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The Study Competences of Physical Education Students

DOI: 10.15804/ tner.2015.40.2.10

Abstract

The purpose of this research was to determine the level of study competences among students of physical education. The study encompassed first-year students aged 18 to 26, who began their studies in 2010, 2011 and 2012. *The Standard Progressive Matrices Plus, the Social Competence Questionnaire, the Emotional Intelligence Questionnaire, the Coping Orientation of Problem Experience Inventory, NEO Five-Factor Inventory, and the Multidimensional Self-Esteem Inventory* were used. Students were characterised by a high level of study competence with regard to skills and personality. The study group was moderately homogeneous: the students starting their studies in consecutive three years did not significantly differ with respect to the analysed skills. This undermines the circulating opinions of lowering the level of competence of students in the recent years.

Keywords: *study competence, students, physical education, sport*

Introduction

In the last 25 years, the number of students in Poland has significantly increased, both in absolute values and in relative values, such as the coefficient of schooling. This was accompanied by a sharp increase in the number of institutions of higher education, especially private schools that offer learning opportunities at the university level to an increasing number of students, that are closer to students' places of residence, and that have decreased admissions requirements. After an educational boom in the 1990s, a drop in the birth rate and an economic crisis resulted in a decreased number of candidates. Eventually, the number of places at higher education institutions exceeded the number of candidates. Although first seen only at private schools, the phenomenon is now appearing at public universi-

ties, too. It is estimated that all students who want to study will soon be able to find their places at public universities as well. Universities will need to offer more and expect less from candidates.

What are the consequences of this phenomenon? Since an increasing proportion of the population is studying, it seems natural that the level of competences relevant to the effectiveness of the learning process decreases among students. We propose to name them study competences. The question arises about what the level of study competences is among contemporary students. Some academics believe that in coming years, secondary school graduates with increasingly decreased abilities to acquire knowledge at an advanced level will be admitted at universities. Is the claim justified? We will try to find it out in our research.

Competence is an outcome of knowledge, skills and attitudes determining the effectiveness of task implementation (Bialecki, 2006). According to the majority of authors, competence comprises abilities, personality, and psychosocial and cognitive predisposition (Dudkiewicz, 2006; Szorc, 2007). In our opinion, a study competence includes: intellectual competence (so-called academic or psychometric intelligence, especially fluid intelligence, including learning abilities); social competence (social intelligence; skills and abilities conditioning effective social interactions); emotional competence (emotional intelligence, especially the ability to use emotions to solve problems); coping competence (the ability to cope effectively with stress); and a personality profile that favours studying (including positive and stable self-esteem). Clearly, this list comprises more potential components of study competence: for instance, the ability to acquire knowledge and to think creatively seems to be important.

The aim of the research was to determine the level of study competences among physical education (PE) students and their differentiation depending on the start year of study and gender.

Research Methodology

Research Sample

The study included the first-year students of the Faculty of Physical Education aged 18 to 26 ($M\% = 20.08$; $SD\% = 1.06$) who began studies at the Józef Piłsudski University of Physical Education in Warsaw in 2010, 2011 and 2012 and attended the psychology classes on the day of research. Depending on the measurement tool, the number of men ranged from 222 (52.8% of all the male students) to 310 (73.8%); the number of women ranged from 115 (63.9% of all the female

students) to 141 (78.3%). The men and women did not differ significantly in terms of age.

Instruments

The study applied standard psychological inventories and scales:

- *Raven's Standard Progressive Matrices Plus (SPM Plus)* (Jaworowska & Szuster, 2010); its result is an indicator of current intellectual capacity (learning ability).
- *The Social Competence Questionnaire by Matczak* (2001), only the global index of social competences was used.
- *The Emotional Intelligence Questionnaire (INTE)* by Jaworowska and Matczak (2001)
- *The Coping Orientation of Problem Experience (COPE) Inventory* by Carver, Scheier and Weintraub in the Polish adaptation by Juczyński and Ogińska-Bulik (2009), used to measure dispositional coping: action-oriented coping, avoidance-oriented behaviour, and seeking support with a focus on emotions.
- *The NEO Five-Factor Inventory (NEO-FFI)* by Costa and McCrae in the Polish adaptation by Zawadzki, Strelau, Szczepaniak, and Śliwińska (1998), which measures the five dimensions of personality: neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness.
- *The Multidimensional Self-Esteem Inventory (MSEI)* by O'Brien and Epstein in the Polish adaptation by Fecenec (2008); only the index of global self-esteem was used in the presented study.

The tools applied (except for the COPE) have sten standards for appropriate age groups. The results of the study will be presented at three levels: low (1–4 sten), average (5–6 sten), and high (7–10 sten). In the case of the COPE, the relative frequency of a certain type strategy was identified based on the means of the results.

Research Results

Table 1 shows the percentage distribution of sten scores at three distinguished levels in the study group. In the majority of cases the most numerous group were not students with average scores, but with high or low scores. That is particularly clear in the case of intellectual competence: more than 90% of the respondents were in the range of high scores, which indicates their extraor-

dinary learning abilities. Almost two-thirds of the individuals obtained high scores on the extraversion scale and nearly half of them obtained high scores on the scales for conscientiousness and global self-esteem. On the other hand, in terms of neuroticism and openness to new experiences, approximately half of the respondents were in the range of low scores. The only dimension in which the average scores were most numerous was emotional intelligence. In the case of social competence, the proportion of high scores was slightly higher than that of average and low scores.

COPE scores in the particular factors may range from 1 to 4. The highest mean was recorded for action-oriented coping ($M\% = 2.76$; $SD\% = 0.36$), while the lowest was recorded for avoidance-oriented behaviour ($M\% = 1.99$; $SD\% = 0.38$). The average score in the factor of seeking support with focus on emotions fell in between them ($M\% = 2.45$; $SD\% = 0.59$).

A two-dimensional analysis of variance (gender x start year of study) was conducted in order to determine whether the students starting study in consecutive years significantly differ with respect to the study competence and whether they are varied depending on gender (Table 2).

The results show that among the students admitted to the university in 2010–2012, the variation of results was slightly greater in terms of personality traits than the skill dimensions (intellectual, emotional, social, and coping competence). They differed in regard to almost all personality dimensions included in the study (except extraversion) and global self-esteem. Differentiation of emotional intelligence was statistically significant, while in the case of fluid intelligence, differentiation reached the level of trend. There were no significant differences with respect to social or coping competences.

Means and post hoc test results indicate that the students in consecutive years were increasingly neurotic and open to new experiences (however, in this dimension, only the difference between the students of the 2010 and 2012 years was significant). The students of the 2012 year exhibited greater conscientiousness and agreeableness than their counterparts who started their studies prior to them. The students of the 2011 year manifested a higher level of global self-esteem compared to the other two groups.

The students who started their studies in 2010 were characterised by significantly lower emotional intelligence than their fellow students in the next two years. The students of the 2011 year scored slightly worse in the intelligence test compared to the students who began their studies one year later.

Gender significantly differentiated all the coping factors, three personality dimensions, the level of global self-esteem, as well as intellectual and social com-

petences. The men were characterised by a greater intellectual potential, higher levels of social competence, higher levels of global self-esteem, and were more likely to actively cope with stress, while the women were more neurotic, agreeable and open to new experiences, more often used an avoidance strategy and an emotional strategy. There were no significant differences with regard to emotional intelligence, extraversion, and conscientiousness.

Discussion

Firstly, it is worth looking at the study results in terms of the effectiveness of acquiring knowledge and skills at an academic level. A particularly distinctive feature is learning ability, which is a manifestation of fluid intelligence. The PE students obtained high and very high scores in SPM Plus, which means they have a large ability to obtain an insight, go beyond the information provided, and create new concepts, which favours effective acquisition and (especially) processing information. The results of previous studies confirmed the importance of the so-called psychometric intelligence (measured by conventional intelligence tests) as a determinant of academic achievement (e.g. Furnham, Chamorro-Premuzic, & McDougall, 2003; Gottfredson, 2003). It may be assumed that the relationship between the intellectual competence and academic performance of the PE students can be slightly weaker than that at other universities due to the large proportion of practical (movement-oriented) subjects in the curriculum.

The greatest numbers of PE students had high social competence. According to MacCann et al. (2011), success in studies not only depends on intellectual potential. Studying requires cooperation with others, which social skills facilitate. The ability to establish contacts and maintain social relationships is crucial to obtaining social support and maintaining emotional well-being, which also serve academic performance.

The students represented different levels of emotional intelligence. Based on the previous studies carried out in different cultures (Afolabi, Ogunmwonyi, & Okediji, 2009; MacCann, Fogarty, Zeidner, & Roberts, 2011; Pope, Roper, & Qualter, 2012), it may be claimed that high levels of emotional competence allow students to better regulate negative emotions and to be free to a greater extent of their negative effects, especially in examinations.

Due to the lack of standards for the COPE, it is impossible to determine the intensity of the tendency to use particular groups of strategies to cope with stress. Based on the study results, it can only be concluded that the students are more

likely to deal with stress in an active, task-oriented manner, and they are least likely to opt for avoidance-oriented behaviour. Such a disposition system seems beneficial for coping with the stressor that often accompanies all students: examination stress. Results of previous studies have confirmed the positive relationship between coping focused on the problem/task and marks obtained by students (McCann et al., 2011).

Conscientiousness is a personality trait that plays an important role in conditioning the marks obtained by students. The results indicate that conscientious students are motivated internally, are characterised by greater determination and a stronger desire for achievement, and are more diligent, orderly and responsible, which is associated with better marks (Busato, Prins, Elshout, & Hamaker, 2000; Chamorro-Premuzic, & Furnham, 2003a, 2003b; Furnham, Chamorro-Premuzic, & McDougall, 2003).

Strong neuroticism does not facilitate academic successes (Chamorro-Premuzic, & Furnham, 2003b); therefore, its low level should be considered to be beneficial in regard to academic performance.

Unfortunately, that cannot be said about small levels of openness to new experiences. Studies have demonstrated a positive correlation between this personality trait and the results obtained at university (Farsides & Woodfield, 2003). A low level of openness to new experiences can be regarded as an unfavourable characteristic for effective studying.

Research has not clearly answered the question of whether high levels of extraversion increase the chances of succeeding at university. Ackerman and Heggestad's meta-analysis (1997) indicates no significant correlation between extraversion and academic performance. Other studies have shown negative relationships (Busato et al., 2000; Chamorro-Premuzic & Furnham, 2003b).

In the case of agreeableness, previous studies are more unequivocal and they mostly indicate a lack of significant correlations (e.g. Busato et al., 2000).

Almost half of the students have high global self-esteem. People with high self-esteem are more persistent in performing their tasks, they more efficiently regulate behaviour while doing their jobs, are ambitious, and are aware of their competence. They are characterised by an internal locus of control, but when they fail, they tend to use external attributions, blaming others (Dandeneau & Baldwin, 2004; Crocker & Park, 2004; Baumeister, Campbell, Krueger, & Vohs, 2003). They cope better with stress, feel happier, are optimistic, and are less susceptible to anxiety and depression (Baumeister et al., 2003; Neiss, Sedikides, & Stevenson 2006). All this seems to increase the effectiveness of education at the university level. Results of the research on Iranian students demonstrated a relationship between emotional

intelligence, academic self-awareness, and achievement (Zahra, Maliheh, Somayeh, & Nasibeh, 2014).

Before attempting to answer the question about the differences in study competence depending on the year of beginning studies, we would like to emphasise that the research covered only three consecutive years of students. All the three groups were dominated by those who took their school final examinations in the year of admission to universities; however, there were also secondary school graduates from previous years. In addition, all of them studied at the same university and at the same faculty. For these reasons, it is unlikely to expect significant differences between them.

Interestingly, the subjects differ more in regard to their characteristics of the contents (dimensions of personality) than skills (competence). The students from the three consecutive academic years are increasingly neurotic and open to experience. The 2012 year students are distinguished by increased levels of conscientiousness and agreeableness. The 2011 year students have slightly lower fluid intelligence, but higher self-esteem, while the 2010 year students show lower emotional intelligence than the students from the other years. Therefore, there is no basis to formulate a claim that the consecutive year students have more positive or negative personality traits system and higher or lower levels of competence determining the course of education at the university level. The consecutive years of students are not getting “worse” or “better”, but they are moderately different.

The results show that the men have a greater intellectual potential, demonstrate higher levels of social competence, higher general self-esteem, and are more likely to actively cope with stress, while the women are more neurotic, agreeable, and open to experience. The latter more often use an avoidance strategy and a strategy that seeks support and that focuses on emotions. There are no significant differences in regard to emotional intelligence, extraversion and conscientiousness.

Gender-dependent variations in personality found in the study mostly correspond to differences between men and women observed in the general population. However, the comparative results of particular interest are those that differ from the population data. One of them is the higher global self-esteem of the male students. Such a difference was not found in the study of people aged 16–19 and 20–64 when adapting the MSEI to Polish conditions (Fecenec, 2008). At present, it is difficult to identify the cause of the observed variation. A certain role may be played by the fact that physical activity, physical fitness and endurance – and thus perhaps also studying at the faculties related to sports activities – are closer to our society's stereotype of a man rather than of a woman. Perhaps the low scores are

obtained by the students who represent the feminine type of psychological gender and feel dissonance resulting from the discrepancies described above.

Studies indicate higher emotional intelligence in women (Jaworowska & Matczak, 2001). The male and female students of the University of Physical Education did not differ significantly in this respect. When analysing the sten scores distribution, it can be observed that the group of women is dominated by female students of average emotional intelligence, while the number of students with high and average scores is similar. This suggests that the lack of differences is due to high levels of emotional intelligence among some men and rather low levels among women. This is probably the result of natural selection during the recruitment for university. The lack of differences in social competences may result from the use of the global index, which took away the most commonly observed differences depending on gender: higher levels of competence in intimate situations for women and lower levels of competence in situations of social exposure, which require assertiveness for men (Matczak, 2001).

Conclusions

The students starting studies at the Faculty of Physical Education of the University of Physical Education in Warsaw from 2010 to 2012 were characterised by high levels of study competences in regard to both skills (fluid and emotional intelligence, social competence) and personality (high global self-esteem, low neuroticism and high conscientiousness). The study group was moderately homogeneous: the consecutive years of students did not significantly differ with respect to the analysed competences. This undermines the circulating opinions of lowering the level of competence of students in the last years, at least in relation to the students of the Józef Piłsudski University of Physical Education in Warsaw. Most of the differences between male and female students are present in the general population.

Acknowledgements

The study was conducted within the research project "Assessment of axiological parameters, physical efficiency and study competence of young people starting studies at the Faculty of Physical Education of the Józef Piłsudski University of Physical Education in Warsaw," funded by the Ministry of Science and Higher Education.

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