https://doi.org/10.36315/2022inpact077
Psychological Applications and Trends 2022

TEACHER TRAINING STUDENTS' STEREOTYPIC IMAGINES OF CAREER COUNSELLOR THROUGH DRAWINGS

Kristi Kõiv[1], Ari Jussila[2], & Inita Soika[3]
[1]*Institute of Education, University of Tartu (Estonia)*
[2]*Pedagogic Innovations and Culture, Tampere University of Applied Sciences (Finland)*
[3]*Institute of Education and Home Economics, Latvia University of Life Sciences and Technologies (Latvia)*

Abstract

The purpose of the present study was to describe the stereotypical images of a career counsellor through drawings. The research was based on a sample of Estonian (N=22), Finnish (N=18) and Latvian (N=22) initial teacher training students who participated in international career guidance e-learning course lasting one academic semester. At the end of the course students were asked to draw their images of a career counsellor, and their drawings were analyzed systematically based on the modified version of the checklist developed by Barrow (2000). Respondents' drawings were scored independently by two raters with the overt features in drawings by a frequency count basis. Findings from present study using the Draw a Career Counsellor Test (DACCT) showed that preservice teachers drawings reflected several stereotypical imagines: the stereotypes of the career counsellor, the client stereotypes, and stereotypic elements of configuration of the working environment of the career counsellor.

Keywords: *Draw a career counsellor, stereotypical images, initial teacher training students.*

1. Introduction

Although structured surveys have yielded useful information on the public's attitudes towards and understanding of career guidance and career counsellors as mental health specialists (e.g., Lau et al., 2020; Ludwikowski et al., 2009) whereby less frequently qualitative research methodologies have employed with using metaphoric drawings for career statuses and values (Chong et al., 2021) among undergraduates. The use of drawings as representations of images is one qualitative method for analyzing personal beliefs and imagines. The assessment of perceptions of a scientist through drawing was developed by Chambers (1983) using the Draw a Scientist Test and have been followed more than 50 years (Miller et al., 2018) research path showing the increasing tendency to draw stereotypic scientists with children's age, but this tendency has decreased over historical time during last decades. Nowadays studies among undergraduates about stereotypic images of the scientist has also been applied in different countries around the world – in Canada (Milford & Tippett, 2013), China (Huang, Huang, Min, & Wei, 2014), Germany (Markic & Eilks, 2012; Reinisch et al., 2017), Ireland (Stapleton et al., 2018), South-Africa (Meyer, Guenther, & Joubert, 2019), USA (Medina-Jerez & Middleton, 2022; Miele, 2014; Morse, 1991; Subramaniam, Harrell & Wojnowski, 2013), Turkey (Ucar, 2012), and in different European (Austria, Belgium, Bulgaria, Czech Republic, Greece, Hungary, Latvia, Malta, Netherland, Poland, Spain) countries (Türkman, 2015).

The usage of tests similar to the Draw a Scientist Test for different professions demonstrates this method's acceptance for measuring stereotypes, including for some specific jobs like archaeologist (Renoe, 2003), biologist (Yang et al., 2018), computer user (Brosnan, 1999), dentist (Ucar & Uçar, 2016), engineer (Knight & Cunningham, 2004), inventor (Lee & Kwon, 2018), mathematician (Picker & Berry, 2000), musician (Colley et al., 2009), psychologist (Barrow, 2000; Hartwig, 2003), reader (Kaback, 2012), sport person (Colley, Berman, & Van Millingen, 2005), teacher and veterinarian (Losh, Wilke, & Pop, 2008). No research has investigated the stereotypical images of a career counsellor previously.

This study is an extension of earlier research in using drawings as a methodological tool in examining the images of undergraduates about career counsellors. The purpose of the present study was to describe the stereotypical images of a career counsellor through drawings. Research question was evoked: What are the stereotypical images of a career counsellor among the teacher training students?

2. Method

2.1. Participants

A total of 60 participants were enrolled as teacher training students in international career guidance e-learning course (Kõiv et al., 2019) lasting one academic semester in three universities at Estonia (N=22), Finland (N= 18), and Latvia (N=22). A majority of the participants (N=55) were females of traditional teacher training age ranging between 20-36 years (M=26.6, SD=1.3).

2.2. Instrumentation and coding

The used instrument in this study was inspired originally by the Draw a Scientist Test which was developed by Chambers (1983) to assess perceptions of scientists through drawing, and the Draw a Career Counsellor Test (DACCT) was developed using the instruction: “Please draw a picture of a career counsellor at work”.

The analytical method of coding of drawings used in this research was a partial modification of that used by Barrow (2000) to determine whether the respondents had stereotyped indicators in the career counsellor image. The checklist for coding the drawings of the DACCT included four categories: images of the career counsellor, images of the client, the configuration of working environment of the career counsellor.

Two raters (including the first authors) intensively analyzed individually each drawing throughout and looked for the recognizable indicators, symbols and descriptors as indicated in the drawings. Multiple examples of overt attributes in the drawings counted only once. After that, raters come to an agreement of attributes or eliminate them from the list due to lack of relation to dentistry. The interrater reliability was averaged 0.94 across the variables, whereby attributes that yielded less consistency across raters included age of the figure and were excluded from the analysis. The data was analyzed by tabulating the number of responses for each of the attributes using the checklist. After reaching a final coding list, percentages were calculated for each of the 36 attributes of drawings plus the five additional indicators concerning with listed written attributes in the drawings. Overall, the drawings were coded on 39 attributes, based on agreement by two reviews to describe participants’ perception of a career counsellor. Descriptive statistics were used for statistical analysis in the study.

2.3. Procedures

The Draw A Career Counsellor Test (DACCT) was given to the participants in the study during the last week of the international career guidance course. Students were given a blank piece of paper and instructed to "draw a career counsellor at work." The respondents were told that there were no right standards about what they could draw, and they can draw as they like. Participation in the investigation was voluntary and anonymous, data confidentiality and other ethical aspects were assured.

3. Results

The stereotypical images presented in the drawing of the DACCT were coded and used to evaluate undergraduates perceived stereotypical images of the career counsellor, the client, and the configuration of the career counsellors' working environment. The number and frequency of the attributes for each of the categories were counted and listed in Table 1. In terms of gender more than one-half (61%) of all drawings depicted the career counsellor as being female. This compared to just over one-fifth (23%) of drawings that depicted an unspecified figure or female career counsellor (8%).

When stereotypical images of the career counsellor were listed from most frequently drawn attributes to least frequently, the following attributes were positive facial expression, correct hairstyle and tidy appearance, suit/dress, notes/notebook, asks questions/listen, thinking, heart, coffee cup, pencil, briefcase, eyeglasses, whereby only few non-traditional (jugger, clown, figure with several heads, hands, legs, orienteer with compass) figures were depicted in the drawings.

After completing a cross-case thematic analysis about listed written attributes describing career counsellor, five sub-themes emerged: empathy and altruism; communication competence; support, help and cooperation; humanity, fairness, confidentiality, ethics; creativity and inspiration.

When the most frequent attributes for the category of client were ranked, they were female, younger than the psychologist, an individual rather than a group, and negative or positive facial expression, and thinking as insight was illustrated. The elements of configuration of the career counsellor working environment included: books/papers, room similar to home (clock, flower vase/flowerpot, lamp, picture at the wall, sun in the window), empty room without other people, chair/soft chair, bookshelves, desk/table, sits behind the desk near the client, sits/stands across from the client/side of client, box of tissues, and computer.

Table 1. Categories and attributes of drawings by response percentage and number.

Categories and attributes of the checklist for coding the drawings of the DACCT	% *(N=60)*
Images of career counsellor	
Male	8 (5)
Female	61 (36)
Undetermined figure	23 (14)
Positive facial expression	80 (48)
Correct hairstyle and tidy appearance	63 (38)
Suit/dress	62 (37)
Notes/notebook	55 (33)
Asks questions/listen	48 (29)
Thinking (insight illustrated)	42 (25)
Heart	38 (23)
Coffee/tee cup	22 (13)
Pencil	20 (12)
Briefcase	15 (9)
Eyeglasses	13 (8)
Non-traditional (jugger, clown, figure with several heads, hands, legs, orienteer with compass)	12 (7)
Listed written attributes	
Communication competence	70 (42)
Support, help and cooperation	68 (41)
Humanity, fairness, confidentiality, ethics	58 (35)
Empathy and altruism	52 (31)
Creativity and inspiration	42 (25)
Images of client	
Male	12 (7)
Female	60 (36)
Undetermined figure	20 (12)
Individual, not group	66 (40)
Negative facial expression	40 (24)
Positive facial expression	42 (25)
Younger than career counsellor	37 (22)
Thinking (insight illustrated)	32 (19)
Configuration of career counsellors' working environment	
Books/papers	45 (27)
Room similar to home (clock, flower vase/flowerpot, lamp, picture at the wall, sun in the window)	42 (25)
Diploma/certificate (in walls)	40 (24)
Empty room without other people (except client)	33 (28)
Chair/soft chair	38 (23)
Bookshelves	30 (18)
Desk/table	25 (15)
Sits behind the desk near the client	23 (14)
Sits/stands across from the client/side of client	22 (13)
Box of tissues	20 (12)
Computer	20 (12)

4. Conclusions

Results of the study showed that several stereotypical images existed in the drawings of the DACCT in the images of the career counsellor, the client, and the configuration of the career counsellors' working environment, pointing out that initial teacher training undergraduates hold stereotypical images of a career counsellor in their drawing as it was shown in other professions such as dentist (Ucar & Uçar, 2016) psychologist (Barrow, 2000), and scientist (e.g. Huang et al., 2014; Medina-Jerez & Middleton, 2022; Meyer et al., 2019; Miele, 2014; Milford & Tippett, 2013; Reinisch et al., 2017; Subramaniam et al., 2013; Türkman, 2015; Ucar, 2012) among undergraduates.

Results of this study using the scoring of drawings of the career counsellor suggest that the career counsellor has perceived by respondents a predominantly female profession wearing suits or dress with correct hairstyle and tidy appearance, as well as eyeglasses, and other symbols of research (notes and notebooks, pencils, briefcases) which elements were suggestive of many respondents perceiving career counsellors as a professional and academic occupation. It was revealed that the career counsellor had stereotypes of external images (female, suit/dress, correct hairstyle, and tidy appearance), internal images

(symbols of positive feelings, warmness; symbols of research inquiry and thinking), and interpersonal communication process (listening, asking questions). In addition, the attributes listed as characteristics of career counsellor were all positive regarding to interpersonal competences and associated with a professional helping and support.

Respondents' descriptions of career counsellors in an office setting as working environment reinforced this impression professional and academic occupation as creating a safe and secure environment for career counselling. Namely, at one side – results suggested that the undergraduates' stereotypic images of the career counsellor were relate to descriptors of symbols of knowledge (e. g. books/papers, bookshelves, box of tissues) and technology product (computer). At the other side, it appears that the respondents' image of the career counsellor was the office setting with chairs and tables, no barriers between the career counsellor and client without other people, and more home like interior. Additionally, for the high status of career counsellor was impressed in the drawings with importance paid to diplomas/certificates as a part of the working room of the career counsellors. This result is parallel with the stereotypic image of working environment for psychologist with characteristic features as no barrier between psychologist and client, a sterile office without drapes, doors, and windows, with straight-back chairs and a minimum amount of furniture, and less importance of titles and diplomates (Barrow, 2000). Both stereotypic roles of the career counsellor and psychologist share commonalities – a close relationship between the mental health professional and client.

The present analysis showed that the career counsellor was portrayed in the respondents' drawings not only as a single figure, but also as a two-figure configuration in relations with clients. Namely, results indicated that client stereotypes included female, younger than the psychologist, negative or positive facial expression, thinking as insight was illustrated, and personal counselling situation, reflecting the professional impression that characterizes the professional status of a career counselor in individual communication with a client, but not group-based context of career guidance.

Summary, the analyze of respondents' drawings suggested that the stereotypic features of the career counsellors were predominantly: (1) external attributes as female person with professional correct appearance expressing nonverbally warm feelings and verbally opportunities for communication; (2) internal attributes were connected with professional communicative competences with help and support, and academic competences as signs of research knowledges; (3) career counsellor-client relational attributes reflected individual counselling situation with younger female client expressing nonverbally both positive and negative feelings; and (4) career counselors working environment was depicted as office setting without spatial barriers between career counsellor-client and with some home-like elements in the room, where, for example, diplomas/certificates and books/papers marked the academic orientation of the career counselor.

In order to better understand a profession – in our study career counsellor, stereotypical images of that profession need to be described. People not only create stereotypic images – in this study stereotypes of career counsellor, but also shape and change them. Previous studies have showed a reduction in stereotypical imagery of scientists (Medina-Jerez & Middleton, 2022; Miele, 2014; Stapleton et al., 2018) and psychologist (Barrow, 2000) during academical studies among undergraduates.

Describing the stereotypical images of one of the professions – career counsellor, could give the educators many hints to plan the educational setting in the area of career guidance. Implications for teacher educators include the need to understand that there is a need for strengthening the position of the subject of career guidance in the teacher training with engagement the multidimensional perspectives of career counsellors.

The strength of the present study was the specifical design to examine the potential of the scoring checklist as a quantitative method of assessing pre-service teachers' stereotypic imagines of career counsellor trough the DACCT. Despite the strength of the study there is a limitation connected with the overbalance of the female students in the initial teacher training studies at the university level in different countries. This main methodological limitation in this study may be related to the interpretation of respondents' drawings and future studies with gender-balanced samples can clarify results.

References

Barrow, R. (2000). Determining stereotypical images of psychologists: The Draw a Psychologist Checklist. *College Student Journal, 34*(1), 123-33.

Brosnan, M. J. (1999). A new methodology, an old story? Gender differences in the "draw-a-computer-user" test. *European Journal of Psychology of Education, 14*(3), 375-385.

Chambers, D. W. (1983). Stereotypical images of the scientist: The Draw-A-Scientist Test. *Science Education, 67*(2), 255-265.

Chong, S. T., Nen, S., Xiong, T. W., Mei, O. G., Koh, D., Subhi, N., Siang, T. J., Ping, N. C. L., & San, S. P. (2021). Metaphoric drawing narrative career counselling: Teaching work value and career identity statuses via experiential learning method. *International Journal of Academic Research in Progressive Education and Development, 10*(1), 671-685.

Colley, A., Berman, E., & Van Millingen, L. (2005). Age and gender differences in young people's perceptions of sport participants. *Journal of Applied Social Psychology, 35*(7), 1440-1454.

Colley, A., Mulhern, G., Relton, S., & Shafi, S. (2009). Exploring children's stereotypes through drawings: The case of musical performance. *Social Development, 18*(2), 464-477.

Hartwig, S. G. (2003). Surveying psychologists' public image with drawings of a "Typical" psychologist. *South Pacific Journal of Psychology, 14*, 69-75.

Huang, F., Huang, Y., Min, Z., & Wei, C. (2014). A Study of Chinese college students' images of the scientist. *International Journal of Contemporary Educational Research, 1*(2), 61-66.

Kaback, S. (2012). The Draw-a-Reader Test: Informal assessment supporting teacher inquiry. In R. Shagoury & B. M. Power (Eds.), *Living the Questions: A Guide for Teacher-researchers* (pp. 162-166). Portland, Maine: Stenhouse Publishers.

Knight, M., & Cunningham, C. (2004). *Draw an engineer test (DAET): Development of a tool to investigate students' ideas about engineers and engineering*. In ASEE Annual Conference and Exposition, Salt Lake City, 20-23 June 2004.

Kõiv, K., Jussila, A., Rantanen, O., & Peitel, T. (2019). Estonian and Finnish students' experiences about international career guidance e-learning course. In C. Pracana & M. Wang (Eds.), *Psychological applications and trends 2019*. Lisbon: InScience Press, 134−137.

Lau, P. L., Anctil, T., Ee, G. T., Jaafar, J., & Kin, T. G. (2020). Self-concept, attitudes toward career counseling, and work readiness of Malaysian vocational students. *The Career Development Quarterly, 68*(1), 18-31.

Lee, E., & Kwon, H. (2018). Primary students' stereotypic image of inventor in Korea. *Journal of Baltic Science Education, 17*(2), 252-266.

Losh, S. C., Wilke, R., & Pop, M. (2008). Some methodological issues with "Draw a Scientist Tests" among young children. *International Journal of Science Education, 30*(6), 773-792.

Ludwikowski, W. M. A., Vogel, D., & Armstrong, P I. (2009). Attitudes toward career counseling: the role of public and self-stigma. *Journal of Counseling Psychology, 56*(3), 408-416.

Medina-Jerez, W. & Middleton, K. (2022). Examining Hispanic preservice teachers' perceptions of scientists in a science methods course. *International Journal on Studies in Education (IJonSE), 4*(1), 70-87.

Miele, E. (2014). Using the Draw-a-Scientist Test for inquiry and evaluation. *Journal of College Science Teaching, 43*(4), 36-40.

Milford, T., & D. Tippett, C. T. (2013) Preservice teachers' images of scientists: Do prior science experiences make a difference? *Journal of Science Teacher Education, 24*(4), 745-762,

Miller, D. I., Kyle, M. Nolla, Alice H. Eagly, & David H. Uttal (2018). The development of children's gender-science stereotypes: A meta-analysis of 5 decades of U.S. Draw-A-Scientist Studies. *Child Development, 89*(6), 1943-1955.

Picker, S., & Berry J. (2000). Investigating pupils' images of mathematicians. *Educational Studies in Mathematics 43*, 65-94.

Reinisch, B., Krell, M., Hergert, S., Gogolin, S., & Krüger, D. (2017) Methodical challenges concerning the Draw-A-Scientist Test: a critical view about the assessment and evaluation of learners' conceptions of scientists. *International Journal of Science Education, 39*(14), 1952-1975.

Renoe, P. (2003). The Draw-an-Archaeologist Test: A good way to get the ball rolling. *Science Activities, 40*, 31-36.

Stapleton, A., McHugh, M., Childs, P. E., & Hayes, S. (2018). "To see ourselves as others see us": Post-primary school students' drawings of scientists before and after participation in a career orientation programme. *Action Research and Innovation in Science Education, 1*(1), 15-25.

Türkmen, H. (2015). Still persistent global problem of scientists' image. *Asia-Pacific Forum on Science Learning and Teaching, 16*(1), 1-21.

Ucar, S. (2012). How do pre-service science teachers' views on science, scientists, and science teaching change over time in a science teacher training program? *Journal of Science Education and Technology, 21*(2), 255-266.

Ucar, S., & Uçar, Y. (2016). The stereotypical images of a dentist and how they change over time in a dds program: application of Draw a Dentist Test (DADT). *Acta Poloniae Historica, 26*(3), 419-426.

Yang, D., Sun, X., Xu, Z., Shen, Z., & Chen, Y. (2018). Pupils' images of the biologist: a small-scale explorative study. *Open Access Journal of Science, 2*(1), 85-87.