and expressing interest in each individual will increase the relatedness need satisfaction of employees. The expected outcome of such intervention would be more self-determined behaviour followed by increased intrinsic work motivation, greater hedonic and eudaimonic well-being, work enjoyment, less burnout and more creativity at work (Deci, Olafsen and Ryan, 2012).

5. Conclusions

It was concluded that results of this study corroborate an organismic hypothesis of self with psycho-physical health dimensions such as fear and anxiety, depression reaction, fatigue, and social functioning, being affected by the level of self-determination. Significantly more frequent ill health symptoms were detected among employees with impersonal self-regulation. In order to increase the level of self-determination, SDT-based organizational interventions were discussed and recommended.

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