Original Article

Coping with stress among women and men training team sports games

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Published online: April 30, 2020

(Accepted for publication: April 15, 2020)

DOI:10.7752/jpes.2020.s2171

Abstract

The purpose of this study was to determine the styles of coping with stress among women and men training team sports games. The study involved 49 women aged 19 to 32 years training: football, handball, ice hockey grass, volleyball and basketball. The training experience of the studied women ranged from 2 to 18 years. The second group consisted of 56 men aged 18 to 31 training: football, field hockey, volleyball, basketball and handball. Training experience ranged from 2 to 20 years. The study used the CISS Questionnaire, which allows determining the dominant style of coping with stress. The final result consists of the sum of points in the scales corresponding to the following styles of coping with stress: task-oriented style, emotion-oriented style, avoidant-oriented style. In the case of avoidant-oriented style, the results are additionally calculated on two scales: engaging in substitute activities and social contact seeking. Based on the research, it was found that compared to general population in the same age, male athletes more often use task-oriented style of coping with stress, and more rarely avoidant-oriented style. In addition, it has been observed that in comparison with male athletes, women training team sports more often use a avoidant-oriented style of coping with stress. The author's considerations and research results allow to draw the following conclusions:(1) male athletes more often use a task-oriented style of coping with stress and less often a avoidant style than people from the general population; (2) in comparison with men training team sports games, female athletes more often use a style focused on avoidance.

Keywords: stress, styles of coping, coping with stress, team sports, games.

Introduction

Due to the wide range of psychosocial requirements and private life experiences, athletes are highly exposed to disposable, cyclical and chronically difficult situations (threats, overloads, interferences, deprivations or conflicts). For this reason every athlete, especially striving for high results, should use effective styles of coping with stress (Lipka-Nowak et al., 2012), impossible to eliminate during a long-term sports career (Książek et al., 2015).

One of the best-known concepts of stress is the theory of Lazarus and Folkman (1984, 1987). According to it, stress is characterized as a kind of interaction between man and the environment - the interaction between subjective requirements and the ability to meet them (Lazarus, 1993). However, whether the situation is stressful depends on the primary and secondary assessment. The initial assessment concerns the importance of a particular situation (positive, negative or neutral) where the stimulus can be seen as a threat, challenge or loss. If the relationship is found to be stressful in the primary assessment, then the secondary assessment process begins. This is cognitive and relates to coping skills. As a result, stress management strategies are activated (Lazarus, Folkman, 1984). According to this theory (Lazarus, 1986, 1993), each person has his individual and genetically determined way of perceiving specific situations.

Based on this concept, a relational coping theory stress was created that defines “stress coping” in terms of behavioral and cognitive coping with requirements (Lazarus, Folkman, 1984; Lazarus, 1993). In general, it happens through two forms of coping with stress (Lazarus, Folkman, 1984). The first form is problem-oriented instrumental effort. The second form is the emotional specter, which reduces unpleasant tensions. Referring to the theories of Lazarus and Folkman, Endler and Parker (1990) distinguished three styles of coping with stress:

1. Task-oriented style (SSZ) – its main function is to solve a given problem in a constructive way. This style is typical for people who intend to change a situation by applying different cognitive transformations.
2. Emotion-oriented style (SSE) – it is common among people who tend to fantasise, dream and focus on emotions in stressful situations.

3. Avoidant-oriented style (SSU) – it is characteristic for people who postpone thinking about a problem and try to avoid experiencing it in a stressful situation (Strelau et al., 2005). This style can appear in two forms:
 - A. Engaging in substitute activities (ACZ) which manifests itself through sleeping, reading books, overeating or watching TV.
 - B. Social contact seeking (PKT) used to avoid the need to resolve a stressful situation and to forget about some problems in stressful situations.

To justify the suggestion on the importance of styles of coping with stress while playing sports, it is worth paying attention to current scientific reports that characterize athletes training various sports disciplines. Increased susceptibility to stress and the occurrence of strong emotions during sports activities (especially before important public performances) can lead to a decrease in the individual's cognitive and behavioral abilities, and thus negatively affect the effectiveness of the actions taken.

Having analysed many literature sources, it can be assumed that people practicing sport are selected in terms of coping styles highlighted by Endler and Parker (1990). For example, Guskowska (2002), who examined students of the University of Physical Education in Warsaw, stated that the dominant style of coping with stress in this group is task-oriented style. A study of juniors and seniors athletes practicing target shooting has shown that male and female athletes most often choose a task-oriented style of coping with stress, and less often emotional-oriented style (Litwic-Kamińska, 2010). The following result is consistent with the results of the Blecharz and Siekańska (2007) who analysed footballers and basketball players, Kalinowski et al. (2017) on a selected footballers, and partly consistent with the results of Bojkowski (2014), who examined martial arts athletes (boxing, karate, kickboxing and brazilianjiujitsu athletes).

Lipka-Nowak et al. (2012) observed that high-class dancers are characterized by a higher level of task-oriented style of coping with stress. Koszyk (2018) concluded that athletes, compared to non-athletes, less often use emotion-oriented style. After a study of dancers Czyżyk and Fostiak (2016) found that the tendency to rely on emotion-oriented styles of coping with stress increases with age. Litwic-Kamińska (2010) confirmed the significant differences between men and women in terms of task-oriented style and its styles in the search for social contacts (both results were higher in women group). On the other hand, Kowal (2011), based on her own research, drew special attention to the difference between women and men practicing ballroom dancing, where women achieved higher results in styles oriented on emotions and avoidance.

Based on theoretical premises, it can be assumed that athletes constitute a selected social group in terms of coping with stress. Therefore, the main goal of the study was to determine styles of coping with stress among female and male players training team sports. The following research hypotheses were listed:

1. Athletes of both sexes have a higher level of task-oriented style and a lower level of emotion-oriented style than people from general population in the same age.
2. Male athletes – compared to female athletes – are characterized by a lower level of emotion-oriented and avoidant-oriented style.

Material and methods

Material

The study involved 49 women aged 19 to 32 years ($M = 22.82$ years; $Me = 21$ years; $SD = 2.721$) training: football ($N = 22$), handball ($N = 9$), ice hockey grass ($N = 7$), volleyball ($N = 6$) and basketball ($N = 5$). The training experience of the studied women ranged from 2 to 18 years ($M = 9.27$ years; $Me = 10$ years; $SD = 4.310$). The second group consisted of 56 men aged 18 to 31 ($M = 21.54$ years; $Me = 21$ years; $SD = 2.351$) training: football ($N = 33$), field hockey ($N = 11$), volleyball ($N = 7$), basketball ($N = 3$) and handball ($N = 2$). Training experience ranged from 2 to 20 years ($M = 9.84$ years; $Me = 9.5$ years; $SD = 4.475$). The selection criterion for the study was at least two years of training practice with a minimum of three training sessions per week and representation (from a minimum of a year) of the club at national competitions.

Methods

The study used the CISS Questionnaire (Endler, Parker, 1990; Polish adaptation: Strelau et al., 2005), which allows determining the dominant style of coping with stress. The final result consists of the sum of points in the scales corresponding to the following styles of coping with stress: SSZ (task-oriented style), SSE (emotion-oriented style), SSU (avoidant-oriented style). In the case of SSU, the results are additionally calculated on two scales: ACZ (engaging in substitute activities) and PKT (social contact seeking).

Statistical analysis

Statistical analysis was performed using the Statistica 12.0 program. First, the size of a standardised effect was calculated using the Cohen formula (King, Minium, 2009). Second, in order to verify the research hypotheses (1 and 2) the Student t-test was used.

Results

First, stress coping styles among women ($N = 49$) and men ($N = 56$) were compared with peers in the general population. Norms for the general population were expressed on a sten scale ($M = 5.5$; $\sigma = 2.0$).

Table 1. Comparison of coping styles among men and women athletes training team games against their peers from the general population

Stresscopingstyles	Biological sex						t
	Sex	M (1)	SD	N	SE	M (2)	
SSZ	W	5,74	1,48	49	0,21	5,50	1,11
	M	5,96	1,67	56	0,22		2,08*
SSE	W	5,86	1,95	49	0,28		1,28
	M	5,89	1,58	56	0,21		1,86
SSU	W	6,06	2,06	49	0,29		1,91
	M	4,55	1,91	56	0,26		-3,72***
ACZ	W	6,14	2,33	49	0,33		1,93
	M	4,89	2,21	56	0,30		-2,06*
PKT	W	5,53	1,57	49	0,22		0,14
	M	4,63	1,69	56	0,23		-3,87***

SSZ– task-oriented style of coping with stress; SSE– emotion-oriented style of coping with stress; SSU – avoidant-oriented style of coping with stress; ACZ –engaging in substitute activities; PKT–social contact seeking; M (1) – average for styles of coping with stress in athletes groups; SD – standard deviation for styles of coping with stress; N– sample size; SE – standard error of the mean; M (2) – population average (sten scale); t – Student’s t-test result.

*** p <0.001; * p <0.05.

It was found that there were no statistically significant differences in styles of coping with stress between female athletes and their peers from general population in the same age. Nevertheless, in the case of male athletes, it was found that, compared to peers from the general population, they showed an unusual preference for a task-oriented style (p <0.05) and a lower tendency to a avoidant-focused style (p <0.001), engaging in substitute activities (p < 0.05) and social contact seeking (p < 0.001). In this group, the results obtained were small and medium-sized: for task-oriented style –Es = 0.232; for a avoidant-oriented style –Es = – 0.473; for engaging in substitute activities –Es = –0.304; to search for social contact seeking –Es = –0.438 (Table 1).

Table 2. Comparison of styles of coping with stress among men and women training team sports games

Stresscopingstyles	Biological sex				
	Women (M)	Men (M)	t	SD (1)	SD (2)
SSZ	5,74	5,96	–0,74	1,48	1,67
SSE	5,86	5,89	–0,10	1,95	1,58
SSU	6,06	4,55	3,90***	2,06	1,91
ACZ	6,14	4,89	2,82**	2,33	2,21
PKT	5,53	4,63	2,83**	1,57	1,69

SSZ – task-oriented style of coping with stress; SSE – emotion-oriented style of coping with stress; SSU – avoidant-oriented style of coping with stress; ACZ –engaging in substitute activities; PKT –social contact seeking; M – medium result; t – Student’s t-test result; SD (1) – standard deviation for styles of coping with stress in the studied women group; SD (2) - standard deviation for styles of coping with stress in the studied men group.

*** p <0.001; ** p <0.01.

Comparison of styles of coping with stress among women (N = 49) and men (N = 56) training team sports games showed that women are characterized by a higher level: avoidant-oriented style (p < 0.001), engaging in substitute activities (p < 0.01) and social contact seeking (p < 0.01) (Table 2).

Discussion

The possibilities of coping with stress experienced by athletes are related to skillful tolerance of mental load in the training and starting process (Radomska, Rudzka, 2006). Research on styles of coping with stress used by athletes showed that respondents training team sports do not differ from their peers from the general population in terms of an emotion-oriented style. Attempts to prove this result can be found in a relatively small research group, as well as in its insufficient selection (the two-year training period may be too short to identify a

person as an athlete). The surveyed women also did not show a much greater tendency to follow the task-oriented style, even though their results were scales higher than those of the general population. However, the men surveyed were characterized by higher results in terms of a task-oriented style (in undertaking actions and efforts to solve the problem) and lower results in terms of avoidant-oriented style (a tendency to maintain interpersonal distance and experience a stressful situation), including engaging in substitute activities and social contact seeking. This means that the surveyed players more often try to solve the difficulties encountered in a constructive way (Endler, Parker, 1990). These results are partly consistent with data obtained by Guskowska (2002), Blecharz and Siekańska (2007), Litwic-Kamińska (2010), Lipka-Nowak et al. (2012) or Kalinowski et al. (2017). In all that studies, athletes of both sexes had a higher level of task-oriented style. It can therefore be assumed that the first research hypothesis has been partially positively verified.

At the same time, the study partly confirmed the second research hypothesis indicating that women training team sports games more often than men use styles focused on emotions and avoidance. This result is consistent with the results of Litwic-Kamińska (2010), which showed that the differences between female and male athletes in terms of coping with stress relate primarily to the more frequent search for social contacts by women. The research results are also consistent with the findings of Kowal (2011), which described a significant difference between men and women practicing ballroom dancing. The researcher proved that women achieved higher results in coping with stress, relying on a style focused on avoiding and seeking social contacts. Analysis of the results raises the question of whether women's participation in sport is a manifestation of the tendency to engage in substitute activities, including seeking company, what can serve as a social buffer (Marchand et al., 2011). In our own study, there was no statistically significant difference between men and women at the level of emotion-oriented style.

Continuing research on styles of coping with stress, it is worth extending them to performance indicators treated as dependent variables. Verification of such relationships may indicate that not only temperamental traits (Guskowska, 2004; Langelaan et al., 2006; Tomczak, 2010), personality (Turosz, Skorko, 2002; Rychta, 2004) or motivational (Jarvis, 2003; Czerwiński, Jastrzębski, 2006), but also styles of coping with stress affect the effectiveness in sport.

The author's considerations and research results allow to draw the following conclusions:

1. Male athletes more often use a task-oriented style of coping with stress and less often a avoidant style than people from the general population.
2. In comparison with men training team sports games, female athletes more often use a style focused on avoidance. As a result, it can be assumed that women treat team sports as a way to postpone the need to face stress.

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