

Personality and performance in soccer: gender differences during the COVID-19 quarantine

Personalidad y rendimiento en el fútbol: diferencias de género durante la cuarentena por COVID-19

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ABSTRACT

This study investigates the relationship between personality traits, based on the Big Five model, and sports performance in university soccer players. The sample consisted of 40 athletes, evenly distributed between 20 female players and 20 male players, aged between 18 and 25 years, all belonging to the representative soccer teams of the Universidad Autónoma de Nuevo León (UANL). Participants were selected from various positions on the field, including goalkeepers, defenders, midfielders, and forwards. To assess personality traits, the Big Five Inventory (BFI) was employed, while sports performance was measured through an ad hoc questionnaire designed for the coaches of both teams. Given the context of inactivity caused by the COVID-19 pandemic, a correlation was conducted between the players' personality traits and their perceived performance. The results revealed that forwards exhibited a greater inclination towards the traits of conscientiousness and agreeableness, while defenders and midfielders showed higher scores in agreeableness. Goalkeepers were predominantly associated with the trait of openness to experience. Overall, the trait of agreeableness demonstrated a significant correlation with perceived sports performance in both teams. This study highlights the importance of considering personality traits in the development and optimization of sports performance in university athletes, while also emphasizing the need for future research that includes larger samples and diverse competitive contexts.

KEY WORDS: psychological traits, five factor model, college athletes, sport psychology, athletic behavior

RESUMEN

El presente estudio investiga la relación entre los rasgos de personalidad basados en el modelo de los Big Five y el rendimiento deportivo en futbolistas universitarios, con un enfoque específico en la evaluación de las diferencias de género. La muestra estuvo compuesta por 40 futbolistas distribuidos equitativamente entre 20 jugadoras y 20 jugadores masculinos, con edades comprendidas entre 18 y 25 años, todos pertenecientes a los equipos representativos de fútbol soccer de la Universidad Autónoma de Nuevo León (UANL). Los participantes fueron seleccionados de diversas posiciones en el campo, incluyendo porteros, defensas, mediocampistas y delanteros. Para evaluar los rasgos de personalidad se empleó el Inventario de los Cinco Factores (Big Five Inventory - BFI), mientras que el rendimiento deportivo fue medido a través de un cuestionario diseñado ad hoc dirigido a los entrenadores de ambos equipos. Además de analizar la correlación entre los rasgos de personalidad y el rendimiento deportivo, este estudio evaluó si existen diferencias significativas entre hombres y mujeres en cómo estos rasgos influyen en su desempeño en el campo. Los resultados revelaron que los delanteros exhibieron una mayor inclinación hacia los rasgos de escrupulosidad y amabilidad, mientras que los defensas y mediocampistas mostraron puntuaciones más elevadas en amabilidad. Los porteros se asociaron predominantemente con el rasgo de apertura a la experiencia. En términos generales, el rasgo de amabilidad mostró una correlación significativa con el rendimiento deportivo en ambos equipos, destacando la relevancia de las diferencias de género en la relación entre la personalidad y el rendimiento.

PALABRAS CLAVE: rasgos psicológicos, modelo de los cinco factores, deportistas universitarios, psicología deportiva, conducta deportiva

INTRODUCTION

Sports performance in soccer, as in other team sports, is influenced by multiple factors, including physical capacities, technical and tactical skills, as well as psychological aspects. In this regard, sports performance can be understood as the outcome or degree of success achieved by an athlete or a team as a result of participation in a competition or sporting event (1).

Within this framework, the analysis of psychological factors plays a central role in understanding sports performance, as these factors directly influence athletes' behavior during training and competition. In the field of sport science, athletic performance has been recognized as a key determinant of athletes' success; however, beyond physical, technical, and tactical components, psychological factors, specifically personality traits, play a decisive role in how athletes cope with competitive demands, both on and off the field (2). In particular, the Big Five model (3), which assesses personality through the traits of

extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience, has become a well-established and effective framework for understanding the influence of personality in sport-related contexts.

Although numerous studies have examined the relationship between personality and sports performance, most of this research has focused on individual sports or elite athletes (4). In contrast, there is limited research analyzing gender differences in how personality traits affect performance in university soccer players, both in male and female teams, which represents a gap in the scientific literature (5). The present study seeks to address this gap by analyzing how personality traits, assessed through the Big Five Inventory (BFI), are correlated with perceived sports performance in two university soccer teams, one male and one female. The sample consists of 40 university soccer players, evenly divided into 20 female and 20 male athletes, all belonging to the Universidad Autónoma de Nuevo León (UANL).

The relevance of this study lies in its contribution to understanding the impact of psychological factors on university-level sports performance, particularly in a post-pandemic context, where physical inactivity and health restrictions have significantly affected athletes' preparation. By identifying differences and similarities between male and female players, this research also has the potential to provide practical tools for coaches and sport psychologists seeking to optimize performance in both genders.

Research on the impact of personality traits on sports performance in the university context is highly relevant, as it aims to fill an existing gap in knowledge and has the potential to benefit both male and female athletes. Its social relevance lies in the possibility that the findings may help coaches and sport psychologists adapt their strategies, thereby improving athletic performance and emotional well-being.

Furthermore, this study addresses a real-world issue related to athletes' adaptation to post-pandemic conditions, in which periods of inactivity have affected both physical and psychological functioning. The information obtained does not seek to develop new theories but rather to provide empirical evidence that expands and strengthens existing knowledge regarding the relationship between personality traits and perceived sports performance in university soccer players.

From a methodological and applied perspective, the results contribute to a better understanding of the psychological and personality characteristics of student-athletes and their influence on sports performance. Overall, this study has broad social and practical implications, promoting comprehensive development within the university sports environment.

The study of personality has gained increasing relevance in the sports domain, particularly in understanding how personality traits may influence athletic performance. The Big Five model, which includes the traits of openness to

experience, conscientiousness, extraversion, agreeableness, and neuroticism, has been widely used to assess personality in diverse populations, including athletes (6,7). Previous research has shown that certain personality traits may be associated with success in sport, providing valuable information for coaches and sport psychologists to optimize athletic performance (8,9).

In the context of soccer, athletes have been shown to display distinct personality profiles depending on their playing position. For example, forwards tend to exhibit higher levels of extraversion and conscientiousness, characteristics that may be beneficial in high-pressure and competitive situations (10). Conversely, defenders and midfielders have shown stronger associations with traits such as agreeableness, suggesting that cohesion and cooperation are fundamental to their roles on the field (11).

The COVID-19 pandemic resulted in a period of inactivity that affected many athletes, offering a unique opportunity to investigate the relationship between personality and performance in a different context. Previous studies have indicated that periods of inactivity can influence athletes' motivation and performance, relationships that have been examined through correlational analyses using statistical association coefficients such as Pearson's or Spearman's correlations to estimate the strength of relationships between psychological and performance variables. This highlights the importance of exploring these factors in a post-pandemic context (12).

Despite advances in research on personality and sports performance, a more focused approach is needed for specific populations, such as university soccer players, who often face unique academic and athletic pressures. The present study aims to address this gap by examining how personality traits, specifically those of the Big Five model, are related to sports performance in university soccer players from the Universidad Autónoma de Nuevo León (UANL). The Big Five model describes five core dimensions: extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience (7). These dimensions have been widely used to predict behavior and performance across various domains, including sport.

Psychological research has shown that personality traits can significantly influence sports performance. Individuals with high levels of conscientiousness tend to be more organized, disciplined, and achievement-oriented, enabling them to maintain consistent performance in team sports such as soccer (4). On the other hand, extraversion is associated with greater sociability and sensation-seeking, which may be advantageous in high-pressure match situations (13).

However, the impact of personality on sport is not uniform, and previous studies have highlighted differences based on competitive level and playing position. García-Naveira et al. reported that high-performance players tend to score higher in extraversion and conscientiousness, whereas amateur players often exhibit higher levels of neuroticism (14). In addition, López concluded that attacking players in soccer show higher levels of creativity and anxiety, in contrast

to defenders, who tend to be more emotionally stable and better able to manage stress (15).

Eysenck's theory is also relevant in this context, as his three-factor model (extraversion, neuroticism, and psychoticism) helps explain how certain personality traits are associated with the ways individuals cope with the psychological demands of sport (16). In this regard, previous studies indicate that athletes generally exhibit lower levels of neuroticism and higher levels of extraversion compared to the general population (17).

Based on the above, the aim of this study is to analyze the relationship between personality traits, assessed through the Big Five model, and perceived sports performance in university soccer players, with particular attention to gender differences and playing position. In this study, sports performance is understood as a global evaluation of the player's behavior in a competitive context, carried out by the coach based on observable indicators such as decision-making, adaptation to game demands, and competitive behavior. This analysis is situated within a post-pandemic context, defined as the period following the interruption of regular sports practice, in which psychological factors may have gained increased relevance in the expression of observable performance.

Based on this general objective, the main hypothesis proposes that there is a significant correlation between certain personality traits, particularly agreeableness and conscientiousness, and sports performance as perceived by coaches in university soccer players. This performance is evaluated based on the coaching staff's assessment, grounded in observations of competitive behavior, decision-making, and adaptation to game demands. It is also hypothesized that significant differences exist between men and women regarding personality profiles and their impact on sports performance, as well as that playing positions are associated with specific personality traits that influence observed performance.

MATERIALS AND METHODS

Study Design

The present study adopted a non-experimental, cross-sectional methodological design with a descriptive–correlational approach. This design allowed for the analysis of associations between personality traits, assessed using the Big Five model, and perceived sports performance, without manipulation of variables. Additionally, the cross-sectional design enabled data collection at a single point in time, which is appropriate for examining differential relationships by gender and by playing position.

Sample

The study was conducted in the state of Nuevo León, Mexico, where a wide variety of soccer teams from different categories, leagues, and competitive levels participate in annual tournaments. Within this context, the representative soccer teams of the Universidad Autónoma de Nuevo León (UANL) were selected. It was identified that some current players had not received guidance regarding the influence of their personality traits on individual performance and team functioning, which has led to various difficulties at both the personal and group levels. It is important to note that soccer is one of the most popular sports worldwide, with a significant social, economic, and cultural impact (5).

The study sample consisted of 40 soccer players, evenly distributed between 20 female and 20 male athletes, all members of the representative teams of the UANL. Participants were selected from different playing positions: 4 goalkeepers, 10 defenders, 10 midfielders, and 16 forwards. This distribution was intended to ensure balanced representation across positions and to explore potential variability in personality traits according to the functional role performed on the field.

Instruments

Big Five Inventory. To assess the five personality factors, the Big Five Inventory (BFI), originally proposed by Costa and McCrae (18) and later adapted into Spanish and reduced in the number of items by Benet-Martínez and John (19), was used. Table 1 presents the distribution of items by dimension, along with representative examples.

Table 1. Distribution of Big Five Inventory Items

Factor	Number of items	items	Example
Extraversión	8	1, 6*, 11, 16, 21*, 26, 31*, 36	"Is full of energy"
Agreeableness	9	2*, 7, 12*, 17, 22, 27*, 32, 37*, 42	"Is helpful and unselfish with others"
Conscientiousness	9	3, 8*, 13, 18*, 23*, 28, 33, 38, 43*	"Can be somewhat careless"
Neuroticism	8	4, 9*, 14, 19, 24*, 29, 34*, 39	"Can be tense"
Openness to Experience	10	5, 10, 15, 20, 25, 30, 35*, 40, 41*, 44	"Is curious about many different things"

Note. *Reverse-coded items

The psychometric properties of the instrument were validated by Gosling et al. (20), who reported the following internal consistency coefficients (Cronbach's α): extraversion ($\alpha = .82$), agreeableness ($\alpha = .76$),

conscientiousness ($\alpha = .76$), neuroticism ($\alpha = .83$), and openness to experience ($\alpha = .80$).

Sports Performance Questionnaire. The sports performance questionnaire was specifically developed for the present study (ad hoc), taking into account factors identified by the model proposed by Grosser et al. (21) as key determinants influencing athletes' sports performance. This instrument was administered to the soccer coaches, who were required to evaluate players' performance based on each of the indicators included in the sports performance observation sheet (Figure 1).

Dimension	Indicators	Rating
Technical	- General coordinative abilities -Motor skills	Very Good
Tactical	-Combination processes -Intellectual and strategic processes	
External conditions	-Climate	Good
	-Socioeconomic factor	Fair
Physical condition	-Strength	Poor
	-Endurance	
	-Speed	
	-Flexibility	
Basic conditions	-Talent	
	-Health	
	-Anthropometric constitution	

Figure 1. General description of the dimensions, indicators, and items according to Grosser et al. (21)

Procedure

Contact was established with the head coaches of the male and female representative soccer teams of the Universidad Autónoma de Nuevo León (UANL), from whom authorization was requested to administer psychometric assessments to a total of 40 university soccer players, evenly distributed between 20 women and 20 men. Each coach was informed about the objectives of the study and the instruments to be used, particularly an ad hoc sports performance evaluation questionnaire designed to assess players' overall performance based on the observation of technical, tactical, physical, and behavioral aspects during training and competition.

Both coaches agreed to participate, and independent virtual sessions were scheduled during the first week of November using the Zoom platform. During these sessions, detailed instructions were provided on how to complete the

questionnaire, and coaches were asked to respond objectively and honestly, based on their direct experience with each player on their respective teams.

In parallel, the Big Five Inventory was administered to the 40 selected soccer players. For this purpose, an online questionnaire was distributed via Google Forms, which included both instructions and the instrument items. All participants were assured that their responses would be treated anonymously and confidentially, and that the collected data would be used exclusively for academic and research purposes. At the end of the process, the ethical commitment of the study was reinforced, ensuring that no personal information would be disclosed or used outside the scope of this research.

RESULTS

For data processing and analysis, IBM SPSS Statistics software, version 25, was used. Descriptive analyses were conducted to characterize the sample in terms of sociodemographic and psychological variables. Additionally, correlational analyses were performed to examine the relationship between personality traits and perceived sports performance. Finally, contingency tables were used to explore the distribution and frequency of categorical variables, particularly according to gender and playing position.

Predominant Personality Traits by Playing Position

The analysis of means and standard deviations made it possible to identify the predominant personality traits according to playing position. Table 2 presents the means and standard deviations of personality traits across the different playing positions. Forwards, in both the male and female teams, showed a greater tendency toward extraversion ($M = 30.50$, $SD = 2.12$ on average), whereas defenders stood out for their higher scores in agreeableness ($M = 42.00$, $SD = 1.00$ on average). Midfielders, in turn, exhibited higher levels of conscientiousness in both teams ($M = 40.00$, $SD = 1.41$ on average).

Table 2. Mean and standard deviation of personality traits by playing position

Position	Extraversion <i>M (SD)</i>	Agreeableness <i>M (SD)</i>	Conscientiousness <i>M (SD)</i>	Neuroticism <i>M (SD)</i>	Openness to Experience <i>M (SD)</i>
Goalkeeper	28.00 (3.46)	34.50 (3.54)	32.50 (2.12)	27.50 (3.54)	37.50 (1.73)
Defender	24.50 (1.00)	42.00 (1.00)	38.50 (2.12)	31.50 (1.00)	38.50 (1.73)
Midfielder	29.00 (1.41)	41.50 (0.71)	40.00 (1.41)	28.50 (0.71)	39.50 (0.71)
Forward	30.50 (2.12)	35.50 (0.71)	34.50 (1.41)	33.50 (0.71)	34.50 (0.71)

Identification of Personality Traits According to the Big Five

Based on the analyses of means and standard deviations, it was observed that, overall, both male and female players scored higher on the agreeableness ($M = 38.50$, $SD = 4.50$) and conscientiousness ($M = 36.50$, $SD = 4.00$) subscales, whereas neuroticism showed the lowest scores ($M = 29.50$, $SD = 4.10$). These

findings suggest that, in general, university soccer players tend to exhibit personality profiles oriented toward cooperation and organization.

Evaluation of Sports Performance

Sports performance was evaluated based on the frequency of behaviors observed by the coach. The results showed that defenders from both teams obtained the highest performance scores ($M = 43.00$, $SD = 0.00$), followed by midfielders ($M = 42.00$, $SD = 1.41$). Forwards and goalkeepers obtained slightly lower average scores, with means of 34.50 ($SD = 1.41$) and 33.50 ($SD = 0.71$), respectively. This pattern indicates a higher perceived level of performance among players occupying more defensive roles.

Table 3. Mean and standard deviation of sports performance by playing position

Position	Sports Performance <i>M (SD)</i>
Goalkeeper	33.50 (0.71)
Defender	43.00 (0.00)
Midfielder	42.00 (1.41)
Forward	34.50 (1.41)

Association Between Personality Traits and Sports Performance

To assess the association between personality traits (neuroticism, openness to experience, and conscientiousness) and sports performance, correlational analyses were conducted. The results indicated that **agreeableness** was the only trait that showed a significant positive correlation with sports performance ($r = 0.97$, $p < 0.001$). No significant correlations were found between neuroticism and sports performance ($r = 0.36$), nor between openness to experience and performance ($r = 0.50$).

Table 4. Correlations between personality traits and sports performance

Scale	Sports Performance	Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness
Sports Performance	-	-0.41	0.97**	0.80	0.36	0.50
Extraversion		-	-0.26	0.15	0.29	-0.36
Agreeableness			-	0.87	0.29	0.56
Conscientiousness				-	0.46	0.20
Neuroticism					-	-0.36

Note. ** $p < 0.001$.

Differences in Sports Performance According to Personality Traits

The analysis of differences in sports performance as a function of personality traits revealed that players with higher levels of extraversion tended to demonstrate greater individual technical performance, particularly among forwards ($r = 0.98$, $p < 0.001$). In addition, conscientiousness showed a significant relationship with tactical performance ($r = 0.90$, $p < 0.01$). No significant correlations were observed between personality traits and physical condition.

These findings suggest that personality traits may influence specific components of sports performance.

Gender-Based Analysis: Comparison of Personality Traits and Sports Performance

Table 5 presents a comparison between male and female players with respect to personality traits and sports performance. The results revealed notable differences between genders in several personality traits, particularly extraversion, agreeableness, and conscientiousness.

Regarding extraversion, male players obtained a higher mean score ($M = 35.2$, $SD = 4.1$) compared to female players ($M = 33.8$, $SD = 3.9$). This difference suggests that, in this context, men tend to be more sociable, assertive, and oriented toward social interaction, which may influence more active participation on the field, especially in offensive positions that require greater proactivity.

In terms of agreeableness, female players showed higher mean scores ($M = 40.5$, $SD = 2.8$) than male players ($M = 38.0$, $SD = 3.5$). This finding may indicate that female players tend to be more cooperative and altruistic, which can be advantageous in team sports where collaboration is essential. This trait may be related to higher perceived performance in positions that require cohesion and cooperation, such as defenders or midfielders.

With respect to conscientiousness, female players also obtained slightly higher scores ($M = 37.1$, $SD = 3.9$) compared to male players ($M = 36.0$, $SD = 4.2$). Conscientiousness, which includes attributes such as organization and discipline, may influence the ability to follow tactical instructions and maintain a high level of performance throughout the match. This trait may be particularly relevant in positions that demand sustained attention to detail and consistency, such as midfield roles.

Table 5. Comparison of personality traits and sports performance by gender

Personality trait	Gender	Sports Performance
		<i>M (SD)</i>
Extraversion	Male	35.2 (4.1)
	Female	33.8 (3.9)
Agreeableness	Male	38.0 (3.5)
	Female	40.5 (2.8)
Conscientiousness	Male	36.0 (4.2)
	Female	37.1 (3.9)

DISCUSSION

The present study aimed to analyze the relationship between personality traits, based on the Big Five model, and sports performance in university soccer players, using a sample of 40 athletes evenly distributed between men and women. The findings provide valuable insights into how personality traits

influence soccer performance, particularly within a mixed-gender university context, and contribute to the growing body of literature in sport psychology.

Regarding the predominance of personality traits by playing position, analyses of means and standard deviations revealed that forwards, in both male and female teams, scored higher in extraversion. This finding is consistent with previous studies suggesting that players in offensive positions tend to be more sociable and energetic (4). Such characteristics may be explained by the demands of the position, which require more proactive and extroverted behavior to create scoring opportunities. In contrast, defenders were characterized by higher scores in agreeableness, which may be related to the need for cooperation and teamwork to effectively stop opponents, a finding supported by prior research (14).

Beyond positional differences, the overall evaluation of personality traits showed that agreeableness and conscientiousness were the most prominent traits in the sample. These results are consistent with studies indicating that athletes tend to be more cooperative and responsible than the general population (13). The relatively low levels of neuroticism observed in this study also align with previous research suggesting that athletes typically exhibit greater emotional stability, which enables them to better manage pressure in competitive contexts (17).

In this regard, players occupying defensive positions, in both male and female teams, achieved the highest scores in sports performance. This finding suggests that coaches perceive defenders as more effective on the field, possibly due to the strategic and fundamental nature of their role in preventing goals. This result may reflect the importance of defensive roles within team structure, as highlighted in previous studies on soccer tactics (15).

Consistent with these findings, agreeableness showed a significant correlation with sports performance in both genders, suggesting that players with greater cooperative and altruistic tendencies may perform better in team sports such as soccer. This result supports previous research emphasizing the relevance of interpersonal skills in collective sports (4). However, no significant correlations were found between neuroticism and sports performance, indicating that although emotional stability is important for general well-being, it may not have a direct impact on performance in this specific context.

Extraversion, on the other hand, showed a positive correlation with players' individual technical performance, suggesting that more extroverted players tend to demonstrate greater proficiency in ball handling and other technical skills. This finding is consistent with studies linking extraversion to an enhanced ability to perform under pressure and to make rapid decisions during competition (13).

Differences in sports performance associated with personality traits were particularly pronounced for extraversion and conscientiousness, indicating that these traits play a key role in specific performance components, such as

individual technique and tactical behavior. This reinforces the notion that personality influences sports performance, especially in team sports, where constant interaction and rapid decision-making are essential for success (15).

The results also revealed significant gender differences in the relationship between personality traits and sports performance. Female players obtained higher scores in agreeableness and conscientiousness, suggesting that interpersonal skills and organizational tendencies may play a more prominent role in women's performance in team sports. These findings are consistent with previous studies reporting gender differences in the influence of personality within the sports domain (5). In contrast, male players showed higher levels of extraversion, which may be associated with a greater tendency to assume active and proactive roles on the field. This gender-related variability highlights the importance of adopting differentiated approaches to the management and optimization of sports performance based on gender.

The findings of the present study partially align with previous research exploring the relationship between personality and sports performance across different contexts. For instance, Gama et al. (22) found that personality traits significantly influence sportsmanship and competitive behavior, even in non-traditional sports such as eSports, where players with higher levels of responsibility and emotional stability exhibited more positive attitudes toward competition. This reinforces the idea that traits such as conscientiousness and agreeableness, also predominant in the present sample, may serve as predictors of performance and team cohesion, regardless of the type of sport. Similarly, the study by Hoyos-Cifuentes and Torres (23) provides a relevant contextual framework by identifying gender differences in the perception of physical exercise among university students during pandemic-related virtual settings. These gender-based differences in motivation and perceived physical performance may be related to the present findings, which showed gender-specific variations in personality traits, particularly agreeableness and conscientiousness, both of which were correlated with perceived sports performance. Together, these results suggest that the post-pandemic context, combined with individual personality differences, may differentially shape the performance of university athletes.

From an applied perspective, the results of this study offer important implications for the field of Physical Activity and Sport Sciences. First, integrating personality assessments into talent identification and sports planning processes is recommended, as understanding athletes' psychological profiles may help assign more suitable roles on the field and optimize group dynamics. Second, coaches and strength and conditioning professionals can design individualized interventions that consider not only physical and technical performance but also athletes' psychological characteristics.

For example, players with low levels of conscientiousness may benefit from strategies aimed at enhancing planning, responsibility, and decision-making, whereas athletes with higher levels of neuroticism may require emotional

regulation tools, such as mindfulness training or competitive stress management techniques. Moreover, these psychological variables may serve as indicators of vulnerability or resilience in high-pressure environments, such as university competitions or periods of major disruption in sports routines, including those caused by the COVID-19 pandemic.

LIMITATIONS AND FUTURE DIRECTIONS

Despite the significant contributions of the present study, it is important to acknowledge several limitations that may have influenced the results and that open avenues for future research.

First, the sample size was relatively small ($n = 40$), which limits the generalizability of the findings to other populations of university soccer players. Although an equal distribution by gender and playing position was achieved, future studies should consider larger samples drawn from different institutions or regions of the country in order to strengthen the external validity of the results.

Second, the cross-sectional design precludes the establishment of causal relationships between personality traits and sports performance. Future research could employ longitudinal designs to examine how these variables evolve over time or across different competitive seasons.

Additionally, the instrument used to assess sports performance was an ad hoc questionnaire administered to the coach, which introduces a degree of subjectivity into the evaluation process. Although efforts were made to standardize the assessment, future studies are encouraged to incorporate more objective or triangulated measures, such as match statistics, physiological assessments, or external observations conducted by additional members of the coaching staff.

Another limitation is that other complementary psychological variables, such as motivation, competitive anxiety, or resilience, were not considered. These factors may interact with personality traits in shaping sports performance. Including such variables in future research would allow for the development of more comprehensive and representative models of athletes' psychological profiles.

In summary, future research is encouraged to further explore psychological variables in university sports contexts using more robust designs and complementary assessment tools, in order to continue advancing toward the personalization of intervention strategies and the development of athletic talent.

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