

Psychological Flexibility and Competition Anxiety: A Study in Sport Psychology

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Psychological flexibility enables athletes to maintain focus and adapt effectively under competitive pressure, which may help reduce competition anxiety. This study aimed to examine the relationship between psychological flexibility and competition anxiety among athletes, and to identify differences based on gender, age, and type of sport. A cross-sectional correlational design was employed. The sample consisted of 104 male and female athletes selected using convenience sampling. Data were collected using standardized measures of psychological flexibility and competition anxiety. Pearson correlation and three-way ANOVA were used for data analysis. The findings revealed a statistically significant negative correlation between psychological flexibility and competition anxiety ($r = -0.23$, $p = .018$), indicating a small effect size. Females reported significantly higher levels of competition anxiety than males ($p < .001$), while no significant differences were found based on age or type of sport. Psychological flexibility did not significantly differ across gender, age, or sport type. Psychological flexibility appears to play a protective role in reducing competition anxiety, although its effect is limited. These findings highlight the importance of incorporating psychological skills training programs, particularly for female athletes.

Keywords: Psychological flexibility, Competition anxiety, Athletes, Sport psychology

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INTRODUCTION

Psychological flexibility is a core construct in modern psychology, referring to the ability to adapt to situational demands, maintain focus on goals, and regulate emotional responses in the presence of stress. Several recent studies (Doorley et al., 2020; Kashdan et al., 2020) have documented the positive correlation between psychological flexibility and psychological coping, performance development, and adaptive behavioral changes.

It involves adaptive cognitive and emotional processes that enable individuals to respond effectively to challenging situations: (1) openness and the willingness to experience new unpleasant experiences, such as feelings and memories, for the sake of serving what matters; (2) consciousness and deliberate attention when engaging in behavior instead of being on “autopilot”; and (3) participation, or choosing to participate, in experiences one finds valuable and meaningful (Kroska et al., 2020).

In sport contexts, psychological flexibility is particularly important due to the high levels of pressure and performance demands placed on athletes. It has been linked to improved coping strategies, emotional regulation, and performance outcomes. Related literature and previous studies suggest that athletes need to develop divergent mental abilities to manage stress and maintain stable performance (Den Hartigh et al., 2024). Psychological flexibility is an important concept that contributes to enhancing sport performance and is a significant tool that enhances value-added life skills by enabling individuals to adopt positive adjustment and coping strategies when facing distress and pressures in sport events. As such, athletes with high levels of psychological flexibility develop their ability to present an active response to negative stimuli, which eventually leads to personal development and individual growth. The development of psychological flexibility may be particularly significant for athletes because it helps them cope with competition-related stress (McManama O’Brien et al., 2021). Athletes’ performance may change from one sports competition or event to another under the pressure of intense training and success anxiety during the season. The contribution of sport psychology in decreasing these variations in sport performance is important in developing psychological flexibility for athletes (Vasconcelos-Raposo & Teixeira, 2025).

Recent studies on psychological flexibility in sport consistently show its positive role in improving performance and well-being, but they differ in terms of direct versus mediating variables.

Previous research has consistently shown that psychological flexibility is associated with improved performance, well-being, and adaptive coping in athletes. Johles et al. (2020) found a strong positive correlation between psychological flexibility and athletic performance and quality of life, and they also reported a significant negative correlation between psychological flexibility and demographic variables such as age and years of experience. Tingaz (2020) went further by documenting the mediating role of mindfulness in the relationship between cognitive reliance and irrational

beliefs among athletes, thereby adding an explanatory mechanism for how psychological flexibility works. Comparing these findings, the Johles studies focused on direct relationships (positive and negative correlations), whereas Tingaz provided a mediation model explaining how psychological flexibility operates through cognitive processes and emotional regulation. This suggests that the effect of psychological flexibility may be not only direct but also indirect through mediating variables such as mindfulness.

Competition anxiety is a negative emotional state that affects athletes' cognitive and physiological responses during performance, often leading to reduced performance efficiency. It is one of the exhausting factors diminishing cognitive and motor functions, which in turn has negative effects on sport performance (Bisen & Singh, 2024; Yusoff et al., 2022). Also, the Model of Individual Zones of Optimal Functioning (IZOF) indicates that each athlete has an optimal zone of excitement and anxiety, as the performance diminishes if the athlete is out of his/her optimal zone. Additionally, the Catastrophe Model in sport performance posits that the interaction between cognitive anxiety and physical anxiety leads to a huge decrease in performance (Bisen & Singh, 2024; Craft et al., 2023). Anxiety is a negative emotional feeling affecting cognition in sports competitions. For athletes, anxiety is exhaustive for their motor functions, thus, lower sport performance (Weinberg & Gould, 2023). Sport psychologists distinguish between anxiety as a trait, which means that anxiety is part of the personality, and anxiety as a state, as individuals become anxious in a specific situation. Both types of anxiety correlate negatively with sport performance. The level of anxiety varies significantly during competition as the cognitive and physical components of anxiety change with time and the nature of the situation. Cognitive anxiety may appear in the form of negative expectations and concerns about self and the current setting, in addition to the potential consequences. As for physical anxiety, it manifests itself in the form of some physiological changes in the body, such as lowered heart rate, trembling, sweating, and fast breathing. Athletes expect that effective control of anxiety, both cognitive and physical, can support successful performance in competitions that require high demands from the athlete (Bisen & Singh, 2024; Choudhary et al., 2023).

Previous studies show that competition anxiety is influenced by multiple and interrelated factors. While Kamarat et al. (2022) demonstrated the effect of sport type and gender on the level of competition anxiety, Casali et al. (2022) added that self-compassion affects the cognitive and physical components of anxiety, along with the influence of experience and number of participations. In a different context, Wu et al. (2022) revealed a negative relationship between psychological flexibility and competition anxiety. Comparing these findings together, it becomes clear that competition anxiety is not attributable to a single factor, but rather to an interaction of demographic

factors (sport type, gender, experience) and psychological factors (self-compassion, psychological flexibility).

In the sports field, over-anxiety is one of the major factors hindering optimal sports performance. Any form of anxiety that is related to a competitive setting or situation is termed in sport psychology as competition anxiety. The therapy is important for athletes reporting high levels of competition anxiety to help them decrease the level of such negative variables, thus improving their performance in competitions (Hassanah & Refanthira, 2020). Experiencing high levels of sport exhaustion is highly affected by the psychosocial dynamics within the sport organizations. As such, there is a need to explore the most relevant factors related to exhaustion and fatigue to direct the efforts of developing effective strategies and programs to prevent or mitigate the negative impacts of sport exhaustion (Wu et al., 2022). Also, increasing levels of psychological flexibility among athletes is vital since they employ a repertoire of mental functions helping them endure the stresses they face in sports competitions. Psychological flexibility is an important characteristic that contributes to helping athletes enhance their sport performance while making them acquire these skills that can be described as lifelong ones. The help that is provided by sport psychology to decrease the fluctuations and variations in the sport performance is of great importance in increasing psychological flexibility among athletes (Vasconcelos-Raposo & Teixeira, 2025).

Although there is abundant literature and previous studies in foreign countries examining levels of psychological flexibility and competition anxiety among athletes separately, the relationship between these two variables has not been sufficiently addressed in sport psychology, as the nature of this relationship remains incompletely understood. This gap is even more pronounced in the Arab context, where no systematic studies have examined the relationship between psychological flexibility and competition anxiety among Arab athletes while taking into account the cultural and organizational specificities of Arab sport cultures. Given that factors such as collectivism, social expectations, and coping styles may differ across Arab societies, the need to clarify the nature of this relationship becomes more urgent. Accordingly, the current study aims to fill this dual gap by investigating the relationship between psychological flexibility and competition anxiety in an Arab cultural setting, thereby adding tangible value to Arab sport psychology literature. Accordingly, the current study seeks to address the following research questions:

RQ1: Is there a statistically significant relationship between psychological flexibility and competition anxiety among athletes?

RQ2: Are there statistically significant differences in levels of psychological flexibility and competition anxiety based on gender, age, and type of sport?

Method

A cross-sectional correlational design was employed to examine the relationship between psychological flexibility and competition anxiety among athletes, allowing the evaluation of relationships between the variables under investigation at a single point in time. Data were collected using standardized measures of psychological flexibility and competition anxiety. The validity and reliability of the two scales were checked using appropriate statistical procedures to ensure that they measured the variables under examination and were suitable for the targeted sample of the study.

Participants

The study sample consisted of 104 student athletes from the Faculty of Physical Education at Jadara University in Irbid. Participants were selected using a convenience sampling method due to their accessibility and availability during the data collection period. The sample included student athletes who participate in sports activities through practical courses or university teams. Inclusion criteria required that participants be enrolled in the Faculty of Physical Education, actively engaged in regular sports activities, and willing to participate in the study. First-year students were excluded because they were not enrolled in practical courses. The participants were categorized based on several demographic variables, including age, gender, and type of sport, in order to examine potential differences and enhance the interpretability of the findings. Although convenience sampling was suitable for the practical aspects of this study, it is a nonprobability sampling method, which may limit the generalizability of the results to the broader population or to other athletic groups. Table 1 shows the distribution of the participants and their percentage of the total sample based on these demographic variables. The instruments were sent to the targeted participants via appropriate social media platforms in October 2025, along with clear instructions on how to complete the instruments, and participants were assured that the responses they provided would be used only for scientific research. These measures facilitated data collection, and participants did not report any apparent difficulties. They were comfortable in providing responses, and the approach reduced the possibility of mistakes in data entry for statistical analysis. This approach is suitable for the nature of the study population, which consisted of athletes. Furthermore, it contributed to accessing a wide array of athletes from different athletic backgrounds in Irbid. This was an important advantage, facilitating the diversity of participants to benefit from the results in understanding the nature of the correlation between psychological flexibility and competition anxiety among athletes.

Table 1

Variable	Category	Frequency	Percentage
Gender	Female	24	23.1
	Male	80	76.9
Age	Under 20	17	16.3
	21–35	81	77.9
	Above 35	6	5.8
Type of sport	Athletics	22	21.2
	Basketball	4	3.8
	Volleyball	20	19.2
	Football	58	55.8
Total		104	100.0

Ethical Considerations

Participation in the study was voluntary, and informed consent was obtained from all participants after they were fully informed about the study's objectives and requirements. Confidentiality was strictly maintained, and all data were used solely for research purposes. Participants were also informed of any potential risks prior to participation and were assured of their right to withdraw from the study at any time without consequences.

Instruments**Competition Anxiety Scale**

The researchers used the Competition Anxiety Scale originally developed by Smith et al. (1990). The scale was translated and adapted into Arabic to suit the study context. It consists of 15 items distributed across three domains: Physical Symptoms (items 2, 6, 10, 12, 14), Concentration (items 3, 5, 8, 9, 11), and Anxiety (items 1, 4, 7, 13, 15).

Scoring: The scale is rated on a 5-point Likert scale (Always = 5, Mostly = 4, Often = 3, Rarely = 2, Never = 1). All items are positively worded, and higher scores indicate higher levels of competition anxiety.

Interpretation of Scores: To interpret the mean scores, the range of the scale was calculated by subtracting the minimum score from the maximum score ($5 - 1 = 4$), which was then divided by three levels (low, moderate, high), resulting in a class interval of 1.33. Accordingly, the levels were interpreted as follows: Low (less than 2.33), Moderate (2.34–3.67), and High (more than 3.67).

Validity and Reliability of the Competition Anxiety Scale

Construct Validity

To elicit the indicators of the construct validity of the scale, Pearson coefficients for each of the individual items with the total scale were computed, in addition to computing Pearson coefficients between the individual items and the domain they belong to, by administering the preliminary format of the scale to a pilot sample out of the original sample of the study, but from the same population. The pilot sample totaled 30 athletes. Pearson correlation coefficients between the individual items and the total scale were between 0.40 and 0.67, while the values of Pearson correlation coefficients between the individual items and the domain were between 0.36 and 0.65, as shown in Table 2.

Table 2
Item Correlations with Domain and Overall Scale

Item	Correlation with Domain	Correlation with Scale
1	.61**	.54**
2	.61**	.59**
3	.64**	.55**
4	.60**	.67**
5	.36*	.43*
6	.57**	.51**
7	.65**	.67**
8	.60**	.56**
9	.64**	.61**
10	.63**	.56**
11	.45*	.40*
12	.64**	.65**

13	.43*	.61**
14	.62**	.61**
15	.57**	.55**

Note. * $p < .05$. ** $p < .01$.

It should be indicated that all correlation coefficients were at acceptable levels and statistically significant. As such, none of the items were deleted. According to Odeh (2010), retaining items whose correlation with the total scale score exceeds 0.20 is suggested.

Furthermore, the correlation coefficient between the domains and the total scale and between the individual domains was computed as presented in Table 3.

Correlation Coefficients Between Individual Domains and Total Scale

	Physical Symptoms	Anxiety	Concentration Disorder	Competition Anxiety Scale
Physical Symptoms	1			
Anxiety	.67**	1		
Concentration Disorder	.78**	.73**	1	
Competition Anxiety Scale	.90**	.89**	.92**	1

Note. ** $p < .01$.

Table 3 indicates that all the correlation coefficients were statistically significant and acceptable, which provides statistical evidence that the instrument can achieve the objectives of the study.

Reliability of Competition Anxiety Scale

To assess the reliability of the competition anxiety scale, test-retest procedures were employed by administering the scale to a pilot sample from the study's original sample, totaling 30 athletes. The same scale was re-administrated to the same sample after two weeks (a two-week interval), and then the Pearson correlation coefficient was computed between the two administrations.

Furthermore, Cronbach's alpha was computed for the total scale to assess internal consistency. Table 4 presents test-retest and internal consistency reliability coefficients for the individual domains and the total scale, which were statistically acceptable.

Table 4

Internal Consistency (Cronbach's Alpha) and Test–Retest Reliability for the Domains and the Total Scale

Domain	Test–retest	Internal consistency
Physical symptoms	0.84	0.79
Anxiety	0.86	0.80
Concentration	0.81	0.77
Competition anxiety scale	0.88	0.81

Psychological Flexibility Scale

The Psychological Flexibility Scale, developed by Van De Meer et al. (2018), was used to measure the level of psychological flexibility among the athletes participating in the current study. The scale was translated and adapted into Arabic to suit the study context. It consists of 9 items rated on a 5-point Likert scale (Always = 5, Mostly = 4, Often = 3, Rarely = 2, Never = 1). All items are positively worded.

Scoring: A 5-point Likert scale was used, where higher scores indicate a higher level of psychological flexibility.

Interpretation of Scores: To interpret the mean scores, the range was calculated by subtracting the minimum score from the maximum score ($5 - 1 = 4$), which was then divided into three levels (low, moderate, high), resulting in a class interval of 1.33. Accordingly, the levels were classified as follows: Low (less than 2.33), Moderate (2.34–3.67), and High (more than 3.67).

Validity and Reliability of Psychological Flexibility Scale

Construct Validity

To elicit the indicators of the construct validity of the scale, Pearson coefficients for each of the individual items with the total scale were computed, in addition to computing Pearson coefficients between the individual items and the domain they belong to, by administering the preliminary format of the scale to a pilot sample out of the original sample of the study, but from the same population. The pilot sample totaled 30

athletes. Pearson correlation coefficients between the individual items and the total scale were between 0.78 and 0.92, while the values of Pearson correlation coefficients between the individual items and the domain were between 0.36 and 0.65, as shown in Table 5.

Table 5

Pearson Correlation Coefficients Between Items and Total Scale

Item	Correlation Coefficient
1	.83**
2	.80**
3	.89**
4	.78**
5	.82**
6	.92**
7	.88**
8	.78**
9	.82**

Note. ** $p < .01$.

It should be indicated that all correlation coefficients were at acceptable levels and statistically significant. As such, none of the items were deleted. According to Odeh (2010), retaining items with a correlation with the total scale score exceeding 0.20 is recommended.

Reliability of Psychological Flexibility Scale

To check the reliability of the psychological flexibility scale, test-retest reliability procedures were employed by administering the scale to a pilot sample from the study's original sample, totaling 30 athletes. The same scale was re-administered to the same sample after two weeks (a two-week interval), and then the Pearson correlation coefficient was computed between the two administrations, which was 0.90.

Furthermore, internal consistency coefficients using Cronbach's alpha were computed for the total scale (0.85), which were statistically acceptable.

RESULTS

Research Question 1: Is there a statistically significant relationship between psychological flexibility and competition anxiety among athletes?

A Pearson correlation analysis revealed a statistically significant negative relationship between psychological flexibility and competition anxiety ($r = -.23, p = .018, N = 104$). The effect size was small, indicating limited practical significance and suggesting that higher levels of psychological flexibility were associated with lower levels of competition anxiety among athletes.

Research Question 2: Are there statistically significant differences in competition anxiety and psychological flexibility based on gender, age, and type of sport?

To answer this question, means and standard deviations for levels of competition anxiety and psychological flexibility, by gender, age, and type of sport, were elicited and presented in Table 6.

Competition Anxiety

Table 6

Means and Standard Deviations for Competition Anxiety by Gender, Age, and Type of Sport

Variable	Group	M	SD	N
Gender	Female	2.98	0.91	24
	Male	2.22	0.70	80
Age	Under 20 years	2.61	1.15	17
	21–35	2.38	0.73	81
	Above 35	2.00	0.68	6
Type of sport	Athletics	2.44	1.03	22
	Basketball	2.62	0.45	4
	Volleyball	2.49	0.60	20
	Football	2.33	0.82	58

Note. M = mean; SD = standard deviation.

Table 6 presents the means and standard deviations of competition anxiety across gender, age, and type of sport.

Table 7

Three-Way ANOVA for the Effects of Gender, Age, and Type of Sport on Competition Anxiety

Source	SS	df	MS	F	p
Gender	10.387	1	10.387	18.41	< .001
Age	1.341	2	0.671	1.19	.309
Type of sport	1.092	3	0.364	0.65	.588
Error	54.721	97	0.564		

Note. SS = sum of squares; MS = mean square.

A three-way ANOVA was conducted to examine the effects of gender, age, and type of sport on competition anxiety.

The results indicated a statistically significant effect of gender ($F(1, 97) = 18.41, p < .001$).

No statistically significant effects were found for age ($F(2, 97) = 1.19, p = .309$) or type of sport ($F(3, 97) = 0.65, p = .588$).

Psychological Flexibility

Table 8

Means and Standard Deviations for Psychological Flexibility by Gender, Age, and Type of Sport

Variable	Group	M	SD	N
Gender	Female	4.51	0.37	24
	Male	4.57	0.49	80
Age	Under 20 years	4.59	0.52	17
	21–35	4.52	0.46	81
	Above 35	4.87	0.13	6
Type of sport	Athletics	4.57	0.47	22
	Basketball	4.50	0.58	4
	Volleyball	4.47	0.38	20
	Football	4.58	0.48	58

Note. M = mean; SD = standard deviation.

Table 8 presents the means and standard deviations of psychological flexibility by gender, age, and sport type.

Table 9

Three-Way ANOVA for the Effects of Gender, Age, and Type of Sport on Psychological Flexibility

Source	SS	df	MS	F	p
Gender	0.000	1	0.000	0.00	.997
Age	0.755	2	0.378	1.75	.179
Type of sport	0.193	3	0.064	0.30	.827
Error	20.941	97	0.216		

Note. SS = sum of squares; MS = mean square.

Interpretation of the Results Related to Research Question 1

This finding reflects the complex and multidimensional nature of competition anxiety, as it cannot be explained by a single variable. Rather, it emerges from the dynamic interaction of a range of psychological factors (such as emotion regulation, self-evaluation, and cognitive patterns), environmental factors (such as coaching pressure, audience expectations, and the competitive context), and personality-related factors. Accordingly, psychological flexibility can be viewed as one positive psychological resource within a broader network of determinants influencing athletes' anxiety levels.

Despite the small effect size, the negative direction of the relationship remains theoretically and practically meaningful, as higher levels of psychological flexibility are associated with relatively lower levels of competition anxiety. This is consistent with previous literature (Mahato & Thander, 2023; Ronkainen et al., 2024), which highlighted the protective role of psychological flexibility in coping with sport-related psychological stress. This can be understood in light of the role of psychological flexibility in enhancing emotional regulation, supporting effective coping strategies in stressful situations, and maintaining psychological balance in competitive performance contexts. Athletes with higher levels of psychological flexibility also tend to adopt more effective coping strategies, such as cognitive reappraisal and task-focused attention, which may contribute—albeit to a limited extent—to reducing competition-related anxiety. Furthermore, the current findings are consistent in direction with the study by Wu et al. (2022), which reported a negative relationship between psychological flexibility and competition anxiety, supporting the theoretical assumption that psychological flexibility functions as a protective factor in sport contexts. However, it operates

within a broader and more complex system of variables influencing competition anxiety. Therefore, enhancing psychological flexibility among athletes remains an important goal in counseling and training programs, yet it should be addressed within an integrated framework that also considers other relevant psychological and environmental factors.

Interpretation of the Results Related to Research Question 2

This result may be explained by the fact that females, in general, are more vulnerable to psychological stresses related to performance and social evaluation. In addition, females may be more likely to perceive competition as a source of intimidation rather than as an opportunity for challenge, which may increase competition anxiety. Differences in emotional regulation and cognitive skills between males and females may also contribute to this result. Recent research indicates that male athletes report greater ability to reappraise competitive situations and reduce the impact of anxiety on performance. Female athletes may be more inclined to focus on potential consequences and negative outcomes, which contributes to higher levels of anxiety (Ariffin et al., 2025; George & Kumar, 2025).

With respect to whether there were differences in levels of competition anxiety based on age and type of sport practiced by the athlete, the results showed no statistically significant differences. This may be attributed to the fact that competition anxiety is more strongly related to personal psychological and cognitive factors, such as thinking style, level of self-confidence, the ability of emotional regulation, and the interpretation of psychological stressors at the individual level. These factors may have a more profound effect on competition anxiety than demographic variables. As indicated by several researchers (Amaro & Brandão, 2023), the above-mentioned psychological variables are personality traits or cognitive responses that are relatively evenly distributed among athletes regardless of age. Athletes from different age groups, regardless of the nature of the sport they practice, may have similar ability to interpret and assess competitive situations, which may account for the lack of statistically significant differences in competition anxiety by age and type of sport.

In addition, the perceptual experience of anxiety as an emotional state depends largely on how the individual assesses a situation, either as intimidating or as a challenge. The athlete's response in such situations is more related to the availability of psychological skills, such as self-discipline and confrontation strategies, than to demographic factors. Likewise, competitive and training environments may lead to similar emotional experiences during competitive situations across athletes. This may limit the effect of demographic factors, such as age and type of sport, in accounting for differences in competition anxiety levels. This perspective supports a multidimensional understanding of competition anxiety, in which personal and cognitive factors are interrelated and may

outweigh demographic variables in explaining differences in competition anxiety levels (Nascimento et al., 2022).

The results of the second question further revealed no statistically significant differences in psychological flexibility levels based on gender, age, or type of sport. This finding may be explained by the fact that psychological flexibility is an acquired trait that develops progressively and is associated with relatively stable characteristics rather than demographic variables such as gender and age. It is gradually shaped through continuous interaction with challenging life situations, individual experiences, and emotional and mental rehearsal. It is essentially a dynamic process that depends on confronting psychological stressors and coping with them over time, rather than on demographic variables alone (Mursalzade et al., 2025).

In competitive sport contexts, athletes across various events often undergo similar experiences—such as high expectations, fear of failure, and intense performance demands—which may lead to comparable levels of psychological flexibility regardless of gender, age, or sport type. Recent research supports the view that there are no statistically significant differences in psychological flexibility due to type of sport or level of competition among athletes. This implies that internal psychological variables and psychological training methods may be primary factors in developing psychological flexibility, rather than demographic factors (Smith & Lee, 2025).

Recent research, particularly in the field of positive psychology, indicates that psychological flexibility is not directly affected by demographic variables but may be influenced by factors such as self-awareness, cognitive and emotional coping styles, and the quality of prior experiences. In this respect, athletes, regardless of age and type of sport, may have limited opportunities to develop these factors, especially in clubs or sport organizations that do not provide regular psychological training programs. Some studies (e.g., Wu et al., 2022; Johles et al., 2020) indicate that psychological flexibility is negatively correlated with years of experience and number of years of training, rather than with gender and chronological age. This supports the hypothesis that constant exposure to sport stressors may increase psychological flexibility, rather than demographic variables *per se*. The absence of statistically significant differences in psychological flexibility by gender, age, and type of sport also suggests that athletes may have relatively equal opportunities to improve psychological coping, which is a positive indicator that psychological and sport training programs may have similar effects across groups of athletes when implemented in a comprehensive and equitable manner (Nascimento et al., 2022).

CONCLUSIONS

Based on the findings of this study, specific resilience-building exercises are recommended for integration into athletes' training programs, particularly mindfulness (to regulate attention and accept negative

thoughts without overreaction) and cognitive restructuring (to modify maladaptive thinking patterns and replace them with more balanced appraisals of competitive situations). These exercises enhance emotional regulation, thereby reducing competition anxiety and improving performance. The results also point to the importance of unified and comprehensive psychological training programs that enhance psychological flexibility skills for all athletes, as they appear to achieve similar effects across different groups (regardless of gender, age, or sport type) and support positive psychological adaptation in competitive environments. In general, these findings highlight the importance of addressing maladaptive thinking as a psychological factor related to athletes' behavioral and psychological performance, especially when facing competition pressures and fluctuations throughout the sports season.

Contributions of the Research to Coaches and Sport Psychologists

The findings of this research offer practical and direct tools that can be utilized by coaches and sport psychologists in their daily practice.

1. Enhancing Psychological Flexibility as a Preventive Mechanism

The research confirms a statistically significant negative relationship between psychological flexibility and competition anxiety. This implies that developing psychological flexibility in athletes may reduce their level of competition anxiety.

Practical application: Coaches and sport psychologists can integrate specific exercises to build psychological flexibility within training programs, such as:

Mindfulness exercises: To regulate attention and accept negative thoughts without exaggerated reactions.

Cognitive restructuring: To modify maladaptive thinking patterns and replace them with more balanced appraisals of competitive situations.

2. Focusing Attention on Female Athletes: The results revealed that female athletes experience significantly higher levels of competition anxiety compared to males, while levels of psychological flexibility did not differ between genders.

Recommendation: The research specifically recommends designing and implementing resilience-building training programs targeted at female athletes to help them manage higher anxiety levels and improve their performance. This does not imply neglecting male athletes, but rather prioritizing or providing additional focus on the specific needs of female athletes.

3. Adopting Unified and Comprehensive Training Programs: The results indicated no statistically significant differences in psychological flexibility levels attributed to age or type of sport.

Recommendation: Unified psychological programs to enhance psychological flexibility can be designed and applied to all athletes, regardless of their age or type of sport (individual or team). This simplifies

the process of psychological interventions and makes them more cost-effective and efficient.

4. Understanding the Limitations of Demographic Factors: The absence of differences in competition anxiety attributable to age or type of sport suggests that psychological and personality factors (such as thinking style, self-confidence, and emotional regulation) may be more influential than age or sport type.

Professional conclusion: Sport psychologists should focus on assessing and developing the athlete's internal psychological factors rather than relying solely on their demographic classifications when dealing with competition anxiety.

Contribution of the Research to Scientific Literature

This research addresses a clear knowledge gap by:

1. Bridging the Gap in the Arab Context: This study is among the first systematic investigations to examine the relationship between psychological flexibility and competition anxiety among athletes within an Arab cultural context (Jordan), taking into account the specificities of Arab sports culture (e.g., collectivism, social expectations). This adds unique value to the international literature, which has previously been dominated by studies from Western contexts.

2. Confirming and Extending the Scope of the Inverse Relationship: It aligns with international literature (e.g., Wu et al., 2022) by demonstrating a significant inverse relationship between psychological flexibility and competition anxiety, but does so with a new sample (students of the Faculty of Physical Education), thereby deepening our understanding of this relationship.

3. Providing Evidence for the Stability of Psychological Flexibility: It offers evidence that levels of psychological flexibility can be relatively stable across variables such as gender, age, and type of sport. This supports the hypothesis that it is an acquired trait developed through experiences rather than necessarily through demographic variables alone.

4. Guiding Future Research: It opens the door to new research questions, such as: What other psychological and personality factors (besides psychological flexibility) predict competition anxiety in the Arab context? And why do female athletes exhibit higher anxiety despite having similar levels of psychological flexibility compared to males?

Concise Summary of the Scientific Contribution

This research provides empirical evidence in the Arab sports context that psychological flexibility is inversely correlated with competition anxiety, while also demonstrating that female athletes experience higher anxiety without differing from males in their psychological flexibility levels. This underscores the necessity of designing training programs to build psychological flexibility, particularly for female athletes, and enriches the international literature by offering an additional cultural perspective.

Limitations

Despite the fact that the current study provides important results about the nature of the correlation between psychological flexibility and competition anxiety among athletes, several limitations should be taken into consideration. Firstly, the study used a convenience sampling method with a relatively small sample size ($N = 104$), which limits the generalizability of the findings to broader athletic populations. Moreover, the sample consisted predominantly of male football players, reflecting the reality of physical education majors in the Arab context, where football is the most widespread sport. Therefore, caution should be exercised when generalizing these results to female athletes, individual sports, or different cultural contexts. Secondly, the study design was based on a descriptive correlational paradigm within a specific time period, which limits the ability to establish causal relationships between the variables under investigation. Finally, the study was conducted in a specific environmental and cultural context (Jordan), which implies that the results may differ in other sports or cultural settings.

Research Ethics

In conducting this study, the research team placed strong emphasis on upholding ethical standards throughout all phases of the work. Ethical research practice is grounded in a commitment to integrity, transparency, and respect for the rights of participants. Accordingly, the following measures were taken to ensure adherence to ethical principles:

Participant Privacy: All personal data and information collected from participants were treated with strict confidentiality. No identifying details were disclosed at any stage without the participants' explicit consent.

Fair and Respectful Treatment: Participants and their responses were treated impartially, without any form of bias or manipulation in data analysis or reporting.

Transparency: The study's goals, methodology, and results were communicated clearly and honestly to promote transparency and replicability. Ethical conduct was viewed not merely as a procedural requirement but as a fundamental component of scientific integrity and public trust in the research process.

Conflicts of Interest:

The authors declare that there are no conflicts of interest related to the design, data collection, analysis, interpretation, writing, or publication of this research.

Originality Statement:

The authors confirm that this manuscript is original, has not been published previously, and is not currently under consideration for publication elsewhere. All authors have approved the manuscript and agree with its submission to this journal.

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