

analysis revealed significant relationships between anxiety with maladaptive coping, and between depression with both adaptive and maladaptive coping strategies. In turn, adaptive and maladaptive coping strategies are associated with sleep disturbance and adverse eating behaviours. In summary, the results of this first study about the soccer referees' mental health revealed the pivotal role of coping mechanisms in the relationship between anxiety and depression with health-related behaviours, such as sleep and eating habits. From a practical viewpoint, referees' committees need to address referees' health-related behaviours and meet their mental health needs for the benefit of both their performance and well-being.

## Prevalence and determinants of illicit performance-enhancing substances in portuguese gym users

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### ABSTRACT

Nowadays, the use of illicit Performance-Enhancing Substances (PES) is not confined to elite sport, it is also spread throughout gymnasias and fitness centers, and it is seen as a public health concern, since the long term use these substances (PES) can be associated with psychological symptoms (e.g., depressive symptoms, antisocial and violent behaviors, suicidality) and several physical disorders (e.g., wide variety of cardiovascular, psychiatric, metabolic, and musculoskeletal disorders) or even fatal side effects. Studies focusing PES use among gym users are few, without providing information about social indicators and determinants to further explore why this specific population use these substances. The purpose of this study is to investigate the extent of PES use and the social-cognitive determinants of the intentions to use PES. We also intend to test the Theory Planned Behavior's usefulness in predicting self-reported PES use in both genders. A convenience sample of Portuguese gym users (n=453) completed an anonymous web-based survey. Multiple binary logistic regression, the Chi-Square test or Monte Carlo Simulation or Fisher's Exact test were used. The odds ratios and their respective 95% confidence intervals were calculated. Also, structural equation modeling, multigroup analysis and t-test with the Welch correction for heterokedastic variances were used. The use of illicit PES, which varies significantly according to gender, education, occupation, exercise profile and type of practice, was reported by 11,1% of gym users. Peer effect and media appear to be strikingly important in the misuse of PES. At the structural level, results support attitudes, beliefs and subjective norms in predicting intentions to PES use in gym users with subjective norms being its strongest predictor. The predictive model was invariant across gender; however, compared to males, females believed less in the performance enhancing effects of PES, were less prone to the influence of significant others and had weaker intentions to use

### KEYWORDS

gym users; performance-enhancing substances; psychological strategies; social-cognitive determinants; gender



these substances. Results provide precise insight into the specific factors associated with PES use, which could support psychological strategies in this particular population. Future studies should take into account individuals personality traits and characteristics which can influence (or be a reflex of) the behavior for taking these substances, such as: low self-esteem, having a greater tendency to behavioral or emotional problems (e.g., anxiety, tension and depression), super-man complex and perfectionism, in order to better support effective psychological strategies in PES prevention.

## Obstacles in applied settings during the COVID-19 pandemic: comparison, challenges, and success

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### ABSTRACT

Numerous countries declared a state of emergency in response to the COVID-19 pandemic in order to contain the spread of the virus. Ding et al. (2021) examined the anxiety and depression symptoms among adults in 11 countries during the COVID19 lockdown and found that these countries have a high rate of mental health problems. In this symposium, we present practical applications of sport psychology by practitioners in Hong Kong, Singapore and Malaysia during the COVID-19 lockdown. In the first presentation, Lo will discuss her experiences working with athletes in Hong Kong using teletherapy vs in-person therapy. In the next presentation, Lim shares his experiences in assisting Singaporean athletes in their preparation for the Olympics, using a case study of an elite shooter's Olympic qualification journey through the pandemic. Following that, Koh et al. examines the use of mindfulness acceptance commitment (MAC) approach with elite triathletes both prior to and during the COVID-19 pandemic. Finally, Kuan et al. compare one-to-one and group teletherapy dealing with games cancellations and demotivated athletes in the face of a pandemic. To conclude, all the studies make practical contributions to sport psychology by expanding the understanding of the practices, challenges, and successes encountered during the COVID-19 pandemic lockdown from different Asian cultural perspectives.

### KEYWORDS

COVID-19; Mental health; Challenges; Teletherapy; Practitioners

## The use of teletherapy vs in-person therapy during COVID-19: suggestions for sport psychology practitioners

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