

SECTION – VARIA

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SENSE OF EFFICACY, HELPLESSNESS AND ANXIETY AS WELL AS STYLE OF COPING WITH STRESS IN YOUTH PERFORMING SPORTS

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- A. Study design/planning
- B. Data collection/entry
- C. Data analysis/statistics
- D. Data interpretation
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- F. Literature analysis/search
- G. Funds collection

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Abstract:

Introduction. Sense of efficacy is one of the important predictors of an athlete's efficiency [1]. The aim of the study was to show whether there is a relationship between the level of sense of efficacy vs. the sense of helplessness in girls and boys undertaking sports and level of anxiety (cognitive and somatic) as well as the dominant styles of coping with stress.

Procedures. The study comprised 222 individuals - students of sport high-schools from the Małopolskie and Śląskie voivode-ships (108 girls, average age =17.52 years and 114 boys, average age =18.47 years). The Intrapersonal, Interpersonal and World Attitudes Questionnaire [Kwestionariusz Nastawień Intrapersonalnych, Interpersonalnych i Nastawień wobec Świata (KNIIS)] created by Ewa Wysocka was used [2] - the "Sense of efficacy" and "Sense of helplessness" scale (version for high-school students); Endler and Parker's "Coping Inventory for Stressful Situations (CISS)" in the Polish adaptation by Szczepaniak, Strelau, Wrześniewski [3] and "Reactions to Competition" by Smith, Smoll, Schutz in the Polish adaptation by Krawczyński, were also implemented [4].

Results. It has been shown in the research that respondents are dominated by a sense of efficacy over helplessness, a task-oriented style of coping with stress, and somatic fear before a start. In addition, it was found that there is a relationship between sense of efficacy and sense of helplessness with somatic anxiety that is moderated by sex, as well as a relationship between the sense of helplessness and the level of distraction, and a relationship between the sense of helplessness and the level of worrying that is also moderated by gender. Also observed was a correlation between the style of coping consisting in seeking social contacts with sense of helplessness among the surveyed girls.

Conclusions. A practical postulate arises regarding strengthening sense of efficacy, especially among female competitors.

Introduction

There are many factors affecting the performance of an athlete. Among the numerous psychological variables that can promote an athlete's success, one of them is undoubtedly sense of self-efficacy. American athletes - medallists of the Olympic Games - have just only recognised sense of efficacy as a strong determinant of success [1]. Sense of self-efficacy at an adequate level means that an athlete properly assesses his/her level of training, which sets appropriate goals and defines methods for achieving them [5].

Therefore, sense of self-efficacy refers to beliefs related to one's own ability to achieve goals. It affects the course of action and what tasks an individual sets for him/herself with the inner conviction that they are achievable. It increases the motivation to act [6]. According to Bandura [7, p. 86], "sense of self-efficacy not only reduces anticipatory fears and inhibitions, but also, owing to the expectation of final success, influences the course of remedial action taken". Sense of efficacy can also be a form of personal resource, which is reflected in the belief of the ability to cope with difficulties and stress,

as well as in the assertion that the strategies undertaken will bring the expected results [8].

According to Bandura [after: 6], self-efficacy is shaped by previous experiences of successes and failures; by observing others (especially referring to significant people achieving goals); as a result of received feedback on the consequences of one's own actions and thanks to positive emotional feelings accompanying the achievement of goals. In studies conducted among athletes, it has been shown that the greater the sense of self-efficacy, the more competitors' confidence and positive mental attitude increases before a competition [9].

However, analysing relationships between an athlete's sense of efficacy and his/her effectiveness is also associated with other factors, as noted by Wurtele [10]. It is demonstrated in research that sense of efficacy also correlates with other variables: gender (results obtained for teenage athletes showed greater sense of efficacy in boys than in girls) - Singh et al. [11]; style of coping with stress and anxiety level (low level of anxiety and task-oriented style of coping with stress is associated with a high level of efficacy, according to Baltzell [12]; with neuroticism (the higher the level of neuroticism, the less people are convinced of their effectiveness) [13]; hope for success (in research by Tomczak [14], it was shown that people with a higher sense of efficacy are also characterised by a higher degree of hope for success), with emotional intelligence [15]. The authors also note the relationship between sense of self-efficacy in decision-making (speeding up decision-making processes), leadership, and relationships between coaches and athletes, or the players themselves [15].

A competitor without a sense of efficacy functions in a completely different way - with a sense of helplessness. Feeling helpless contributes to giving up and abandoning goals in the face of failures, leading to low self-esteem and negative self-perception. It has a demotivating effect, announcing failure even before undertaking the task. It increases the level of anxiety. According to Guskowska [16], people with low self-efficacy are characterised by a sense of helplessness, a high level of anxiety and negative emotions. This applies to various areas of life, but it is especially visible in activities related to sports.

Study aim and research methods

It was decided to assess whether there is a relationship between the level of sense of efficacy and sense of helplessness in girls and boys performing sports and the level of anxiety (cognitive and somatic) as well as the dominant styles of coping with stress.

The following research questions were put forward (due to the exploratory nature of research, research hypotheses were abandoned):

1. Does gender affect the relationship between sense of effectiveness - helplessness and pre-start anxiety?
2. Is there a relationship between sex, sense of effectiveness - helplessness, and style of coping with stress?

Group studies were conducted, in which 222 individuals - students of sports high-schools (sports championship schools and sports classes) from the Małopolskie and Śląskie voivodeships, were examined. The girls comprised 108 subjects ($M=17.52$, $OS=0.96$ for age), and 114 participants were boys ($M=18.47$, $OS=0.81$ for age). The 124 subject recruited for the study represented 20 individual disciplines, and 98 people - 7 team disciplines.

The following research methods were used:

The Intrapersonal, Interpersonal and World Attitudes Questionnaire [Kwestionariusz Nastawień Intrapersonalnych, Interpersonalnych i Nastawień wobec Świata (KNIIS)] created by Ewa Wysocka was used [2] - the "Sense of efficacy" and "Sense of helplessness" scale (version for high-school students); Endler and Parker's "Coping Inventory for Stressful Situations (CISS)" in the Polish adaptation by Szczepaniak, Strelau, Wrześniewski [3] and "Reactions to Competition" by Smith, Smoll, Schutz in the Polish adaptation by Krawczyński, were also implemented [4] - the scale measures individual differences in somatic anxiety and two aspects of cognitive anxiety: fears and distractions.

Statistical analyses were performed using the IBM SPSS 21 program. Interaction analyses were conducted to determine whether gender is an important moderator of the relationship between sense of efficacy/helplessness and pre-start anxiety and the relationship of sense of efficacy/helplessness with styles of coping with stress. The adopted level of statistical significance was $p=0.05$.

Research results

The undertaken analyses concerned the relationship between sense of efficacy and the feeling of helplessness with pre-start anxiety and gender.

The conducted moderation analyses showed several statistically significant relationships. It was found that the relationship between the sense of efficacy ($p=0.006$) and the feeling of helplessness ($p=0.001$) with somatic anxiety is moderated by sex. Among girls, the level of anxiety decreased along with an increase in the sense of efficacy, while fear increased as the sense of helplessness increased. However, among boys, these relationships did not reach statistical significance.

It was also noted that the relationship between sense of helplessness ($p=0.040$) and the level of attention disruption is moderated by gender. Among competitors, the level of distraction before a competition also increased

along with the feeling of helplessness. Among athletes, these relationships did not reach statistical significance. It has been shown that the relationship between sense of helplessness ($p=0.034$) and level of worry is moderated by gender. As for the sense of helplessness, both in girls and boys, along with its increase, sense of worry also increased, but for the girls, this relationship was significantly greater. The discussed relationships are presented in Table 1.

The last of the analysed relationships concerned sense of efficacy and sense of helplessness with styles of coping with stress and gender. The conducted moderation analyses showed several statistically significant relationships. It was found that only the relationship between the style of coping consisting in seeking social contacts (in the case of other styles of coping with stress, no statistical significance was obtained) with a sense of helplessness ($p=0.002$) is moderated by gender. Among girls, along with an increase

Table 1. Moderation analyses of relationships between sense of efficacy and helplessness as well as pre-start anxiety and gender

Predictor	Moderator	Dependent variable	Beta	BS	t	p	Interaction
Sense of efficacy	Sex	Pre-start anxiety – somatic anxiety	-0.28	0.10	-2.76	0.006	$\beta_M = 0.09$ $\beta_F = -0.28^{**}$
Sense of helplessness	Sex	Pre-start anxiety – somatic anxiety	0.31	0.09	3.30	0.001	$\beta_M = 0.01$ $\beta_F = 0.042^{***}$
Sense of helplessness	Sex	Pre-start anxiety – worrying	0.19	0.09	2.13	0.034	$\beta_M = 0.27^{**}$ $\beta_F = 0.52^{***}$
Sense of helplessness	Sex	Pre-start anxiety – concentration disturbances	0.19	0.09	2.06	0.040	$\beta_M = 0.21^*$ $\beta_F = 0.7^{***}$

F - females; M - males
* $p<0.05$; ** $p<0.01$, *** $p<0.001$

Table 2. Moderation analyses of the relationships between sense of efficacy and helplessness with styles of coping with stress and gender

Predictor	Moderator	Dependent variable	Beta	BS	t	p	Interaction
Sense of efficacy	Sex	SCST - style of coping with stress concentrated on tasks	0.05	0.09	0.61	0.544	
Sense of efficacy	Sex	SCSE - style of coping with stress concentrated on emotions	0.09	0.10	0.95	0.344	
Sense of efficacy	Sex	SCSA - style of coping with stress concentrated on avoidance	0.13	0.10	1.31	0.190	
Sense of efficacy	Sex	SCSSA - style of coping with stress concentrated on avoidance – engaging in substitute activities	0.06	0.10	0.59	0.553	
Sense of efficacy	Sex	SCSSC - style of coping with stress concentrated on avoidance – seeking social contacts	0.22	0.10	2.26	0.025	$\beta_M = -0.01$ $\beta_F = 0.29^{**}$
Sense of helplessness	Sex	SCST - style of coping with stress concentrated on tasks	-0.02	0.09	-0.27	0.785	
Sense of helplessness	Sex	SCSE - style of coping with stress concentrated on emotions	0.10	0.08	1.17	0.244	
Sense of helplessness	Sex	SCSA - style of coping with stress concentrated on avoidance	-0.14	0.10	-1.37	0.171	
Sense of helplessness	Sex	SCSSA – style of coping with stress concentrated on avoidance – engaging in substitute activities	-0.01	0.10	-0.10	0.922	
Sense of helplessness	Sex	SCSSC – style of coping with stress concentrated on avoidance – seeking new social contacts	-0.30	0.09	-3.17	0.002	$\beta_M = 0.07$ $\beta_F = -0.33^{***}$

F - females; M - males
* $p<0.05$; ** $p<0.01$, *** $p<0.001$

in the sense of effectiveness, the search for the company of other people also increased, while among boys, these relationships did not reach statistical significance. Furthermore, only in the female competitors was it observed that as the sense of helplessness increased, there was a decrease in the search for social contacts (Table 2).

Discussion

It has also been shown in studies that there is a relationship between sense of efficacy and somatic anxiety (which causes a variety of physiological symptoms in an individual, e.g. excessive sweating, increased heartbeat, increased muscle tone, chills, etc.). [17]. This is evident in the surveyed girls, whose sense of effectiveness reduced the level of somatic anxiety, while the sense of helplessness caused its intensification. Level of anxiety affects behaviour, athlete's effectiveness [18], and decreases cognitive performance (when it is too high) [19].

As already stated in the Introduction, a sense of effectiveness leads to anxiety reduction. The more self-confidence and the ability to accomplish a goal, the less anxiety an individual feels before completing a task. An interesting observation from the presented research is that the relationships only relate to somatic anxiety. It has been shown that this fear dominates in the subjects during the pre-start period, however, the relationship with the sense of effectiveness concerned only girls. It is possible that for the examined athletes, belief in their effectiveness is very important and affects emotions before the start. They feel less confident than their colleagues, and their emotional arousal is stronger. Gender and sense of efficacy relationships were also analysed, among others, by Singh et al. [11]. The obtained results indicate a clear need to strengthen sense of efficacy (and thus, self-confidence) when working in sports with women (as a coach, sports psychologist). This is an important variable affecting efficiency as well as their (players') well-being. A conviction of helplessness, on the other hand, intensifies the level of anxiety, which, when it is too strong, can have negative consequences for sports performance.

This is also confirmed by the results, in which it was shown that when the surveyed girls feel helpless, their cognitive anxiety increases significantly (both in the form of attention disturbance and their negative thinking or worrying). Cognitive anxiety is the tendency to focus on failure [18]; these are negative thoughts about performance. The tendency to think negatively and worry also occurred in boys with a sense of helplessness. However, the impact of helplessness on cognitive anxiety (raising its level) is stronger in the females. It also confirms the

above-mentioned need to strengthen sense of efficacy and to eliminate helplessness, for example, via mental training used by a sports psychologist.

Interesting relationships between styles of coping (avoidance) and a sense of efficacy - helplessness were also observed in the examined athletes. The unique style of coping with stress is often accompanied by high anxiety [20, 21, 22], and as mentioned above, the relationship between feelings of helplessness and pre-start anxiety concerned girls. But at the same time, only in this group (the studied females) was it noticed that the sense of efficacy was intensified by the use of avoidance strategies, and especially the search for social contacts. Avoidance style is not considered a good predictor of success in sports, but a sense of efficacy - yes. According to Bahramizade and Besharat [23], the unique style of coping with stress in women does not correlate with sporting achievements. Thus, there is some inconsistency here. In the face of difficulties, the examined athletes most often seek support from their surroundings, seeking contact with people. This is consistent with the results obtained by Hoar, Kowalski and others [24]. However, these are also the tested females who feel their sense of efficacy. Perhaps sense of efficacy promotes social skills and in a stressful situation, the subjects do not show difficulties in asking for help and the support of other people. Ede et al. wrote about the relationship between sense of efficacy and interpersonal relations [15]. At the same time, respondents with a high sense of helplessness cannot (avoid) benefit from social support, which is an important factor facilitating coping with stress [25, 26], if it is accompanied by other coping styles, especially those task-related.

Conclusions

1. In the studied girls, sense of efficacy reduces the level of somatic pre-start anxiety, while the feeling of helplessness intensifies it.
2. The feeling of helplessness increases the level of pre-start cognitive anxiety, especially in the group of female competitors.
3. In the examined girls, sense of efficacy intensifies the use of the "seeking for social contacts" style of coping with stress.

In conclusion, there is a practical postulate regarding strengthening sense of efficacy, especially among female athletes.

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Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki, and approved by the Institutional Ethics Committee

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