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ΕΡΕΥΝΗΤΙΚΗ ΕΡΓΑΣΙΑ

Sport professionals' psychological stress during COVID-19-related restrictions

OBJECTIVE To look at probable differences in psychological stress indicators among sports professionals (national coaches) based on (a) sex, (b) living status, (c) years of experience, (d) sport kind, and (e) residential status. **METHOD** The "Perceived Stress Scale" questionnaire was used for the survey. The sample included 605 Greek national coaches, 398 males, 206 women, and one who did not specify their gender preference. **RESULTS** Only on the questionnaire's "Favorable Perceptions" did univariate analyses of variance indicate statistically significant differences. **CONCLUSIONS** The study found that stress is a key influence in determining a person's quality of life, especially among sport professionals.

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ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2024, 41(4):493-497

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Το ψυχολογικό stress των επαγγελματιών του αθλητισμού κατά τη διάρκεια περιορισμών που σχετίζονται με την COVID-19

Περίληψη στο τέλος του άρθρου

Key words

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The COVID-19 epidemic, which emerged in late 2019 and early 2020, quickly spread across the globe. The SARS-CoV-2 virus affected numerous countries worldwide, leading to the declaration of COVID-19 as a global pandemic.¹ In response to this situation, mandatory home confinement measures were implemented as an immediate and crucial step to combat the epidemic, aiming to slow down the transmission of the disease. Consequently, more than a quarter of the world's population has been under confinement measures.²⁻⁴

Such an unforeseen event, like the COVID-19 pandemic, raises concerns about increased worry and anxiety among individuals facing the hazardous implications of the coronavirus, whether they are genuine or associated with potential catastrophic human outcomes.⁵⁻⁷ The impacts of COVID-19 have significantly altered people's daily behaviors, leading to radical adjustments in their lifestyles and routines.⁷ One

key distinction between COVID-19 and other diseases, such as the common flu, is the media's portrayal of COVID-19 as a unique and imminent threat. This heightened portrayal contributes to panic, anxiety, and an increased likelihood of hysteria.^{6,8}

Pandemics instill extraordinary social fear due to the highly infectious and potentially lethal nature of the viruses they carry. Alongside the risk of infection, individuals' mental health is affected by the quarantine measures, potential financial losses, and the inconsistent and insufficient information received through online channels.⁹⁻¹¹ People naturally experience worry when they perceive a situation as hazardous but lack adequate resources to cope with the threat.¹² The negative emotions experienced during the COVID-19 crisis can worsen people's well-being and exacerbate other health-related issues, such as anxiety and depression.^{13,14} Furthermore, the COVID-19 epidemic

has significantly impacted regular physical activity and, consequently, people's way of life. The imposed restrictions, including the closure of sports facilities and venues, have disrupted the daily sports routines worldwide.^{7,15}

The global spread of the COVID-19 epidemic has also had consequences for people's work and social lives, including athletes, coaches, and sports personnel. Specifically, coaches, like the rest of the population, have faced restrictions on their movements, being confined to their homes. This disruption has affected their usual involvement with their job and their interaction with athletes, which is likely to have an impact on their mental health.^{7,16}

Extensive research indicates that COVID-19 has caused severe stress and emotional disturbances during the lockdown period.¹⁶ The relationship between perceived stress and emotion regulation has been extensively studied among healthcare workers, encompassing both clinical and non-clinical populations. These studies have examined measures taken during and after the quarantine period.^{16,17}

Literature has previously demonstrated the significant role of sports in promoting mental health, with gender also influencing this outcome. Some writers have suggested that resistance exercise is beneficial for mental health due to its relatively rapid influence on body perception, enhancing self-concept and self-efficacy.^{18,19} However, others argue that the type of activity is less important as long as individuals engage in a sport of their choice and enjoyment.²⁰ It is important to note that these reports primarily focus on the preferences of trainees, not coaches. The findings concerning coaches have been inconclusive over the years,^{21–23} with recent studies indicating that the type of sport does not significantly impact coaches' psychology.^{24,25} Additionally, coaching experience appears to be associated with how coaches cope with stress, which has been explored further through qualitative research.²⁶ Given the relevance of this aspect in previous decades, studying it during a pandemic like COVID-19 is of utmost importance.

Regarding quality-of-life factors, the location and living arrangements of individuals have also played a role in the context of COVID-19.²⁷ Although global confinement measures were implemented with the aim of limiting exposure to the deadly virus, prolonged quarantine and staying within confined spaces have had a positive impact on the development of anxiety and stress disorders.^{28,29}

The purpose of this study is to examine the emotional impact of COVID-19 on Greek national coaches and their coping mechanisms. The study was conducted during the second wave of COVID-19, specifically investigating whether

their sport, years of professional experience, residential status, and family living arrangements influenced their psychological well-being during this period. Given the research gaps, this study underscores the uniqueness of both Greek and international research efforts in this field.

MATERIAL AND METHOD

The sample consisted of 605 Greek national coaches. More specifically, 398 were men (65.8%), 206 were women (34.0%), and one did not indicate sex preference (0.2%). Additionally, the sample was divided according to (a) "type of sport" (individual=277; 45.8%) (team=328; 54.2%), (b) "years of professional experience" in coaching (0–5=182; 30.1%, 6–14=180; 29.8%, 15–≥24; 40.2%), (c) "residential status" (urban=291; 48.1%, province=314; 51.9%), and (d) "family-living status" (alone=104; 17.2%, with parents=120; 19.8%, roommate=10; 1.7%, companion=62; 10.2%, wife/husband=46; 7.6%, single parent=20; 3.3%, and family=243; 40.2%).

The Greek version of the Perceived Stress Scale (PSS) was employed in the investigation.³⁰ The instrument was designed as a 14-item scale for the sample to indicate their impression of stressful events and circumstances from the preceding month. Seven items address negative impressions (i.e. *in the last month, how often have you felt nervous and stressed?*), while seven address favorable perceptions (i.e. *in the last month, how often have you felt that things were going your way?*). Each item is graded on a Likert-type scale ranging from 0=never to 4=very often. A total score of 56 shows that someone is under a lot of stress.

The use of an electronic form/questionnaire (Google Form) was judged necessary by the researchers following the current coronavirus protection rules (COVID-19), reducing unnecessary physical interaction. The reason for selecting a certain period is due to the length of the COVID-19 outbreak and its mandatory inclusion in Greece.

All study features and ethical issues, such as voluntary participation, participant anonymity, the possibility to leave freely at any stage of the questionnaire, and the exclusive use of the data for research purposes, were explained to participants. They were informed by completing the first page of the questionnaire, which had all of the necessary information. The procedure was carried out if they agreed.

RESULTS

The average inter-item correlations (coefficient alpha values) for the negative and positive subscales were 0.84 and 0.82, respectively. The PSS score was calculated by summing the negative and reverse of the positive subscale values. Cronbach's alpha for the entire scale was 0.85. It should be emphasized that a prior study³⁰ had reported similar findings.

Univariate analyses were performed to look into any potential variations in the sample. More specifically, solely for the variable "Favorable perceptions": (a) The analysis revealed statistically significant differences between sex groups [$F_{(1,604)}=10.072$, $p<0.01$]. More specifically, women had greater value (mean [M]=2.70, standard deviation [SD]=0.66), than men ($M=2.62$, $SD=0.66$). (b) The analysis revealed statistically significant differences between the type of sports groups [$F_{(1,604)}=10.219$, $p<0.001$]. More specifically, individual sports had greater value ($M=2.68$, $SD=0.66$), than team sports ($M=2.50$, $SD=0.67$). (c) The analysis revealed statistically significant differences between residential status groups [$F_{(1,604)}=7.819$, $p<0.01$]. More specifically, urban individuals had greater value ($M=2.66$, $SD=0.68$), than the province individuals ($M=2.51$, $SD=0.65$). (d) The analysis revealed statistically significant differences between types of living status groups [$F_{(6,604)}=3.938$, $p<0.001$]. More specifically, the *post-hoc* multiple comparisons Scheffe test indicated differences only between the 5th group (family-living), which showed greater value ($M=2.78$, $SD=0.66$), than the 1st (living alone) ($M=2.50$, $SD=0.61$). (e) The analysis revealed statistically significant differences between the type of years of professional experience groups [$F_{(2,604)}=5.738$, $p<0.01$]. More specifically, the *post-hoc* multiple comparisons Scheffe test indicated differences between the 1st group (least experienced), which showed greater value ($M=2.72$, $SD=0.67$), with both the 2nd (intermediate) ($M=2.53$, $SD=0.61$), and the 3rd (most experienced) ($M=2.51$, $SD=0.69$).

DISCUSSION

The objective of this study was to examine the emotional impact of coaches' experiences on the Greek national level and how they managed their psychological well-being during the COVID-19 confinement period. Specifically, the study aimed to determine if the type of sport (individual or team), years of professional experience, residential status, and family-living status influenced the coaches' stress levels during the second wave of COVID-19. The PSS examination was administered to the coaches through an online survey to investigate this specific issue.

According to the findings of this study, women displayed a more favorable response to the stressful conditions of confinement. While gender does not seem to have a significant influence in other relevant research studies,^{24,31,32} it appears to play a role in Greece. Previous studies^{16,33-35} have found that female coaches reported higher levels of perceived stress compared to male coaches. The authors of this research attribute this difference to the socio-cultural context of Greek culture, which differs from the European

lifestyle in which the aforementioned studies were conducted. The traditional notion of women being responsible for household chores is a characteristic of Greek culture. Consequently, the confinement period may have been more detrimental for Greek male coaches, who were completely isolated from their daily lives. On the other hand, women had to cope with the burden of domestic responsibilities even before the quarantine.

Regarding the impact of sport type, previous research has yielded conflicting findings. While researchers²⁴ found no influence of sport type on German coaches, several studies²¹⁻²³ have produced ambiguous results. The current study revealed that coaches of specific sports exhibited better responses to perceived stress. This finding raises concerns since team sports coaches in Greece are more susceptible to burnout.²³ Therefore, it could be expected that team sports coaches would have a more positive response during the quarantine period, considering it as an opportunity to relax and rest. However, a more proactive approach to stress management by individual sports coaches might be justified due to the ability to interact with their athletes through technological means and better regulate their training activities at home. Another factor could be that team sports were more affected by the necessary physical distancing measures, whereas individual athletes continue to train alone in some form.

As predicted, coaching experience played a role in stress management. Existing research already indicates that coaching experience is associated with how coaches manage stress.²⁶ Hence, the current study aimed to enhance and update these findings. Building upon qualitative research that highlighted a positive association between coaching experience and stress management, the study revealed that individuals with less coaching experience (up to five years) exhibited better stress management during the quarantine period. However, there is a lack of existing data for comparison. It is well-known that younger individuals tend to have a more positive attitude toward technology.⁶ Assuming that individuals with less coaching experience are also younger, it is possible that younger coaches have discovered strategies to manage their stress at home through increased use of technological devices and the internet.

Furthermore, it appears that the quality of coaches' lives also influences their stress management. Living with family members has been shown to facilitate stress management, which is consistent with previous research.³⁶ It is well-established that individuals who have never been married are more prone to mental health issues.³⁷ Ultimately, cultural

factors such as social support are crucial for understanding how individuals experience and cope with stress.³⁸

Finally, one of the study's findings indicated that city dwellers exhibit better stress management compared to rural dwellers. This finding contradicts global literature,³⁹ which has shown that COVID-19 had a psychological impact on urban populations⁹ and that participants from urban areas experienced increased depression compared to pre-COVID-19 levels. The results of the present study can possibly be explained by the differing quality of urban and rural living conditions in Greece. Urban areas are characterized by a fast-paced lifestyle where individuals spend

a significant amount of time at home or confined to work buildings. Conversely, individuals living in rural areas have more freedom and spend more time engaging in activities outside the house. Therefore, when faced with lockdown conditions, urban residents were more accustomed to the lifestyle changes.

In conclusion, various factors influence how individuals manage stress. These variables need to be thoroughly researched to ensure preparedness for future pandemics or similar situations. The present study, in comparison to worldwide literature, revealed research gaps and cultural disparities across communities.

ΠΕΡΙΛΗΨΗ

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ΣΚΟΠΟΣ Εξέταση πιθανών διαφορών στους δείκτες ψυχολογικού stress μεταξύ των επαγγελματιών του αθλητισμού (εθνικοί προπονητές) με βάση (α) το φύλο, (β) την κατάσταση διαβίωσης, (γ) τα έτη εμπειρίας, (δ) το είδος του αθλητισμού και (ε) την οικιστική τους κατάσταση. **ΥΛΙΚΟ-ΜΕΘΟΔΟΣ** Για την έρευνα χρησιμοποιήθηκε το ερωτηματολόγιο «Αντιλαμβανόμενο stress». Το δείγμα περιλάμβανε 605 προπονητές της Εθνικής Ελλάδας (398 άνδρες, 206 γυναίκες και έναν που δεν διευκρίνισε την προτίμησή του ως προς το φύλο). **ΑΠΟΤΕΛΕΣΜΑΤΑ** Μόνο στον παράγοντα του ερωτηματολογίου «Ευνοϊκές αντιλήψεις» οι αναλύσεις διακύμανσης παρουσίασαν στατιστικά σημαντικές διαφορές. **ΣΥΜΠΕΡΑΣΜΑΤΑ** Από τη μελέτη διαπιστώθηκε ότι το άγχος είναι ένας βασικός παράγοντας στον καθορισμό της ποιότητας ζωής του ατόμου, ειδικά μεταξύ επαγγελματιών αθλητισμού.

Λέξεις ευρετηρίου: Είδος αθλήματος, Επαγγελματική εμπειρία, Κατάσταση διαβίωσης, Οικιστική κατάσταση, Προπονητής, PSS-14, Φύλο

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