

Original Article

**Effects of the COVID 19 pandemic on the mental health of professional soccer teams: epidemiological factors associated with state and trait anxiety**

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**Abstract:**

This study aims to verify associated factors with trait and state anxiety in professional soccer teams during the COVID-19 epidemic. The sample was composed of 529 athletes, coaches, and professional soccer teams' physical trainers during the COVID-19 epidemic. From this amount, 214 were classified with trait-anxiety, and 315 were classified with state-anxiety using the State-Trait Anxiety Inventory (STAI). This study is an epidemiological and cross-sectional study. We applied an observational method, and we performed a remote measurement. The measurement was made via online questionnaires in male and female individuals working on soccer teams (soccer professionals or athletes) who could be affected by anxiety during social isolation in the COVID-19 epidemic. Each questionnaire was composed of sociodemographic questions, self-perceived performance, and State-Trait Anxiety Inventory (STAI). Descriptive data are presented as percentage/absolute frequency. Factor analysis was used to reduce many variables into fewer factors of each anxiety group (state and trait) to verify which variables are associated with the COVID-19 pandemic anxiety state,  $p \leq .05$ . Factor analysis of the trait anxiety group indicated a significant correlation ( $p \leq .0001$ ). The trait anxiety group's components correlated 0.43 and 0.84, while the state anxiety demonstrated a correlation between 0.52 and 0.996. The present results highlight the importance of cognitive behavior therapy for professional soccer teams. Its core is cognitive restructuring using the ABC model (antecedents-behavior-consequences). Mental errors and maladaptive behaviors are identified and worked upon considering sociodemographic factors such as gender and schooling levels.

**KeyWords:** Coronavirus, Sport Psychology, Team sport, Mood state, Gender, Psychiatry.

**Introduction**

Coronavirus disease 2019 (COVID-19) is a new, rapidly emerging zoonotic infectious disease associated with mental problems (Ahmed et al., 2020). The first case was reported from Wuhan (Hubei province, China) on

December 31st, 2019. The World Health Organization (WHO) declared the outbreak a global health emergency on January 30th, 2020, and then on March 11th, 2020, it was declared a pandemic (Chen et al., 2020). COVID-19 is caused by a novel coronavirus, SARS-CoV-2 (severe acute respiratory syndrome coronavirus-2), transmitted via droplets during close unprotected contact with an infector and fomites (Al-Quteimat Om Msc & Amer Am R.Ph, 2020). No effective pharmacological interventions or vaccines are currently available to treat or prevent COVID-19. For this reason, non-pharmacological public health measures such as isolation, social distancing, and quarantine are the only effective ways to respond to the outbreak (Lippi, Henry, Bovo, & Sanchis-Gomar, 2020). However, professional soccer clubs invest significant amounts of money in professional players, and this modality is one of the most popular and competitive Olympic sports around the world. Therefore, this sport was one of the first to return to training and competition practices, even in quarantine. Still, the mental health condition, especially anxiety, of the players after this isolation period has not been investigated until now.

Anxiety is a frequent psychiatric disorder. It is usually associated with fear, nervousness, apprehension, and panic but may also involve the respiratory, cardiovascular, gastrointestinal, or nervous systems, exclusively or in combination (Ayuso-Moreno, Fuentes-Garcia, Collado-Mateo, & Villafaina, 2020). Before the COVID-19 quarantine, authors indicated heart rate variability changes with precompetitive anxiety in semi-professional female soccer players (Ayuso-Moreno et al., 2020). However, since this study, no one knows how professional soccer teams work with their mental health. Epidemiological studies in sports are very informative because they gather data from large numbers of athletes and non-athletes using powerful statistical techniques and survey community samples of persons who are not undergoing treatment, demonstrating the prevalence of anxiety and other mental disorders between athletes and professionals with direct impact on athlete's performance (Junge & Feddermann-Demont, 2016; Junge & Prinz, 2019). Preceding reports using different self-reporting questionnaires have reported that the prevalence of anxiety symptoms varied between ~3.5% and ~20% in male athletes, and ~10% and ~35% in female athletes of different levels (Borrego, Cid, & Silva, 2012; Broodryk, Pienaar, Edwards, & Sparks, 2019; Gulliver, Griffiths, Mackinnon, Batterham, & Stanimirovic, 2015).

Anxiety disorders might be currently increased by emotional responses related to fear, apprehension, worry, and tension in response to the actual perceived context (Abdessater et al., 2020). The authors recently reported that the COVID19 pandemic harmed young French urologists in training and their work and training quality (Abdessater et al., 2020). Managing psychosocial well-being during this time is as important as managing physical health. No one study has investigated anxiety in sports practices. This investigation is essential because anxiety modulates attention networks, resulting in compromised executive function, stimulus processing, and information selection, which are all significant domains for soccer competition (Gonzaga Ados, Albuquerque, Malloy-Diniz, Greco, & Teoldo da Costa, 2014; Laskowski, Creed, & Raghupathi, 2015).

Understanding the role of personality traits can aid athletes' behavior and sports performance (Weinberg & Gould, 2016). However, it is important to highlight that personality characteristics are in a frequent state of interaction between athletes' situational and environmental factors and can shape new patterns of traits (Weinberg & Gould, 2016).

Anxiety in sport psychology could be a situational or event-dependent transitory state, called state anxiety, or a relatively stable personality characteristic (i.e., trait anxiety) (Broodryk et al., 2019; Naderi, Shaabani, Gharayagh Zandi, Calmeiro, & Brewer, 2020). State anxiety symptoms are more likely to occur in perceived situations or specific situations, such as in sleep dysfunction (Benjamin et al., 2020) or caused by steroids (Slimani, Baker, Cheour, Taylor, & Bragazzi, 2017).

Specific factors for soccer athletes may precipitate or exacerbate anxiety disorders, including pressures to perform and public scrutiny (Benjamin et al., 2020), career uncertainty or dissatisfaction (Gouttebauge, Aoki, Verhagen, & Kerkhoffs, 2017), and injury (Slimani et al., 2018). General psychosocial factors are also strongly implicated in the onset and maintenance of anxiety disorders within professional soccer teams (Kilic et al., 2017). These include behavioral inhibition (Pain & Harwood, 2007), social withdrawal or avoidance (Kilic et al., 2017), and cognitive patterns of rumination (Broodryk, Pienaar, Edwards, & Sparks, 2017).

However, the specific determinants of anxiety disorders in athletes, coaches, and physical trainers during the COVID-19 pandemic has not yet been reported. The present study presents the hypothesis of trait and state anxiety associated with the COVID-19 pandemic situation. Identification of associated factors may assist with early identification and indicate prevention efforts in this Olympic sport, improving the timely management of anxiety disorders among elite soccer athletes. Therefore, this study aims to verify associated factors with trait and state anxiety in professional soccer teams during the COVID-19 pandemic.

## **Material & methods**

### *Study Design*

This study is an epidemiological and cross-sectional study. We applied an observational method, and we performed a remote measurement. The measurement was made via online questionnaires in male and female individuals working on soccer teams (soccer professionals or athletes) affected by anxiety during social isolation in the COVID-19 Pandemic. Each questionnaire was composed of sociodemographic questions, self-perceived performance, and State-Trait Anxiety Inventory (STAI). The measurement was conducted for 20 days in May 2020. This was when the epidemic curve was growing in Brazil, and the authorities were debating the return of soccer in the country.

### *Participants*

The sample was composed of 529 athletes, coaches, and physical trainers of professional soccer teams during the COVID-19 Pandemic. For the classification of the groups, the final score obtained between the two scales (STAI) was used, which pointed to more prevalence. From this amount, 214 were classified with trait-anxiety, and 315 were classified with state-anxiety using the State-Trait Anxiety Inventory (STAI). These athletes were from professional soccer teams of 24 different states (São Paulo, Sergipe, Rio de Janeiro, Santa Catarina, Rio Grande do Sul, the Rio Grande do Norte, Piauí, Goiás, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Paraná, Maranhão, Paraíba, Pernambuco, Pará, Rondônia, Bahia, Amazonas, Espírito Santo, Tocantins,

Ceará, Alagoas, Acre) in Brazil, continuously competing in state, national and international representative championships with regular training (technical and tactical) 4-7 times a week before the COVID-19 Pandemic. They performed basic physical training under 75% of maximal heart rate ~3 times a week during the quarantine.

The inclusion criteria for the present research included participants aged over 18 years without cognitive alterations, without surgeries or injuries, and having played more than three years in the professional soccer level, without COVID-19 or positively contagious but in an asymptomatic situation and discharged by a doctor. The present study had as exclusion criteria soccer athletes, coaches, and physical trainers who were unable to respond to the questionnaire or had limitations during the study, mainly for health reasons, duly certified by doctors. The participants were also instructed not to intake alcohol or drugs for at least 24 hours before the measures and were maintaining normal diets.

Before proceeding with data collection, all participants attended a briefing meeting and signed an informed consent document to understand the testing parameters and the risks and benefits associated with the study. This study was submitted to and approved by the Local Committee of Ethics in Research (n. 68598317.0.0000.5147), following the rules of resolution of the National Health Council and according to the WMA Declaration of Helsinki.

#### *Procedures and measures*

The questionnaires were virtually distributed by an investigator who explained that the study's purpose was to examine anxiety during the COVID-19 Pandemic, and the test was virtually applied and analyzed by a Psychologist using the Google Form platform. The participants also completed a consent form reflecting the confidential and voluntary nature of their involvement in the study. The investigator was present to answer any questions about the wording or meaning of any of the items on both questionnaires.

#### *Sociodemographic questions*

The present study applied sociodemographic questions in participants with the variables: gender, age, schooling level, club state, soccer experience, the average number of official games by month, experience in soccer (years), tournament experience, level of the championship (Kristjansdottir, Johannsdottir, Pic, & Saavedra, 2019; Solleveld, Goedhart, & Vanden Bossche, 2015).

#### *Self-Perceived Performance Scale (SPS)*

The SPS was adapted from preceding authors and intended to describe self-perceived performance (Sequeira, 2005). This assessment uses the theory of self-efficacy with the judgments that individuals have about themselves. The athlete had to indicate the frequency with which each one of the characteristics occurs in the proposed situation according to a Likert scale of 7 points (e.g., self-performance until now, physical, technical, tactical, psychological, disciplinary and the self-performance in a team) (Sequeira, 2005). We obtained direct scores and subsequently calculated a scale for each participant in each of the measures (Sequeira, 2005).

#### *State-Trait Anxiety Inventory (STAI)*

The STAI is one of the most used instruments to quantify subjective factors related to anxiety (Keedwell & Snaith, 1996). Developed by Spielberger, Vagg, Barker, Donham, and Wetsberry (1980) and translated and adapted for Brazil by Biaggio and Natalicio (1979), the STAI presents a scale that evaluates anxiety as a state (STAI-E) and another that accesses anxiety as a trait (STAI-T). The STAI-E is an inventory that requests that the participants describe how they feel now concerning 20 questions presented on a scale of 4-point Likert (1- not; 2- a little; 3- enough; 4- very much). Just as the STAI-E, the STAI-T also has 20 questions, but the participants are instructed to answer how they generally feel according to a new 4-point Likert scale (1- rarely; 2- sometimes; 3- frequently; 4- almost ever).

While the state of anxiety reflects a transient reaction directly related to a situation of adversity that presents itself during a current moment, the trait anxiety refers to the individual's propensity to deal with greater or lesser anxiety throughout their life (Cattell & Scheier, 1961). The score for each part ranges from 20 to 80 points, and the scores may indicate a low degree of anxiety (0-30), a median degree of anxiety (31-49), and a high degree of anxiety (greater than or equal to 50) (Andreatine & Seabra, 1993).

The sample's internal consistency in the survey was calculated, and the Cronbach alpha found was 0.960 for the STAI-E and Cronbach's alpha of 0.705 for the STAI-T, indicating the instrument's reliability (Cronbach & Warrington, 1951). The Cronbach alphas found in this study on both scales agree with those previously reported in the literature with Brazilian samples (Andrade, Gorenstein, Vieira Filho, Tung, & Artes, 2001; Pasquali, Pinelli Júnior, & Solha, 1994). The scores of the instrument indicate that the higher the score, the higher the level of anxiety.

#### *Statistical Analysis*

All analyses were performed utilizing the SPSS software version 20.0 package (SPSS, Chicago, USA). Descriptive data are presented as percentage/absolute frequency, and factor analysis (principal components analysis method) was used to reduce a large number of variables into fewer numbers of factors of each anxiety group (state and trait) to verify which variables are associated with the COVID-19 pandemic anxiety state. This technique extracted the maximum common variance from all variables and puts them into a common score of anxiety associated with soccer athletes, coaches, and physical trainers. A significance level of  $p \leq .05$  was used.

**Results**

For the classification of groups in state anxiety and trait anxiety are demonstrated in percentage in Table 1.

**Table 1.** Classification of groups

State anxiety	Degree	State anxiety	Trait anxiety
	High	95.2%	90.8%
	Moderate	4.8%	9.2%
	Low	0	0
Trait anxiety	Degree	State anxiety	Trait anxiety
	High	58.4%	84.1%
	Moderate	40.2%	15.9%
	Low	1.4%	0

The groups' classification used the final score of each scale, indicating the score with the highest value as the character with the highest prevalence.

Sociodemographic variables included in the PCA are demonstrated in percentages in Table 2.

**Table 2.** Sociodemographic components included by the factorial analysis and self-perceived features were included by the factorial analysis, in percentage.

Groups	Gender		Marital Status		
	Female	Male	Married	Single	
State Anxiety	16.5%	83.5%	28.9%	71.1%	
Trait Anxiety	20.6%	79.4%	32.2%	67.8%	
Groups	Schooling				
	Primary Education	High School	Higher Education	Graduate	
State Anxiety	8.3%	38.1%	30.7%	22.9%	
Trait Anxiety	8.9%	21.5%	36.0%	33.7%	
Groups	Soccer Experience				
	>10 years	>20 years	1 to 5 years	6 to 10 years	
State Anxiety	33.0%	9.2%	26.0%	31.8%	
Trait Anxiety	30.4%	13.1%	25.7%	30.8%	
Groups	International Matches		Workout during Quarantine		
	No	Yes	No	Yes	
State Anxiety	83.5%	16.5%	7.6%	92.4%	
Trait Anxiety	83.6%	16.4%	12.6%	87.4%	
Groups	Number of matches by month before quarantine				
	<1	1-2 matches	2-3 matches	<4	
State Anxiety	7.9%	7.6%	43.3%	41.0%	
Trait Anxiety	10.7%	1.4%	7.9%	79.9%	
Groups	Club functions				
	Athlete	Coordinator	Physiologist	Coaches	
State Anxiety	53.2%	5.4%	1.6%	39.7%	
Trait Anxiety	43.8%	7.0%	3.3%	44.9%	
Groups	Self-Perceived Performance				
	Current Performance	Physical Performance	Individual Performance	Group Performance	
State Anxiety	Good	58.1%	54.6%	60.0%	51.7%
	Medium	25.1%	27.3%	20.3%	30.8%
	Very Good	16.8%	18.1%	19.7%	17.5%
Trait Anxiety	Good	53.7%	56.5%	56.1%	47.2%
	Medium	29.4%	26.3%	27.6%	36.9%
	Very Good	16.9%	17.2%	16.3%	15.9%
Groups	Technical Performance		Psychological Performance		
	Technical Performance	Tactical Performance	Psychological Performance	Disciplinary Performance	
State Anxiety	Good	56.9%	59.7%	58.7%	45.4%
	Medium	24.4%	22.8%	20.6%	17.1%
	Very Good	18.7%	17.5%	20.3%	37.5%
Trait Anxiety	Good	57.0%	57.4%	53.3%	46.7%
	Medium	23.8%	24.8%	34.1%	18.2%
	Very Good	19.2%	17.8%	12.6%	35.1%

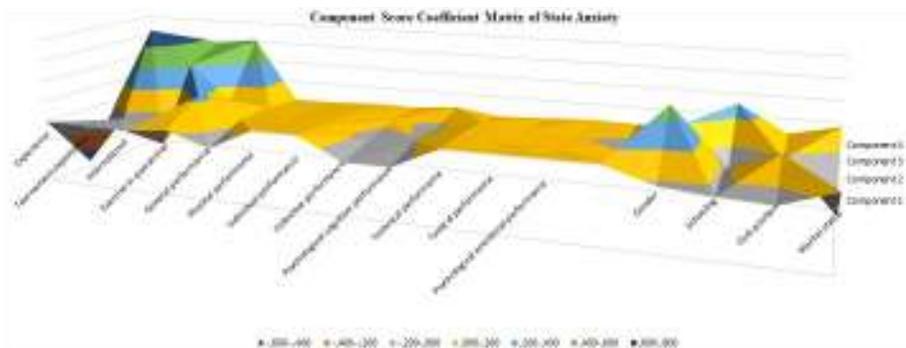
Factor analysis of the trait anxiety group indicated a significant correlation (KMO=.956, X<sup>2</sup>=3822.70, df=136, p≤ 0001). The trait anxiety group's components correlated between 0.43 and 0.84, while the state anxiety demonstrated a correlation between 0.52 and 0.996. All correlations are presented in Table 3 with their respective correlations and eigenvalues.

**Table 3.** Correlations and eigenvalues from factorial analysis.

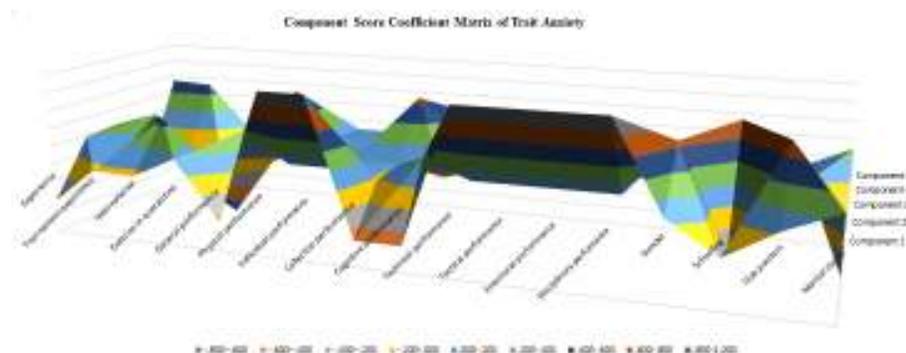
Variables	State-anxiety		Trait-anxiety	
	Extraction	Eigenvalues	Extraction	Eigenvalues
Soccer (years)	0.656	50.31	0.431	40.67
Soccer matches per month	0.517	57.23	0.843	52.06
International matches	0.662	64.00	0.744	62.44
Workout during quarantine	0.651	70.41	0.604	71.94
Current performance	0.817	76.18	0.789	78.05
Physical performance	0.996	80.42	0.787	83.62
Individual performance	0.996	84.52	0.798	87.91
Team performance	0.721	87.89	0.802	91.55
Psychological performance	0.548	89.88	0.761	94.79
Technical performance	0.996	91.74	0.806	97.73
Tactical performance	0.996	93.46	0.783	99.03
Cognitive performance	0.996	94.87	0.794	100.00
Disciplinary performance	0.996	96.19	0.815	100.00
Gender	0.680	97.28	0.485	100.00
Schooling	0.848	98.32	0.528	100.00
Club functions	0.667	99.21	0.677	100.00
Marital Status	0.526	100.00	0.523	100.00

Figure 1 demonstrates the Principal Components Matrix extracted of the trait anxiety group, while Figure 2 shows the Principal Components Matrix extracted from the state anxiety group.

**Figure 1.** Principal Components Matrix extracted of the trait anxiety group



**Figure 2.** Principal Components Matrix extracted from the state anxiety group



## Discussion

The present study presented the premise of trait and state anxiety associated with the COVID-19 pandemic situation in professional soccer teams. We verified associated factors with trait and state anxiety in professional soccer teams during the COVID-19 pandemic using the principal components method extracted from sociodemographic and self-perceived performances. The results indicated that 17 of 23 factors contributed to increased or decreased trait and state anxiety: the practice time and championship experience negatively correlated with the state anxiety components. In contrast, international games had a moderate positive correlation with state-anxiety during the COVID-19 pandemic.

Anxiety consists of a unique combination of thoughts and feelings and internal physiological changes associated with the autonomic nervous system's activation. Anxiety levels vary in low, medium, or high (Spielberger, 1981). Our results demonstrated different degrees of trait anxiety and state anxiety. The data showed that the degrees of anxiety were high and close to each other, offering only 5% between them. In the Trait group, the state anxiety level was 37% lower than the trait anxiety level.

Participants classified with trait-anxiety also indicated a positive correlation with practice time and championship experience negatively correlated with international game participation. On the other hand, past articles revealed that high-level athletes playing at the international level characteristically described fewer anxiety symptoms than competitors in lower levels (Junge&Prinz, 2019; Rice et al., 2019). The present study showed that soccer players, coaches, and personal trainers presented a moderate correlation between the state-anxiety and the practice of exercise during quarantine, as participants with state-anxiety have been performing exercises at home. However, participants with trait-anxiety had higher correlations with the exercise practice at home with a strong association between trait-anxiety and physical, individual, tactical, technical, emotional and disciplinary performances. In contrast, collective and cognitive performances had moderate correlations with trait-anxiety. High trait-anxiety was negatively related to performance in a past study (Horikawa& Yagi, 2012). For state anxiety in soccer, female athletes demonstrated that perceived anxiety state and hormonal levels affect their physical performance (Broodryk, Pienaar, Edwards, & Sparks, 2019). Tension and anxiety were also increased in team sports with an *l/l* genotype versus an *s/s* genotype for the 5-HTTLPR serotonin transporter (Rice et al., 2019). Also, indications of anxiety were negatively associated with several markers of omega-3 polyunsaturated fatty acids, blood levels of docosapentaenoic acid, eicosapentaenoic acid, and HS-omega-3 indices in athletes of different modalities (Rice et al., 2019).

All participants with state-anxiety indicated a weak correlation between state anxiety with general, individual, physical, collective, technical, and tactical performances. In contrast, emotional and disciplinary performances had a moderate positive correlation with state-anxiety during the COVID-19 pandemic. Preceding reports have indicated a negative association between trait anxiety and numerous factors of concentration and motivation, including autonomy and integrated regulation, along with behaviors congruent with one's value system and intrinsic motivation and actions that produce satisfaction in team sports (Allen, Jones, McCarthy, Sheehan-Mansfield, & Sheffield, 2013; Sheehan, Herring, & Campbell, 2018). In addition, trait-anxiety was positively linked with non-regulated motivation or the lack of intention to realize physical activities (Sheehan et al., 2018). The present study agrees with previous suggestions that combined team and individual performance using social support coping, along with positive reinterpretation and evidence looking for new references of athletes without a high level of anxiety (Edvardsson, Ivarsson, & Johnson, 2012; Flatt & Esco, 2016; Navia, van der Kamp, Aviles, & Aceituno, 2019). Other treatments could be suggested during the COVID-19 pandemic, such as the use of biofeedback (Edvardsson et al., 2012) and neurofeedback rehabilitation (Schilat, Nagelli, & Hewett, 2016).

Regarding sociodemographic factors included in state anxiety's principal components, gender presented a negative correlation with state-anxiety and trait-anxiety, considering male as the second referential; therefore, female soccer athletes, coaches, and physical trainers showed higher state-anxiety and trait-anxiety than males. A high level of schooling and club positions had more state anxiety between professional soccer teams. Besides, the marital state impacted state-anxiety, as single participants with state and trait anxieties demonstrated higher levels of anxiety than married people. Preceding research on anxiety highlights its relations with sociodemographic factors, showing that gender and modality are significant to increase or decrease anxiety levels (Chan, Wong, & Wang, 2020; Correia& Rosado, 2019; Pluhar et al., 2019; Scott, Plateau, & Haycraft, 2020). Furthermore, findings of an application of structural equation modeling were made with more than 600 Portuguese athletes with 172 women and 429 men, ~40% from individual sports (e.g., climbing, athletics, orienteering, swimming, tennis, surfing) and ~60% from team sports (e.g., basketball, handball, rugby, soccer, and volleyball) (Correia& Rosado, 2019). The findings indicated that female and individual sports athletes presented higher general sports anxiety (Correia& Rosado, 2019). Therefore, it is essential to demonstrate that soccer is different from other team sports when comparing social, economic, and political aspects (Benjamin et al., 2020; Slimani et al., 2018); this already shows an impact on anxiety, especially in international players. This anxiety is evident in the current moment of the COVID-19 pandemic, and it could increase injuries and comorbidities (Franco, Lantin, Dekeuleneer, Bongaerts, & Tecco, 2018; Kilic et al., 2017; Slimani et al., 2018; Valovich McLeod & Register-Mihalik, 2011). Diagnosed comorbidity was verified in preceding reports for

generalized anxiety disorder occurring with depression and sleep disorder in soccer athletes (Benjamin et al., 2020; Kilic et al., 2017; Scott et al., 2020).

The present study presents some limitations, such as conducting future studies with subgroup analyses for measures distinguishing trait, global, generalized, and diagnosed anxieties. Distinguishing anxiety symptoms from diagnostic disorders is essential given functional impairment, and linked distress is more severe in an anxiety disorder. Research examining athletes' results within the clinical range for anxiety disorders during the COVID-19 pandemic is now lacking. As the field progresses, future research should look to verify potential group differences according to clinician diagnoses of anxiety versus self-report symptoms, given there may be bias in self-report assessments either in relative over-reporting or under-reporting (Rice et al., 2019). The present study presented evidence of trait and state anxiety associated with the COVID-19 pandemic situation in professional soccer teams. Treatment of anxiety in sports involves more non-pharmacological approaches, which are first recommended rather than pharmacological approaches. The first recommendation involves lifestyle modification, reducing sociodemographic triggers: single people have to perform socialization. The evidence behind this is that virtual activities provide stimulation and interaction with the environment, give a sense of control, and reduce overall anxiety.

### Conclusions

The present study verified associated factors with trait and state anxiety in professional soccer teams during the COVID-19 pandemic using the principal components method extracted from sociodemographic and self-perceived performances. Participants classified with trait-anxiety indicated a positive correlation with practice time and championship experience negatively correlated with international game participation. Soccer players and coaches presented a moderate correlation between the state-anxiety and exercise practice during the quarantine. On the other hand, participants with state-anxiety have been performing exercises at home. However, participants with trait-anxiety had higher correlations with the exercise practice at home, with a strong association between trait-anxiety and physical, individual, tactical, technical, emotional, and disciplinary performances. In contrast, collective and cognitive performances had moderate correlations with trait-anxiety. All participants with state-anxiety indicated a weak correlation between state anxiety with general, individual, physical, collective, technical, and tactical performances.

In contrast, emotional and disciplinary performances had a moderate positive correlation with state-anxiety during the COVID-19 pandemic. Cognitive behavior therapy and mindfulness could be used to focus on 'the present,' while cognitive behavior therapy could help with principles of relaxation, and hierarchal construction may be used. The present results highlight the importance of cognitive behavior therapy for professional soccer teams. Its core is cognitive restructuring using the ABC model (antecedents-behavior-consequences).

### Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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