Sense of Self-Worth and Executive Aspects of the Self Among Female Handball Players and Physical Education Students

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Summary

Introduction. The ambiguous results of research and various contradictory conclusions resulting from them, motivate researchers to undertake further attempts at analyses that could shed additional light on personality determinants of sports success. The authors of the study made 3 dimensions of personality the subject of their research – significant from the point of view of achieving high sports results: self-esteem, hope for success and self-efficacy.

Objective. The aim of the study was to investigate self-esteem and selected personality traits describing the executive functions of the self and empirical verification of the relationship between variables among female handball players and physical education students.

Material and Methods. The study comprised 3 groups of women: the first – 33 female handball players aged 15-32, players of 1st league sports teams with an average training experience of over 10 years. The second – 42 female physical education students. The control group (non-training), consisted of female 39 philology students. In total, 114 women were included in the study. The following were used: the Polish adaptation of the Rosenberg Self-Esteem Scale (SES), the Hope for Success Questionnaire (KNS) by Łaguna, Trzebiński and Zięba, modelled on the basis of the Hope Scale by Snyder et al., and the Polish version of the Generalised Self-Efficacy Scale (GSES) created by Schwarzer and Jerusalem.

Results. Handball players do not differ in their personality dimensions from female students of physical education, but they have greater willpower than non-trained women. In turn, physical education students, compared to the control group, are characterised by higher self-esteem, greater hope for success (greater willpower and the ability to find solutions) and they have a stronger belief in their own efficacy. Statistically significant, positive correlations between self-esteem and features describing executive aspects of the self were found in all 3 groups of respondents. Similarly, in all 3 groups of women, a direct relationship between two-dimensional hope for success and self-efficacy was observed.

Conclusions. The study may be a contribution to research on the personality of handball players and have practical applications, being of interest to sports psychologists and coaches working with handball players.

Keywords: handball players, self-esteem correlates, executive aspects of self, willpower, ability to find solutions, belief in self-efficacy, physical education students, sports psychology

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INTRODUCTION

Research on personality in sports psychology has its supporters and quite a long tradition. The issues of personality among athletes practicing individual disciplines, players training team sports and students of physical education, have been discussed many times (Eysenck et al., 1982; Czajkowski, 1993; Kremer, Scully, 1994; Cox, 1998; Rychta, 1998; Jarvis, 2003; Mikolajczyk, 2004; Litwiniuk, Daniliuk, 2009). However, the results of these studies are inconclusive, and many of them are still contradictory. This situation motivates us to undertake further analysis that could shed additional light on the issue of personality determinants conditioning sports success.

The authors of the work made the subject of their research – in their opinion, important from the point of view of achieving high sports results – dimensions of personality: self-esteem, hope for success and conviction of one’s own effectiveness.

Self-esteem

In this paper, the authors adopt M. Rosenberg’s definition of self-esteem. In his opinion, people have different attitudes towards objects, the self being one of them. Therefore, self-esteem is an attitude towards the self, a kind of global self-assessment. High self-esteem – is the belief that you are a good, valuable person, low – means dissatisfaction with yourself, rejection of your own self (Dzwonkowska et al., 2008). Global self-esteem should be distinguished from specific self-esteem, which concerns human functioning in various, detailed areas of life, competences or features, such as: intellectual abilities, social competences, physical fitness, etc. Individual, specific self-assessment correlates with global self-esteem, but they are not totally identical. It is also not entirely clear what the direction of the relationship between global and specific self-esteem is, however, empirical evidence to date indicates that it is global self-esteem that influences partial self-esteem (Dzwonkowska et al., 2008).

Global self-esteem is of interest to many researchers. In numerous studies, it was found to be correlated with other personality variables: extraversion, neuroticism, narcissism, with experiencing emotional states (shame, embarrassment, fear, aggression, depression, subjective sense of happiness and satisfaction with life), as well as with the executive aspects of the self (attitude towards action, striving for achievement, undertaking challenges, self-efficacy, location of control), and even physical health (Schmitt &Allik, 2005; Baumeister et al., 2003; Diener & Diener, 1995; Tracy, Robins, 2007; Judge, 20002.

Rosenberg believes that self-esteem is a conscious attitude towards the self; emotion related to one’s own self, concerning cognitive judgments about oneself. Self-esteem is a subjective construct based on the perception and evaluation of oneself. It is one of the elements of the self-concept (Dzwonkowska et al., 2008).

Overt self-esteem should be distinguished from that hidden, manifesting itself spontaneously, automatically and without conscious self-reflection. Both types of self-esteem should be treated separately, because they relate to different aspects of the individual’s functioning, being predictors of different reactions (Dzwonkowska et al., 2008).

According to Rosenberg, self-esteem is a trait or a state. As a trait, it is partially genetically determined (in 30-40%), relatively stable over time. In adults, it is relatively permanent, reflecting the sociometric position of the individual in a group (Leary, 2003). Self-esteem, as a state, reflects the currently experienced level of social approval and acceptance (Leary, 2003). It is susceptible to changes under the influence of mood, feedback, level of social acceptance, the type of self-presentation created by the subject, the effort put into a task, as well as the aspect of assessing moral or efficacy-related traits (Dzwonkowska et al., 2008).

Hope for success

C.R. Snyder is the author of the most popular concept regarding hope as the belief in having competences that enable success (Laguna et al., 2005). According to this researcher, hope is a positive motivational state based on 2 interrelated beliefs: 1) belief in the strength of one’s will – convincing oneself as an executor who can implement a planned course of events, pursue a goal and persevere in it, despite encountered obstacles; 2) belief in the ability to find solutions, which concerns perceiving oneself as a person with knowledge and intellectual competence that allows for effective execution of will – as a capable and resourceful person, able to invent or know a way to achieve a goal (Snyder et al., 2001, Snyder, 2002).

In Snyder’s view, hope is not an emotional state, but a cognitive motivational process. Although emotions play an important role here, they are secondary to cognitive processes. Hope for success is a disposition, a system of relatively stable beliefs that are triggered in certain situations and influence behaviour. It is part of the self-concept and relates to how a person perceives him/herself. It is an acquired pattern of thinking that influences the way of interpreting a situation and assessing the chances of success following undertaken actions (Laguna et al., 2005).

The data collected in the course of many years of research prove that the strength of hope defined in such a way, affects the effectiveness of an individual’s behaviour; on the way of overcoming difficulties, perseverance, the level of adaptation to life and on emotional functioning (Laguna et al., 2005). Hope for success should be distinguished from another conceptually related construct: self-efficacy.

According to Bandura (1997), the concept of self-efficacy refers to judgments that an individual formulates about his/her ability to act in certain situations. It is the
believe that a person is able to carry out a given activity, achieve the expected result. The belief in one’s effectiveness depends on the set goal, on the situation. Measuring hope also takes goals into account, but they are of a permanent, supra-situational nature. Snyder (2002) argues that the self-efficacy belief refers to the perception of how much we can (are able to) take action in a specific situational context (it is about the ability to act); and hope is the conviction that one will initiate and will continue action directed towards the goal (the intention is to act). Self-efficacy beliefs precede the initiation of a goal-oriented action. In the theory of hope, judgments about one’s ability to find solutions and beliefs about willpower are important, both before and during the process of proceeding towards a goal. Although both constructs are correlated with each other, they should be treated separately (Laguna et al., 2005).

Perceiving one’s own self-efficacy is a determinant of intentions and actions in various areas of behaviour. The belief in self-efficacy promotes success, releases additional energy and influences the assessment of an individual’s own resources in a stressful situation. It was observed that the stronger the beliefs about self-efficacy, the higher the goals set by individuals and the stronger their commitment (Laguna et al., 2005, Juczyński, 2009).

The aim of the study was to investigate self-esteem and selected dimensions of personality describing executive aspects, and empirical verification of the relationship between the variables among female handball players and students of physical education.

Exploratory research tasks (without formulating hypotheses) were guided by the following questions:
1. What level of self-esteem, hope for success and self-efficacy are presented by the studied female handball players and physical education students compared to the control group comprising untrained students?
2. Does the type of undertaken physical activity differentiate the respondents in terms of selected personality traits?
3. Is there a relationship between sense of self-esteem and personality dimensions describing executive aspects of the self among female handball players and physical education students?
4. Are there any differences between the studied groups regarding the observed correlations?

MATERIAL AND METHODS

Characteristics of the study participants

The study comprised 3 groups of women. The first – 33 handball players aged 15-32 (21.09 ± 3.53) of 2, 1st league sports teams: “MKS Olimpia – Beśkid Nowy Sącz” and “UKS Dąbrowski Profill Nowy Sącz”. The tactical positions of the players in the game and their numbers are as follows: goalkeepers – 5 women, pivots – 4 players, centres (left, right, middle) – 14, and wingers (right, left) – 10. Only 2 of the respondents were ambidextrous players, while the rest of the game had a right hand preference. Body height for the female handball players was measured and totalled: 163-182 cm (172 ± 4.92), body mass: 53-85 kg (66.21 ± 8.24), and average training experience: 10.36 years (± 3.99). In the preparatory period, the athletes trained 12 times a week, and during the competition stage – 5 times a week. Female players – mainly high-school graduates: post-secondary school students, students of various study fields or already graduates of studies – 29 women; only 4 of them – students of general secondary schools. The next 2 research groups consisted of undergraduate students from the State Higher Vocational School in Nowy Sącz, their study specialisation being physical education: 42 students aged 18-24 (20.19 ± 1.37) or philology: 39 students aged 19-24 (20.33 ± 1.44), the latter constituting the non-training control group. In total, 114 women were included in the study.

Research methodology and tools

The following were used: the Polish adaptation of the Rosenberg Self-Esteem Scale, the Hope for Success Questionnaire – KNS by Laguna, Trzebiński and Ziemia, modelled on the basis of the Hope Scale by Snyder et al., and the Polish version of the Generalised Self-Efficacy Scale (GSES) designed by Schwarzer and Jerusalem.

Rosenberg’s Self-Esteem Scale (SES) is used for measuring global, overt, self-esteem as a trait and as a state. It contains 10 diagnostic statements. The examined person responds to each of them on a 4-point scale (from 1 – “I strongly agree” to 4 – “I strongly disagree”). For each answer, the respondent may obtain from 1 to 4 points. The score is the sum of the points, which is an indicator of the overall self-esteem level. The range of possible results is within the range: 10–40, the higher the result, the higher the self-esteem. The scale is a reliable tool with confirmed theoretical validity. Cronbach’s α internal consistency coefficient is between 0.81-0.83 (Dzwonkowska et al., 2008).

The Hope for Success Questionnaire (KNS) consists of 12 statements, 8 of which are diagnostic: 4 items refer to beliefs about strong will (agency), and another 4 concern beliefs about the ability to find solutions (pathways). The remaining statements are buffer items. The respondents mark their answers on an 8-point scale, where 1 means this statement is “definitely false”, while 8 – indicates this statement is “definitely true”. The result is the sum of points, which is an indicator of the general level of hope for success (from 8 to 64 points; the higher the score, the greater hope for success). The questionnaire allows the measurement of 2 hope for success components: the ability to find solutions and willpower; in each, the tested person can obtain a result between 4 and 32 points. The scale and subscales are internally consistent; Cronbach’s α is 0.72-0.86 (Laguna et al., 2005).
The Generalised Self-Efficacy Scale (GSES) consists of 10 statements, to which the subject provides responses on a 4-point scale and answers: 1 – "Not true at all", 2 – "Hardly true", 3 – "Moderately true", 4 – "Exactly true". The sum of all points gives an overall self-efficacy index, which can range from 10 to 40 points. The higher the score, the greater the self-efficacy. The internal consistency of the scale, measured with Cronbach’s α coefficient, is 0.85 (Juczyński, 2009).

Statistical analysis was performed using the Statistica 13.1 PL program. The significance of differences between groups was verified via the Kruskal-Wallis test and implementing post-hoc tests. Spearman’s signed rank correlation coefficient procedure was carried out in order to establish the relationship between the variables. For the analyses, the permissible type-1 error was assumed to be α = 0.05; while p < 0.05 was considered statistically significant (Wilk, 2019).

RESULTS

In Table 1, the results of research achieved using Rosenberg’s Self-Esteem Scale – SES, the Hope for Success Questionnaire – KNS, and the Generalised Self-Efficacy Scale – GSES, are presented for the 3 studied groups.

This comparison allows to note that handball players obtained lower results (lower value of the arithmetic mean – M and median – Me) than those achieved by the students of physical education, but higher than those studying philology (control group). Nonetheless, statistical analyses: the Kruskal-Wallis test and multiple comparisons: post-hoc tests, did not allow to confirm the existence of statistically significant differences in the observed personality dimensions between the group of female handball players and that comprising physical education students.

On the other hand, the differences between the handball players and those representing the philology group turned out to be statistically significant, but only with regard to the Hope for Success subscale - Willpower, as indicated by the Kruskal-Wallis test: H = 12.359; p = 0.008. Handball players obtained higher results in the Willpower subscale (24.00 ± 3.22) than the philology students (20.10 ± 6.21).

Furthermore, statistical evaluations revealed significant differences in all the studied variables between the group physical education and philology students (Table 2).

Physical education students obtained higher results than those of philology students for Rosenberg’s Self-Assessment Scale, the Hope for Success Questionnaire (for Total Score, in the subscales: Willpower and Achieving Solutions) and the Generalised Self-Efficiency Scale.

Spearman’s signed rank correlation coefficient procedure revealed numerous dependencies between variables and in 3 study groups (Table 3).

All the noted correlation coefficients are positive, which means that there is a direct correlation: as the value of 1 feature increases, the values of the other in-

<table>
<thead>
<tr>
<th>Study group</th>
<th>Test</th>
<th>M</th>
<th>SD</th>
<th>Me</th>
<th>Min</th>
<th>Max</th>
<th>Lower quartile</th>
<th>Upper quartile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female handball players N=33</td>
<td>SES</td>
<td>28.70</td>
<td>4.03</td>
<td>29</td>
<td>18</td>
<td>38</td>
<td>27</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>KNS-WO</td>
<td>47.94</td>
<td>5.63</td>
<td>48</td>
<td>37</td>
<td>58</td>
<td>45</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>KNS-SW</td>
<td>24.00</td>
<td>3.22</td>
<td>24</td>
<td>17</td>
<td>29</td>
<td>22</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>KNS-ZR</td>
<td>23.94</td>
<td>2.74</td>
<td>24</td>
<td>19</td>
<td>29</td>
<td>22</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>GSES</td>
<td>30.82</td>
<td>3.06</td>
<td>30</td>
<td>24</td>
<td>38</td>
<td>28</td>
<td>33</td>
</tr>
<tr>
<td>Female physical education students N=42</td>
<td>SES</td>
<td>30.10</td>
<td>3.98</td>
<td>31</td>
<td>23</td>
<td>39</td>
<td>27</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>KNS-WO</td>
<td>50.02</td>
<td>6.57</td>
<td>50</td>
<td>37</td>
<td>63</td>
<td>45</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>KNS-SW</td>
<td>23.98</td>
<td>3.57</td>
<td>24</td>
<td>16</td>
<td>31</td>
<td>22</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>KNS-ZR</td>
<td>26.05</td>
<td>3.57</td>
<td>27</td>
<td>20</td>
<td>32</td>
<td>22</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>GSES</td>
<td>32.17</td>
<td>3.47</td>
<td>33</td>
<td>25</td>
<td>39</td>
<td>29</td>
<td>35</td>
</tr>
<tr>
<td>Female philology students – Control group N=39</td>
<td>SES</td>
<td>27.10</td>
<td>5.63</td>
<td>26</td>
<td>18</td>
<td>40</td>
<td>23</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>KNS-WO</td>
<td>43.26</td>
<td>11.50</td>
<td>43</td>
<td>14</td>
<td>63</td>
<td>38</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>KNS-SW</td>
<td>20.10</td>
<td>6.21</td>
<td>21</td>
<td>5</td>
<td>31</td>
<td>16</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>KNS-ZR</td>
<td>23.15</td>
<td>5.79</td>
<td>23</td>
<td>7</td>
<td>32</td>
<td>21</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>GSES</td>
<td>28.87</td>
<td>4.89</td>
<td>29</td>
<td>19</td>
<td>40</td>
<td>26</td>
<td>32</td>
</tr>
</tbody>
</table>

N – sample size; M – arithmetic mean; SD – standard deviation; Me – median; Min – minimal value; Max – maximal value; SES – Rosenberg’s Self-Esteem Scale; KNS-WO – Hope for Success Questionnaire, Total Score; KNS-SW – Hope for Success Questionnaire, Willpower; KNS-ZR – Hope for Success Questionnaire, Achieving Solutions; GSES – Generalised Self-Efficacy Scale
Table 2. Differences between groups of female physical education and philology students

<table>
<thead>
<tr>
<th>Test</th>
<th>Physical education</th>
<th>Philology</th>
<th>H</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>SES</td>
<td>30.10±3.98</td>
<td>27.10±5.65</td>
<td>8.740</td>
<td>0.010</td>
</tr>
<tr>
<td>KNS-WO</td>
<td>50.02±6.57</td>
<td>43.26±11.50</td>
<td>9.016</td>
<td>0.008</td>
</tr>
<tr>
<td>KNS-SW</td>
<td>23.98±3.57</td>
<td>20.10±6.21</td>
<td>12.359</td>
<td>0.006</td>
</tr>
<tr>
<td>KNS-ZR</td>
<td>26.05±3.57</td>
<td>23.15±6.21</td>
<td>7.972</td>
<td>0.034</td>
</tr>
<tr>
<td>GSES</td>
<td>32.17±3.47</td>
<td>28.87±4.89</td>
<td>12.826</td>
<td>0.001</td>
</tr>
</tbody>
</table>

H – Kruskal-Wallis test value; p – level of significance; SES – Rosenberg’s Self-Esteem Scale; KNS-WO – Hope for Success Questionnaire, Total Score; KNS-SW – Hope for Success Questionnaire, Willpower; KNS-ZR – Hope for Success Questionnaire, Achieving Solutions; GSES – Generalised Self-Efficacy Scale

Table 3. Inter-correlations of variables in study groups

<table>
<thead>
<tr>
<th>Sample</th>
<th>Test</th>
<th>SES</th>
<th>KNS-WO</th>
<th>KNS-SW</th>
<th>KNS-ZR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female handball players N=33</td>
<td>KNS-WO</td>
<td>0.453</td>
<td>0.008</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>KNS-SW</td>
<td>0.452</td>
<td>0.008</td>
<td>0.950</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>KNS-ZR</td>
<td>0.430</td>
<td>0.012</td>
<td>0.943</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>GSES</td>
<td>0.618</td>
<td>0.000</td>
<td>0.750</td>
<td>0.000</td>
</tr>
<tr>
<td>Female physical education</td>
<td>KNS-WO</td>
<td>0.514</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>students N=42</td>
<td>KNS-SW</td>
<td>0.480</td>
<td>0.001</td>
<td>0.887</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>KNS-ZR</td>
<td>0.424</td>
<td>0.005</td>
<td>0.920</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>GSES</td>
<td>0.544</td>
<td>0.000</td>
<td>0.713</td>
<td>0.000</td>
</tr>
<tr>
<td>Female philology students</td>
<td>KNS-WO</td>
<td>0.809</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N=39</td>
<td>KNS-SW</td>
<td>0.790</td>
<td>0.000</td>
<td>0.959</td>
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<td></td>
<td>KNS-ZR</td>
<td>0.784</td>
<td>0.000</td>
<td>0.936</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>GSES</td>
<td>0.570</td>
<td>0.000</td>
<td>0.606</td>
<td>0.000</td>
</tr>
</tbody>
</table>

N – sample size; r – Spearman’s signed rank correlation coefficient; p – level of significance; SES – Rosenberg’s Self-Esteem Scale; KNS-WO – Hope for Success Questionnaire, Total Score; KNS-SW – Hope for Success Questionnaire, Willpower; KNS-ZR – Hope for Success Questionnaire, Achieving Solutions; GSES – Generalised Self-Efficacy Scale

In all 3 groups of respondents, self-esteem correlates with hope for success, including willpower and the ability to find solutions, as well as with self-efficacy, with the 2-component hope for success coexisting with self-efficacy.

Analysis of tabular data allows to indicate that in the control group of non-training female philosophy students, there is a particularly strong correlation between self-esteem and hope for success ($r_s = 0.809$), including willpower ($r_s = 0.790$) and achieving solutions ($r_s = 0.784$), as evidenced by very high values of the correlation coefficients.

**DISCUSSION**

The lack of significant differences between the female handball players and physical education students in terms of personality dimensions selected for research may suggest that training on the 1st league handball team and studying physical education successfully, require similar self-esteem, hope for success and belief one’s own self-efficacy among women.

While reviewing literature provided in scientific databases, no similarly designed studies were found that would take into account all selected variables which could confirm or contradict the results obtained in this study. In their research, Supiński and Kalużyń (2016) indicated slight differences between athletes and physical education students regarding only sense of self-efficacy.
The personality dimension distinguishing female handball players from the women in the control group is willpower; determination, tenacity, persistent pursuit of a set goal, despite encountering obstacles. It may be assumed that the practice of handball shapes this characteristic, desired in other types of human activity.

According to Czerwiński (2010), the advantages of this sport discipline are manifested in educational and psychological spheres. Handball teaches, among others, nobility, relentless fight and determination in the pursuit of success. Similarly, Naglak (2009) recognises tenacity and reliability of action as advantages characteristic of a “winner”-type player, essential in the competition of handball. Also, Spanish researchers who conducted a trial on a large group of adolescent handball players, pointed out that, in handball, it is important to believe in sports success achieved thanks to the effort made and skills acquired (Gómez-López et al., 2019).

Our research results correspond to those obtained by König-Görögh et al. (2017), who diagnosed the personality traits of handball players using the Big Five Questionnaire - BFQ test. The players’ motivation in goal-oriented activities and their proper attitude towards work; commitment and careful performance of duties (König-Görögh et al., 2017).

The female physical education students participating in this study have greater self-esteem and willpower, are more inventive in finding solutions and more convinced of their own effectiveness than the female philology students. This suggests a conclusion known from literature on the subject, indicating that physical activity - systematic, diverse and significant, but lacking features of competitive sports, being the participation of female students of physical education, may be related to shaping many dimensions of the self, important for the initiation and course of the motivational process, in this case: higher self-esteem, greater hope for success (willpower, ability to find solutions) and greater self-esteem (Guszkowska, 2013; Guszkowska et al., 2016; Wieteska, 2017; Foszczyńska, 2018). As previously stated, in our study, it is also shown that practicing handball as a qualified sport, limited to one type of physical activity, is associated with a higher level of willpower.

The presented research results confirm the relationships of self-esteem with personality variables that directly affect action.

The presence of positive correlations between self-esteem and executive aspects of the self (willpower, ability to find solutions, self-efficacy) was indicated not only by the authors of the SES Scale (Dzwonkowska et al., 2008).

On the basis of their research, Judge et al. (2002) found a strong correlation between self-esteem and generalised self-efficacy (correlation in the area of 0.80), which, in their opinion, determines high motivation to undertake tasks, persistence and resistance to failure. They concluded that high self-esteem probably favours the creation of beliefs justifying the sense of taking action, assuming that a person has influence on events and is able to overcome encountered obstacles. It seems that this conviction is particularly important in sports activities (Fox, 2000; Gracz, Sankowski, 2007). German scholars, conducting longitudinal research, have found an interesting dependence that in the past, more qualified and talented handball players, as adolescent athletes (12-14-year-olds), undertook more technical and tactical activities than their training, less-talented colleagues. The results indicated significant differences between groups in terms of the number of actions taken, but not their quality (Schorer et al., 2020).

The relationship between self-esteem and sports performance has been of interest to both researchers and handball coaches (Masmoudi et al., 2015; Aksamit, 2005). Research by Masmoudi et al. (2015) conducted among handball seniors allows to indicate the existence of a statistically significant relationship (ρ = 0.006) between self-esteem measured with the Rosenberg Self-Esteem Scale and sports results. The authors also conclude that the work of a psychologist aimed at increasing the self-esteem of players can help in achieving better sports results.

In their research conducted among students, Lachowicz-Tabaczek and Śniecińska (2006) observed a high correlation between self-esteem measured using the SES and the results of the Generalised Self-Efficacy Scale (GSES) by Schwarzer, Jerusalem and Juczyński, totalling 0.65.

In a study on 109 students (86 women and 23 men), positive correlations were also noted between the level of self-esteem measured by SES and the overall result of the Hope for Success questionnaire (0.57) and the subscales of Willpower (0.59) and Ability to Find Solutions (0.39) (Jarosz, Wiechetek, 2006). On the other hand, research carried out by Ceglarska (2004) among 76 high-school students proved the existence of a relationship between the belief in self-efficacy, measured by the Polish adaptation of the Scale GSES, and hope for success measured by the KNS test Total Score (0.36), the Willpower subscale (0.31) and the Ability to Find Solutions subscale (0.38).

In our study, it was revealed that there is a stronger relationship between self-esteem, willpower and the ability to find solutions (correlation at the level of 0.8) in untrained philology students, compared to handball players and physical education students (correlations within the range of 0.4-0.5). Athletes and physical education students seem to have more stable (less dependent on other personality factors) self-esteem and hope for success. However, the above conclusion requires further research and empirical verification.

**CONCLUSIONS**

The discussed study is associated with certain limitations. In this work, the researchers use diagnostic tools burdened with subjectivism, based on the measure of declared behaviour. The implemented correlation procedure does not allow for obtaining unequivocal conclusions about the existence of cause-effect relationships,
and the sample size as well as targeted selection oblige us to exercise caution in formulating conclusions and generalising the results (Wilke, 2019).

Nevertheless, the study may be a contribution to research on personality determinants of sports success among female handball players. Taking the above-described limitations into account, this study may also have practical applications: 1) in the process of selection and recruitment for sports (Zubik et al., 2013; Buekers et al., 2015), 2) in creating personality profiles of handball players, 3) in developing and implementing individual psychological preparation programmes for competitions; all of its stages: diagnosis (specifying the potential psychological abilities of a player, determining strengths and weaknesses of an athlete’s mental functioning), conducting corrective interactions and mental training (Jarvis, 2003; Krawczyński et al., 2012; Łuszczyńska, 2011; Rychta, 2012; Sá in., 2015).

Alike other psychological factors, self-esteem, hope for success and a sense of perpetration can all make a difference when the players’ competences are at the same level. Increasing training loads, improving techniques, equipment or training methods no longer bring the expected results. The above-mentioned personality resources may constitute a reserve, which can be measured and manipulated in order to obtain greater achievements and ensure greater comfort of self-realisation in the field of sport (Jarvis, 2003; Sroka-Oborska, Graczyk, 2015).

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