

COPING STRATEGIES OF FOOTBALLERS WHO HAVE RECOVERED FROM COVID-19 IN FIVE EUROPEAN COUNTRIES

Alexandra PREDOIU^{1*}, Selenia DI FRONSO², Maurizio BERTOLLO²,
Radu PREDOIU¹, Ryszard MAKAROWSKI³, Andrzej PIOTROWSKI⁴,
Germina COSMA⁵, Romualdas MALINAUSKAS⁶, Zermena VAZNE⁷

¹ National University of Physical Education and Sport, Faculty of Physical Education and Sport, Bucharest, Romania

² University “G. d’Annunzio” of Chieti-Pescara, Behavioral Imaging and Neural Dynamics Center, Chieti, Italy

³ Academy of Applied Medical and Social Sciences, Faculty of Administration and Social Sciences, Elblag, Poland

⁴ University of Gdańsk, Institute of Psychology, Gdańsk, Poland

⁵ University of Craiova, Faculty of Physical Education and Sport, Craiova, Romania

⁶ Lithuanian Sports University, Kaunas, Lithuania

⁷ Latvian Academy of Sport Education, Riga, Latvia

*Corresponding author: radu_predoiu@yahoo.com

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Abstract. *In the realm of sports performance, coping skills play a pivotal role, particularly within the stress-inducing environment of sports. The aim of this research was to explore differences between football athletes who had tested positive for COVID-19 and athletes who had not contracted the virus in terms of their utilization of coping strategies. Additionally, differences among countries were investigated, in the case of football players who had, at some point, battled COVID-19. A total of 147 (one hundred and forty-seven) male football players from five European countries - Italy, Latvia, Lithuania, Poland, and Romania – took part in this study. To assess coping skills, we employed the Brief COPE questionnaire, which encompassed fourteen coping strategies, grouped into three categories: emotion-oriented coping strategies, problem/task-oriented strategies, and dysfunctional coping strategies. Using the Dwass-Steel-Critchlow-Fligner pairwise comparison test, the differences between the five countries were scrutinized, starting from the three dependent variables (the grouped coping strategies). Notably, football athletes from Poland and Romania exhibited a higher frequency of employing emotion-focused coping strategies (during the pandemic). Conversely, athletes from Italy leaned towards employing problem-focused strategies more frequently. No significant differences were observed in terms of dysfunctional coping strategies among football players who had battled COVID-19 across the five countries. We discussed the frequency of using coping strategies among football athletes who reported no infection with the SARS-COV-2 virus (up to the 4th wave of the pandemic) and those who had experienced COVID-19. The findings are of considerable interest to specialists, raising awareness on the coping skills employed by footballers during the pandemic.*

Keywords: stress, SARS-CoV-2 virus, dysfunctional coping strategies, football.

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Introduction

Due to the global spread of the SARS-COV-2 virus, the World Health Organization (WHO), declared the COVID-19 pandemic in March 2020. Governments worldwide recommended social (physical) distancing measures to reduce infection rates, resulting in the closure of public

spaces and the implementation of mandatory lockdowns and isolation periods (Meier et al., 2020). Under these circumstances, many sports competitions have been postponed. Researchers argued that athletes' training, sleep quality or recovery were negatively influenced by COVID-19 isolation (Mon-López et al., 2020). Athletes and coaches also faced significant reductions in earnings (Hall, 2020). It is worth noting that the pandemic's negative effects varied among athletes. A training plan is more easily followed by a runner (for example) during different waves of the COVID-19 pandemic.

As of March 31, 2023, nearly 762 million people worldwide have been infected with SARS-CoV-2, resulting in approximately 7 million deaths (World Health Organization, 2020). In an attempt to underline the number of infected athletes before August 2020 (worldwide), You et al. (2022) discuss about 521 COVID-19 -positive athletes (but, as the authors underline, these are not all infected athletes). Athletes practicing football and basketball appeared to be the most affected. "It is very difficult to identify the number of COVID-19 infections among athletes (the more so as there are professional athletes, amateur, college, junior or senior athletes, and a part of them were asymptomatic)" - Makarowski et al. (2022).

Regarding the impact of the pandemic on competitive athletes, specialized literature emphasized some key points: increased body fat mass was observed in football players (Grazioli et al., 2020); athletes in individual sports experienced higher levels of anxiety (and stress) compared to those in team sports (Haan et al., 2021); athletes' mental health was adversely affected, with elevated levels of negative stress and depression reported (Schinke et al., 2020; FIFPRO, 2020). Athletic identity played an important role, with higher scores linked to higher values for distress (Uroh & Adewunmi, 2021), and these athletes (having a higher result for athletic identity) "tend to ruminate and catastrophize more" (Costa et al., 2020). Coping strategies played a crucial role in reducing negative stress, enhancing athletes' well-being and quality of life, and helping them cope with disappointments and problems of life (Williams, 2001).

Coping can be defined as the conscious use of internal resources (involving behavioural, cognitive, affective efforts) to deal with situations perceived as threatening/ potentially harmful (Anshel & Sutarso, 2007). Coping also relates to automated and volitional/ intentional responses of individuals (see the Coping Circumplex Model - Stanisławski, 2019). In sports competition, athletes must cope with failure, recovery, or injuries (Bochaver & Dovzhik, 2016), and anxiety (between stress and anxiety there is a relationship of mutual influence) having the potential to influence the coping behavior (Törestad et al., 1990).

When discussing coping strategies, many researches refer to the adaptation to stress (and to analysis of stress) as described by Lazarus (1991 and 1999) in the Transactional Stress Model. Lazarus emphasizes that a comprehensive examination of stress adaptation must consider various factors: the stressor, the cognitive appraisal (in the case of the stressful situation), an individual's coping capacity, and the emotions evoked by the situation. The intensity (and quality) of the emotions is affected by the athletes' cognitive appraisal, while experienced emotions during competitions affect the athletes' performance (Jones, 1995; Lazarus and Folkman, 1991). Furthermore, Gomes (2014) proposed the Interactive Model of Adaptation to Stress building upon Lazarus' theoretical model. According to this theoretical framework, an athlete's adaptation process (for example) begins when they perceive the stressor as relevant to their existing goals. In a recent study focusing on adaptation to stress in football players,

Gomes et al. (2022) highlighted that “cognitive appraisal partially mediated the relationship between competitive stressors and emotions; athletes who perceived stressors as a challenge tended to feel more control over the situation and more resourceful (coping perception), leading to a more positive emotional experience”.

The specialized literature discusses adaptive coping strategies, such as active stress coping, seeking social support, planning, and positive thinking), which play a positive role in competitive athletes’ mental health (Daumiller et al., 2021). Effective coping strategies have a positive impact on stress experienced by athletes, including during the COVID-19 pandemic (Levine et al., 2022). Notably, research found that „positive reframing as an emotion-focused coping strategy [...] reduces negative stress, while self-blaming and behavioural disengagement (dysfunctional coping strategies) negatively influences athletes’ mood” (see Predoiu et al., 2022a).

Emotion-oriented coping strategies refer to “self-oriented efforts directed at reducing stress through emotional responses, self-preoccupation, and fantasizing” (Snyder & Lopez, 2002). In contrast, problem/task-oriented strategies are focused on resolving problems by seeking information about the stressor and determining the best course of action in that context (Eysenck, 2005). Dysfunctional coping strategies, on the other hand, are associated with withdrawal, eating more (or less), playing games (e.g., on the mobile phone, PC), drinking alcohol, etc., under stressful conditions. The use of these coping strategies has been linked to a higher risk of burnout (Erschens et al., 2018).

The *aim* of the study was twofold: to examine differences between football athletes who were diagnosed with COVID-19 (up to the 4th wave of the pandemic) and those who reported no history of COVID-19 (in terms of coping strategies used), and to investigate the frequency of using coping skills among athletes (diagnosed with COVID-19) from Italy, Lithuania, Poland, Latvia, and Romania.

The following research questions were added in this current research:

1. What differences exist in the employment of coping strategies (problem-focused, emotion-focused, and dysfunctional coping strategies) between football athletes who reported that they have not been infected with SARS-COV-2 virus (up to and including wave 4 of the pandemic) and those who have been ill with COVID-19?
2. What differences can be observed in coping skills among football athletes (diagnosed with COVID-19) from Italy, Latvia, Lithuania, Poland, and Romania, during the pandemic?

Methodology

Participants

One hundred and forty-seven male football players from five European countries: Italy, Latvia, Lithuania, Poland, and Romania participated in the study. Table 1 provides insights into the age distribution of the football players and the number of football athletes who reported that they were ill with COVID-19 (until the 4th wave of the pandemic), in each investigated country. Inclusion criteria for the current research included a minimum of 2 years of training in a sports club and a minimum age of 18 years. The football players (in the entire sample) had an average competitive experience of 9.2 years, with 66.7% competing at the local/regional level and the remaining 33.3% at the national level.

Table 1. *Characteristics of the investigated sample*

Country	Men (total sample)			Football athletes who reported being infected with COVID-19
	N	M_{age}	SD	N
Italy	30	20.2	2.15	13
Latvia	21	22.4	3.51	10
Lithuania	23	23.0	4.28	12
Poland	32	25.4	3.70	15
Romania	41	23.7	3.66	13
Total	147			63

Measures

The research employed Brief COPE questionnaire, which assessed fourteen coping strategies: active coping, positive reframing, seeking emotional support, planning, seeking instrumental support, self-distraction, behavioural disengagement, venting, self-blame, denial, substance use, humour, acceptance, and religion (Carver, 1997).

This instrument contains 28 items. Football players expressed (through a four-point Likert-type scale, with 1 indicating “I haven’t been doing this at all”, and 4 indicating “I’ve been doing this a lot”) the frequency of using a different strategy for coping with stress during the pandemic. The Brief COPE questionnaire has been used in previous investigations of athletes (e.g., Makarowski et al., 2022; Predoiu et al., 2022a; Makarowski et al., 2020).

Procedure

The research was carried out from October 2021 to early January 2022 (during the fourth wave of the pandemic), across five countries: Poland, Latvia, Romania, Italy, and Lithuania. The purposive sampling technique was employed to investigate football players, considering the inclusion criteria. For collecting the data, Brief COPE was applied online, through *Google forms*.

In the current study, coping strategies have been analysed and interpreted within the framework of Su et al.’s (2015) model. Accordingly, we examined *emotion-focused strategies*, including humour, emotional support, positive reframing, religion, and acceptance, *problem focused strategies*, such as planning, active coping and use of informational support, as well as *dysfunctional strategies*, which encompassed substance use, self-blame, behavioural disengagement, venting, self-distraction, and denial.

Data analysis

The internal reliability of the scales was assessed (McDonald’s omega ω was calculated), and other statistical procedures were applied – independent sample *t*-test, the Kruskal-Wallis test, and the Dwass-Steel-Critchlow-Fligner test (and, also, the effect size indicators, as Epsilon Squared and Cohen’s *d*), were conducted using Jamovi (The Jamovi project, 2021). In the current study $\omega = 0.72$ (emotion focused strategies), $\omega = 0.75$ (problem focused strategies) and $\omega = 0.71$ for dysfunctional coping strategies (an acceptable internal consistency).

Results

In order to explore the differences in coping strategies (problem-focused, emotion-focused, and dysfunctional coping strategies) between football athletes who reported no prior infection with the SARS-COV-2 virus (up to the 4th wave of the pandemic / the time they completed the Brief COPE questionnaire) and athletes who had experienced COVID-19 at some point, an independent *t*-test was employed. Bearing in mind that the skewness values were < 1 (Table 2) in the case of the three dependent variables (DVs) examined, the condition of normality of distributions has been met (George & Mallery, 2016). Also, since the *p*-values exceeded 0.05 in the case of the Levene's test for homogeneity of variances, we can conclude that equal variances were maintained.

Table 2. *Coping strategies – descriptive statistics*

		Emotion focused strategies	Problem focused strategies	Dysfunctional strategies
N	1.		63	
	2.		84	
Mean	1.	24.7	16.0	24.6
	2.	22.9	15.4	23.4
SE	1.	0.583	0.472	0.427
	2.	0.534	0.387	0.327
Median	1.	23	16.0	24
	2.	22.0	14.5	24.0
SD	1.	4.63	3.75	3.39
	2.	4.89	3.55	2.99
Variance	1.	21.4	14.0	11.5
	2.	24.0	12.6	8.97
Skewness	1.	0.391	0.611	0.336
	2.	0.742	0.484	-0.125

Note: 1: football athletes were ill (at some point) with COVID-19; 2: football athletes reported that they were not ill with COVID-19

Table 3. *Football athletes who reported that being infected with COVID-19 (n = 63) vs. athletes who reported not being ill with COVID-19 (n = 84)*

Coping strategies	t	p	d	Mean difference
Emotion focused strategies	2.18	0.031	0.36	1.734
Problem focused strategies	1.02	0.309	0.17	0.606
Dysfunctional coping strategies	2.31	0.022	0.38	1.218

The results emphasize that football athletes who experienced COVID-19 illness (up to the 4th wave of the pandemic or the time they responded to the questionnaire) tended to employ emotion-focused strategies ($p = 0.031$) and dysfunctional coping strategies ($p = 0.022$) more frequently (during the pandemic), in comparison to the football players which reported no diagnosis of SARS-COV-2 (Table 3). The effect size index (Cohen's *d*) reflects a moderate to weak difference ($d = 0.36$, respectively $d = 0.38$ – see Predoiu, 2020) between the two groups, in terms of emotion-focused and dysfunctional coping strategies.

Subsequently, we explored the variations in coping skills among football athletes who had, at some point, been diagnosed with COVID-19, hailing from Italy, Latvia, Lithuania, Poland, and Romania, using the Kruskal-Wallis test.

Table 4. Differences in coping strategies among football athletes (who experienced COVID-19) from Italy, Latvia, Lithuania, Poland, and Romania (n = 63)

Country	Emotion focused strategies			Problem focused strategies		Dysfunctional strategies	
	N	M	SD	M	SD	M	SD
Italy	13	22.5	2.47	18.1	3.77	23.2	3.47
Latvia	10	20.5	2.22	15.6	1.71	24.7	2.06
Lithuania	12	24.0	4.75	14.4	2.02	23.7	2.46
Poland	15	25.8	3.73	15.0	2.10	23.3	3.22
Romania	13	28.7	4.94	15.7	3.43	25.8	4.15
Chi-Square		21.2		9.83		5.49	
p		< 0.01		0.043		0.241	
Epsilon Squared (ϵ^2)		0.342		0.158		0.088	

Note: $\epsilon^2 = 0.14$ (large effect size)

The findings emphasize that during the pandemic, Latvian football athletes tended to use emotion-focused coping strategies less frequently, whereas Romanian athletes demonstrated the highest utilization in this regard. In terms of problem-focused coping strategies, athletes from Italy scored the highest, while in terms of dysfunctional coping strategies, the highest results were obtained by Romanian and Latvian football players (Table 4).

To delve deeper into these differences among the five countries, we conducted a Dwass-Steel-Critchlow-Fligner (DSCF) pairwise comparison test, starting from the three dependent variables (strategies used to deal with stress during the pandemic). Table 5 contains the significant differences between football players (only athletes who reported being ill with COVID-19 were examined).

Table 5. DSCF test results – football athletes from five countries

Group (Median)		W	p
Emotion-focused coping strategies			
1 (22)	4 (24)	4.140	0.028
1 (22)	5 (30)	3.851	0.051 ^M
2 (19.5)	4 (24)	4.720	0.008
2 (19.5)	5 (30)	4.611	0.010
Problem-focused coping strategies			
1 (17)	3 (14)	-3.886	0.047

Note. 1 - Italy, 2 - Latvia, 3 - Lithuania, 4 - Poland, 5 - Romania, W - Wilcoxon value, M - marginally significant.

Statistical analysis of the data (Table 5) shows that, during the pandemic, football athletes from Poland and Romania employed emotion-focused coping strategies more frequently than their counterparts from Italy and Latvia. Also, athletes from Italy used with a higher frequency problem-focused coping strategies compared to football players from Lithuania. Regarding dysfunctional coping strategies, no significant differences were observed among football athletes who had contracted COVID-19 (from the five countries).

Discussion

In times of emergencies, such as the COVID-19 pandemic, the utilization of coping strategies to manage negative stress becomes crucial for athletes' mental health, as emphasized by Leguizamo et al., 2021. The scope of this research was to examine the differences between football players who had contracted COVID-19 at some point (up to the 4th wave of the pandemic) and athletes who had not, with respect to their coping strategies. Additionally, it delved into the frequency of coping skills utilization among football athletes diagnosed with SARS-CoV-2 virus from five European countries (Italy, Lithuania, Poland, Latvia, and Romania). The dependent variables (DVs) were the grouped coping strategies: emotion-focused, problem-focused, and dysfunctional strategies.

The results underlined that football athletes who had experienced COVID-19 (up to the 4th wave of the pandemic or at the time they responded to the questionnaire) employed significantly more emotion-focused and dysfunctional coping strategies, compared to athletes who reported that they were not ill with COVID-19. A moderate to weak difference between the two groups (in terms of coping skills) was observed. With the help of the same instrument which measures coping skills (as in the current research), in 2020, authors found that during the 1st wave of the pandemic (when athletes faced for the first time COVID-19) dysfunctional strategies (behavioural disengagement, denial, venting of emotions, and self-blame) were used by athletes to cope with distress - see Makarowski et al. (martial arts athletes were then investigated). Given that denial can lead to unhealthy behaviours (Doron et al., 2015), and behavioural disengagement implies feelings of helplessness, affecting athletes' mood (Szczyńska et al., 2021), counselling and guidance to football athletes, steering them toward adaptive coping strategies represents a very important topic for specialists.

When it comes to emotion-oriented coping strategies (which include humour, emotional support, positive reframing, religion, and acceptance) researchers argued that positive reframing techniques can help reduce depression (Swoboda et al., 1990), and negative affect (Garnefski & Kraaji, 2006), being associated with better management of pandemic-related impact on people (Pété et al., 2021). Football athletes who had COVID-19 and used more frequent emotion-focused coping strategies, managed better the stress of illness (considering the benefits of positive reappraisal, mentioned above).

Considering problem-focused coping strategies, athletes from Italy obtained the highest scores, while for emotion-focused coping strategies, Romanian football athletes registered the highest results. In terms of dysfunctional coping strategies, the highest values were obtained by Romanian and Latvian football players. Specialized literature emphasized that among Romanian athletes (from sixteen sports branches, including football), dysfunctional strategies

became more frequent between the 1st and 4th waves of the pandemic, with an increase in the use of behavioural disengagement reported (Makarowski et al., 2022).

Following the application of the DSCF pairwise comparison test (to investigate the significant differences), the results reveal that: football athletes from Poland and Romania employed emotion-focused coping strategies more frequently during the pandemic, compared to athletes from Italy and Latvia. Conversely, football players from Italy demonstrated a higher-frequency of problem-focused coping strategies than athletes from Lithuania. However, no significant differences were observed among football athletes who had COVID-19 (from the five countries) in terms of dysfunctional strategies. These noteworthy significant differences could be attributed to several factors, including the Inequality-Adjusted Human Development Index (IHDI), the Global Multidimensional Poverty Index (see United Nations Development Programme, 2021), highlighting the quality of life in different countries, and the employment stability or the intensity of the pandemic (it is known that Italy “was one of the most impacted countries by the COVID-19 crisis” (di Fronso et al., 2020).

The limitations of this research refer to the reduced sample-size of football athletes (in each country) who reported that they were ill (at some point) with COVID-19. Moreover, there is the possibility that some football players were asymptomatic and untested (and declared that they were not sick from COVID-19). It is known that, in many cases, this disease is asymptomatic or result in mild symptoms (Sierpiński et al., 2020). The use of explicit, declarative measures (questionnaires) may introduce limitations, including the potential for respondents to provide desirable answers, as highlighted in the literature (Predoiu et al., 2022b). The conclusions may be different if athletes from individual sport branches would be examined, or from other team sports (apart from football). Lastly, the individual coping strategies must be explored in relation to specific athlete groups.

Conclusions

The findings of the research, conducted across five European countries during the fourth wave of the pandemic, revealed that football athletes who had contracted COVID-19 tended to employ emotion-oriented coping strategies and dysfunctional coping strategies more frequently during the pandemic, in comparison to athletes who had not been diagnosed with SARS-COV-2. Specifically, among football athletes who had tested positive for COVID-19, those from Romania registered the highest utilization of emotion-focused strategies to cope with stress, while Latvian players obtained the lowest usage in this regard. Italian athletes registered the highest score in terms of using problem/task-oriented strategies to address negative stress, while Romanian and Latvian football players obtained the highest values for dysfunctional coping strategies, although these differences did not reach statistical significance. This study holds relevance for football players, coaches, sports psychologists, sports managers, and parents, as it raises awareness about the coping skills used by athletes during the pandemic, knowing that long-term use of dysfunctional strategies (e.g., substance use, behavioural disengagement, venting of emotions, or denial) can significantly impact the psychological well-being of football athletes.

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