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DEPRESSIVENESS AMONG ATHLETES AND COPING WITH STRESS, SENSE OF EFFICACY AND SATISFACTION WITH LIFE – A PILOT STUDY

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D. Data interpretation
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Abstract:

Introduction: Depression is considered the most common mental disorder in the world. Representatives of all social groups and professions, including athletes, suffer from it. More and more competitors representing the highest sports level, including elite athletes, admit that they suffer from depression, which is indicated by the results of research [1, 2].

Study aim: In the study, it was decided to establish relationships between depression among athletes and styles of coping with stress, self-efficacy and overall satisfaction with life.

Group and methods: The study comprised 40 subjects, 14 women and 26 men practicing sports. The mean age was 20.43±1.22 years. Individual sports were trained by 25 participants, while team disciplines were practiced by 15 individuals. The questionnaire "Perception of difficult situations by adolescents in sport", the Set of Questionnaires for the Diagnosis of Depression in Children and Adolescents, the Generalised Sense of Self-Efficacy Scale, the Satisfaction with Life Scale and the Coping with Stress Questionnaire were used.

Results: The results allowed to demonstrated a relationship between depression and the styles of coping with stress as well as the type of difficult situations; depressiveness and sense of efficacy, satisfaction with life and sense of efficacy. There were no correlations between gender as well as sports discipline and the discussed variables.

Conclusion: Inefficient coping with stress and low self-efficacy increase the level of depression in young athletes.

Introduction

Depression – a term known not only to the medical community, but functioning in the consciousness of almost every adult person. The media more and more frequently cite examples of famous people – including famous athletes – who talk about their problems with depression. Therefore, the issue of depression – its frequency, relationships with other variables – seems to be an interesting research problem in the sports environment that also provides practical implications.

Depression in athletes affects players of all ages; also those in the age of adolescence. The following considerations will focus on young athletes who are on the verge of late adolescence and early adulthood [3]. Depression in adolescents "manifests itself in a complex of disorders related to mood, emotions, cognitive functions and behaviour" [4]. In young people, low mood in the form of depression and irritability is observed. It may be a reaction to a physical illness or a difficult situation. However, when symptoms last more than 2 weeks, and are accompanied by a loss of interest, inability to experience pleasure, fatigue, lack of energy, decreased self-confidence and/or self-esteem, guilt, decreased cognitive abilities (thinking, concentration), sleep disturbances, low body-mass or suicidal thoughts, then depression is treated as a disease [5, 6]. As the Kraków psychiatrist Antoni Kępiński aptly put it, "in depression,

sadness comes to you for no apparent reason. As if someone pressed a switch, everything suddenly goes out, the world loses its colour, the future is separated by an impassable black wall" [7]. Depression is usually accompanied by anxiety and unease of a chronic nature, that also periodically increases. With this fear comes the anticipation of catastrophic, negative events; a sense of danger related to one's own health and that of relatives; and fear. Chronic anxiety is sometimes interrupted by panic attacks [8]. Depression comes in many forms and its causes may vary. Common features of all disorders: the presence of sadness, a feeling of emptiness or irritability, low and volatile mood, increased level of anxiety (especially about the future), disturbances in the cognitive sphere (difficulties in learning, focusing), inability to find pleasure, disturbances in the sphere of activity (problems with completing activities and quick fatigue), change of circadian rhythms - better functioning in the evening hours, neglect of personal hygiene and appearance, somatic disorders, possible suicide attempts.

Therefore, can young, healthy, physically active people be characterised by mood disorders - depression? Not only do the observations or direct statements of sports champions confirm the fact that they suffer from depression, but this is also visible in the results of research devoted to the issue. However, it is worth noting some contradictions in this regard.

In research among Iranian athletes, lower levels of depression in this group have been demonstrated, in comparison to individuals not practicing sports. It has been found that sports activity activates and increases the level of endorphins in the body, thus, reducing the risk of depression [9]. The relationship between regularly practicing sports and a positive mood was also noticed by Łuszczyńska [10]. A similar function of physical activity and sports (especially team disciplines) in the prevention of depression was noted by Canan and Ataoglu [11] when examining athletes from Turkey. However, in other studies among Turkish athletes (students of sports universities) and non-athletes (students of other faculties), the opposite trend has been shown - athletes are characterised by a higher level of depression, anxiety and psychological stress compared to non-athletes [12].

These discrepancies may also result from the premature ending of a sports career among adolescent athletes. This tendency was noted by Łuszczyńska [10], citing Burton's research. Hence, among people with high experience in sports, the general level of depression may be lower compared to the population of non-training individuals. However, its occurrence cannot be excluded. In the research conducted by Zarychta et al. [2], it was indicated that among leading athletes, as many as 3.6% to 34% meet the diagnostic criteria for depression. Similarly, in the research by Leburn et al [1], carried out among elite athletes, the existence of this situation was also confirmed. Depression may be caused by participation in sport and specific, difficult situations associated with it, such as, the need to end one's sports career at an early stage, severe injuries, serious life events, comorbidities, career dissatisfaction, miscarriages; while for others, sport becomes a way of coping with depression [1].

Study aim

The aim of the study was to determine relationships in this group of athletes between depression and the type of difficult situations (sports- or academic-related, personal); style of coping with stress (task-, emotion- or avoidance-oriented); level of satisfaction with life and sense of self-efficacy. The research was conducted in the form of a pilot study in order to verify the correctness of the assumed research procedures. The participants were informed about the purpose of research. All subjects were of legal age (i.e. 18 and above).

Study group

The study comprised 40 participants - 14 women and 26 men training sports were examined. The mean age was 20.43 ± 1.22 years. Individual disciplines were practiced by 25 participants, while team sports were trained by 15 subjects.

The participants were 1st-year male and female students from the Sports and Physical Education faculties of the University of Physical Education in Kraków (from among the students, active players were selected who made up the study group).

Research tools

1. In the research, the "Perception of difficult situations by adolescents in sport" author-designed questionnaire was used. In it, 3 types of situations were distinguished: stress related to sports situations, stress related to academic situations, and situations of personal nature. The survey, in the form of the Likert scale, contained a list of difficult situations from the above-mentioned areas. The respondents noted to what extent these situations were of difficulty to them over the past year.
2. Set of Questionnaires for the Diagnosis of Depression in Children and Adolescents - CDI 2 [13]. Thos tool enables measurement of the general level of depression, and also includes the subscale "emotional problems", problems related to everyday functioning.

3. GSES – the Generalised Sense of Self-Efficacy Scale [14] is used to measure the strength of an individual's general beliefs about the efficacy of coping with difficulties.
4. SWLS – the Satisfaction with Life Scale [15] scale allows to determine the general level of a respondent's satisfaction with life.
5. CISS – the Coping in Stressful Situations [16] questionnaire includes 3 scales allowing to determine the dominant style of coping with stress: TOC - task-oriented coping style; EOC - emotion-oriented; AOC - style oriented towards avoidance. Additionally, the avoidant style may assume 2 forms: D – distraction seeking, and SoD - social diversion.

Results

In the first analyses, descriptive statistics of the studied variables are presented (Tab. 1). As can be seen, the task-oriented style of coping with stress dominated in respondents: $\bar{x}$ =57.53, with the SD = 9.06, the max. value = 76, and the min. value = 34. On the other hand, the subjects least frequently applied the emotional style, where $\bar{x}$ =44.53, with high differentiation within the group: SD=10.96. The max. value here = 67, and the min. = 16. As far as the avoidance style is concerned, they implemented social diversion (SoD) the least: $\bar{x}$=16.7, SD=4.69, max. = 25 and min. = 7.

The mean value for the general level of depression was $\bar{x}$=11.38, with the SD=5.87. The average level of satisfaction with life here was $\bar{x}$=22.11, SD=5.67, and for sense of self-efficacy, $\bar{x}$ =31.43, where SD=3.73. Among difficult situations, the highest level of stress among the respondents was observed in the case of sports-related stress generating situations; $\bar{x}$ =15.23, with the SD=3.7.

All variables in the study group demonstrated normality of distribution. It was observed that in the study group, the styles of coping with stress were at different levels ($F_{2.78}$=2.52=20.49; p<0.001). The task-oriented style was at the highest level, while the emotion- and avoidance-oriented styles did not differ significantly.

It was also found that the level of stress related to various situations was at different levels (the level of the statistical trend: $F_{2.78}$=2.52; p=0.087), while stress related to sports situations was higher than that academic-related. However, those remaining did not differ significantly from one another.

All variables in the study group were normally distributed. It was observed that in the study group, the task-oriented coping style was the highest ($F_{1.39}$=33.86; p=<0.001).

There were no statistically significant differences in the proportion of representatives from both disciplines among men and women (chi^2=0.73; df=1; p=0.392). Furthermore, no statistically significant differences between sexes in the level of the examined variables or in the level of studied variables between the representatives of the different disciplines, were noted.

Subsequent analyses concern the correlation between level of depression, styles of coping with stress, satisfaction with life, sense of efficacy and type of difficult situations.

Table 1. Means and standard deviations of tested quantitative variables

	N	Mean	Minimum	Maximum	Std. dev.
TOC – task-oriented	40	57.53	34.00	76.00	9.06
EOC – emotion-oriented	40	44.53	16.00	67.00	10.96
AOC – avoidance-oriented	40	46.73	26.00	69.00	10.55
D – distraction seeking	40	21.18	12.00	36.00	6.28
SoD – social diversion	40	16.70	7.00	25.00	4.69
Depression	40	11.38	1.00	24.00	5.87
Emotional problems	40	5.68	0.00	13.00	3.44
Problems with functioning	40	5.70	0.00	14.00	3.07
SWLS – satisfaction with life	40	22.11	10.00	31.00	5.67
GSES – generalised sense of self-efficacy	40	31.43	22.00	40.00	3.73
Stressful situations	40	43.50	23.00	56.00	9.58
Sports-related stressful situations	40	15.23	5.00	21.00	3.70
Academic-related stressful situations	40	14.05	6.00	20.00	3.65
Personal-related stressful situations	40	14.23	6.00	21.00	4.04

Table 2. Correlation between depressiveness, emotional problems as well as problems in functioning and styles of coping with stress

	Level of depressiveness	Emotional problems	Problems with functioning
TOC – task-oriented	**r=-0.36, p=0.02**	r=-0.25, p=0.12	**r=-0.41, p=0.01**
EOC – emotion-oriented	r=0.58, p<0.001	r=0.49, p=0.001	r=0.56, p<0.001
AOC – avoidance-oriented	r=0.08, p=0.61	r=0.13, p=0.42	r=0.01, p=0.93
D – distraction seeking	r=0.25, p=0.12	r=0.25, p=0.12	r=0.20, p=0.22
SoD – social diversion	r=-0.25, p=0.12	r=-0.1463, p=0.37	r=-0.31, p=0.052

Table 3. Correlation between depressiveness, emotional problems as well as problems with functioning and satisfaction with life

	Level of depressiveness	Emotional problems	Problems with functioning
SWLS – satisfaction with life	r=-0.67, p<0.001	r=-0.66, p<0.001	r=-0.55, p<0.001

Table 4. Correlation between depressiveness, emotional problems as well as problems with functioning and level of efficacy.

	Level of depressiveness	Emotional problems	Problems with functioning
GSES – generalised sense of self-efficacy	r=-0.59, p<0.001	r=-0.43, p=0.005	r=-0.64, p<0.001

Table 5. Correlation between depressiveness, emotional problems as well as problems with functioning and difficult situations

	Level of depressiveness	Emotional problems	Problems with functioning
Stressful situations	**r=0.35, p=0.03**	**r=0.39, p=0.01**	r=0.23, p=0.14
Sports-related stressful situations	**r=0.33, p<0.04**	**r=0.35, p=0.03**	r=0.23, p<0.15
Academic-related stressful situations	r=0.2, p=0.22	r=0.26, p=0.10	r=0.09, p=0.61
Personal-related stressful situations	**r=0.35, p<0.03**	**r=0.41, p=0.01**	r=0.23, p=0.14

The data presented in Table 2 make it possible to conclude that in the studied group, the level of the task-oriented style decreased along with the increase in the level of depression and problems with functioning.

On the other hand, along with the increase in general level of depression, as well as emotional and functioning problems, the intensity of applying the emotion-oriented style to cope with difficult situations also increased.

Interestingly, no statistically significant relationships between avoidance style and level of depression were found.

As shown in Table 3, along with the increase in all indices of depression, the level of satisfaction with life experienced a decreased among the surveyed athletes.

Similarly as in the case of satisfaction with life, the sense of self-efficacy decreased along with the increase in the general level of depression as well as emotional and functioning problems.

It was also found that the higher the general level of stress and the level of stress related to sports and personal situations, the higher the overall level of general depression and emotional problems (Tab. 5).

Discussion of results

The average results of the CISS questionnaire obtained by the respondents indicate that the dominant style of coping with stress is task-oriented. On the other hand, the most rarely used style of coping is focused on emotions. With regard to the avoidance-oriented style, the subjects least often seek social diversions. The results of the research conducted by the authors correspond with the research by Guszkowska [17] and Turosz [18], who noted that athletes prefer to implement the task-oriented style of coping with stress.

The presented research results also demonstrate a decrease in the level of task-oriented coping in the study group along with an increase in the level of depression and problems with functioning. Moreover, the obtained results allow to conclude that with the increase in the general level of depression as well as emotional problems and those related to functioning, the frequency of implementing the emotion-oriented coping style increases. According to Seligman [19], the helplessness of adolescents, manifested in the face of stressful situations, may lead

to a rapid increase in the number of cases related to depression. Among young people, the use of coping strategies focused on avoidance may intensify the symptoms of depression, while the strategy of working through the stressor is associated with mental well-being [19, 20]. This may mean that athletes who, in a stressful situation, tend to focus on themselves, their emotions and feelings, as well as those who shy away from solving the problem, are more exposed to this phenomenon.

In the research, it is also shown that the higher the level of overall stress, as well as the level of stress related to sports and personal situations, the higher the respondents level of general depression and emotional problems. Prevention seems to be greatly significant in effectively coping with depression, as well as teaching young players constructive methods of coping with stress, developing and strengthening their task-oriented coping strategies as early on as possible. According to Henschen [21], it is young athletes who, due to the lack of fully developed stress coping strategies, are at a high risk of developing various negative phenomena, e.g. burnout.

The obtained results also allow to indicate a decrease in satisfaction with life and self-efficacy, along with an increase in the general level of depression, experiencing emotional problems and those related to functioning. Well-being is a very important element of health and is often even equated with it [15]. Subjective well-being consists of 3 elements: the level of satisfaction with life, positive feelings and the absence of negative feelings [15]. The assessment of life satisfaction results from comparing one's own situation with the standards set by oneself. If the result of the comparison is satisfactory, then there is a feeling of satisfaction and contentment with life [15]. Due to the fact that the common features of depressive disorders are, among others: the presence of anxiety, sadness, decreased and changing moods, inability to experience pleasure, sense of worthlessness, hopelessness, and possible suicidal thoughts or attempts [22], the level of satisfaction with life is reduced.

Sense of self-efficacy, on the other hand, is the competence of an individual, his/her internal tools enabling the performance of specific activities [14]. The stronger the beliefs about self-efficacy, the more the individual sets him/herself higher and more ambitious goals, to which s/he strives despite difficulties, and the stronger his/her commitment to the intended activities. Sense of self-efficacy is also an essential component of pro-health behaviours. It is associated with such health behaviours as, for example, undertaking regular physical activity, controlling weight and eating behaviours, and giving up addiction. On the other hand, according to, i.e. Schwarzer and Fuchs [23], a low level of self-efficacy is associated with helplessness, anxiety and depression, which is also indicated in the results of this study.

Conclusion:

A correlation was found between the level of depression and the styles of coping with stress as well as types of difficult situations and depression, life satisfaction and sense of efficacy among young athletes. Therefore, special attention should be paid to the early detection of symptoms and signs of depressive disorders among players of both individual and team disciplines. Education in this area seems to be important to increase the awareness of not only athletes themselves, but also their entire environment (i.e. coaches, training staff, parents) that depression may also occur in those undertaking physical activity, regardless of discipline or age. Awareness that depression in adolescents is associated with a number of adverse consequences, such as suicide, problems in social functioning and poor physical and mental health [24].

What is more, education in the field recovering lost energy among athletes, relaxation and mental training as well as visualisation, seems to be important [21, 25, 26, 27]. Due to the complexity of the topic under discussion, it is postulated to continue the research, which should take a different group of subjects into account, as well as a wider range of psychological parameters of athletes, e.g. personality, self-esteem or hope for success.

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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