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The Role of Psychological Well-Being in Reducing Competition Stress Among Junior Artistic Gymnasts

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Abstract

The objective of the study was to develop two scales: one for psychological well-being and another for competition stress among junior artistic gymnasts. It aimed to assess the level of psychological well-being among these gymnasts, determine the level of competition stress they experience, and explore the role of psychological well-being in reducing competition stress. The hypothesis posited that there is a significant correlation, contribution, and impact of the psychological well-being scale results on the competition stress scale results within the research sample. The descriptive approach using the correlational relationships method was adopted, targeting a sample of junior artistic gymnasts for the 2023/2024 sports season. The sample was naturally distributed across 15 gymnastics centers in Baghdad and other provinces, comprising a total of 146 players who were intentionally selected using a comprehensive census method, achieving a 100% inclusion rate. From this population, 6 players were randomly selected for the pilot sample, representing 4.11% of the original population. Additionally, 75 players were randomly chosen for the scale development sample, accounting for 51.37% of the original population. The remaining 65 players were designated for the primary research application sample, making up 44.521% of the original population. After constructing the two scales, a survey was conducted over a specified period from February 28, 2024, to March 14, 2024, on the main research application participants. The results were then processed using the Statistical Package for the Social Sciences (SPSS). The conclusions indicated that the psychological well-being and competition stress scales for gymnastics are suitable for the purposes for which they were developed and are appropriate for junior artistic gymnasts. These scales adhere to the scientific foundations and criteria necessary for acceptance in the field of sports psychology. The findings revealed that junior artistic gymnasts possess a level of psychological well-being that enables them to reduce competition stress. Moreover, an increase in psychological well-being contributes to a decrease in competition stress, demonstrating a linear, positive correlation and impact. The recommendations emphasized the need for gymnastics coaches to focus on creating an appropriate training environment that enhances psychological well-being due to its significant role in reducing competition stress among junior artistic gymnasts. Regular psychological monitoring of both phenomena studied—psychological well-being and competition stress—is advised through periodic assessments, with the current scales serving as reliable tools for this purpose. Additionally, it is crucial to avoid overburdening gymnasts with excessive training demands, reduce pressure, and prevent fatigue. Efforts should also be directed toward boosting their self-confidence to mitigate the escalation of competition stress among junior artistic gymnasts. and this achieves one of the sustainable development goals of the United Nations in Iraq which is (Quality Education).

Keywords | **Psychological Well-being, Competition Stress, Junior Artistic Gymnastics.**

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Introduction:

The ultimate aspiration of any individual is to experience happiness and alleviate feelings of stress. The pinnacle of happiness is often achieved through accomplishments or the fulfillment of personal desires. In the context of sports, victory, progress in training levels, and a sense of satisfaction are integral to attaining psychological well-being. Conversely, psychological pressures, which counteract happiness, can have adverse effects on mental states depending on the nature and type of these pressures.

Sports psychology has placed significant emphasis on addressing competition stress, often mitigating its impact through psychological counseling aimed at restoring athletes to their normal state, free from such pressures. Building self-confidence to overcome the negative effects of stress requires psychological stability, which in turn fosters psychological well-being. Ultimately, this well-being paves the way for the attainment of happiness.

Psychological well-being refers to experiencing positive emotions and maintaining good mental health as a foundation for quality of life. From this perspective, psychological well-being encompasses how individuals evaluate their lives in the past and present. These evaluations include emotional reactions to life events, moods, and judgments about how individuals live their lives. Thus, psychological well-being generally consists of three dimensions: the physical, the psychological, and the social (Novo et al., 2010) (24).

Psychological well-being, often translated as psychological happiness, is defined as "a semi-permanent positive inner feeling reflecting satisfaction with life, psychological tranquility, joy, enjoyment, internal regulation, self-actualization, and the ability to efficiently and effectively deal with problems and challenges" (Abdul-Maqsoud, 2006) (11).

Psychological well-being also refers to "a state of psychological balance that encompasses an individual's ability to cope with life stressors, achieve goals, build positive social relationships, and feel satisfied with themselves and their life overall. The concept of psychological well-being is comprehensive, encompassing various dimensions, including emotional, mental, and social health" (Ryff, 2014) (25).

Psychological well-being is considered one of the key indicators of life satisfaction, often regarded as synonymous with the concept of happiness. While some view happiness and subjective well-being as interchangeable terms, others argue that psychological well-being is a distinct concept. According to Ryff's model, psychological well-being reflects a general sense of happiness and comprises six sub-dimensions: autonomy, self-acceptance, positive relations with others, purpose in life, personal growth, and environmental mastery (Kapikiran, 2011) (19).

Psychological well-being includes the following factors (Lappan, 2020) (21)

- **Stress and Anxiety Management:** Through techniques such as deep breathing, meditation, and yoga, athletes can learn to regulate their psychological and physical responses to stress.
- **Social Support:** Having a network of friends, family, and coaches provides a sense of security and reduces feelings of isolation.
- **Balancing Personal and Athletic Life:** Maintaining a healthy balance between training, competitions, and personal life helps minimize stress and burnout.
- **Self and Professional Development:** Enhancing self-confidence and fostering a sense of personal achievement can elevate psychological well-being and enable more effective stress management.
- **Proper Nutrition and Adequate Sleep:** Physical health directly impacts mental

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health, making balanced nutrition and sufficient sleep essential for athletes.

- **Psychological Counselling:** Specialized sports psychologists can provide the necessary support and guidance to help athletes cope with psychological pressures and challenges.

One of the most renowned theories addressing psychological well-being is Carol Ryff's theory, which identifies six core dimensions of psychological well-being (Ryff, 2014) (25:16):

- **Autonomy:** The ability to make independent decisions.
- **Personal Growth:** A sense of continuous development and self-improvement.
- **Positive Relations with Others:** Building satisfying and constructive social relationships.
- **Environmental Mastery:** The capability to effectively manage life and one's surrounding environment.
- **Purpose in Life:** Having goals and a sense of meaning in life.
- **Self-Acceptance:** Being content with oneself and recognizing personal values and abilities.

Psychological well-being can play a significant role in reducing competition stress among athletes by helping them develop strategies to cope with psychological pressures, enhancing their ability to focus, and improving their performance in competitions" (Tchiki, 2024) (26).

The researcher believes that psychological well-being, with all its characteristics, importance, and benefits, can be adopted as a preventive psychological factor to mitigate or neutralize the impact of unpleasant psychological events or pressures experienced by junior artistic gymnasts.

Psychological stress is defined as part of the dynamic and complex system of interactions between an individual and their environment. It is a subjectively perceived phenomenon rooted in psychological processes and represents the demands placed on an individual by both internal and external environments. These demands are typically referred to as external factors in one's personal environment. Psychological stress thus distinguishes between external and internal demands, as individuals have psychological and physiological needs. The fulfillment of these needs plays a crucial role in shaping behavior, with these needs constituting internal demands. An individual's perception of the demand and their ability to overcome it are critical factors" (Abdul Aziz, 2010) (7).

Many psychological pressures experienced by athletes stem from the excessive or cumulative instructions given by coaches, which become a burden on their perceptions during competitions. These pressures are further exacerbated by threats, punishment, mockery, neglect, and aggressive behaviors encountered in their training environments" (Hyman & Zelikoff, 2009) (18).

Competition stress is defined as "a set of demands and events that compel athletes to adapt and cope, often against their will, while maintaining balance, pursuing goals, and striving for victory in competition" (Morozink et.al, 2010) (23).

Athletes often experience what is referred to as a state of emotional ambivalence, which means they may face internal conflicts as a result. The intensity of these conflicts tends to increase with their aspirations and ambitions for the future. To manage and control these conflicts, athletes must learn to regulate their emotions" (Al-Momani, 2010) (15).

Young athletes' emotions are characterized by intensity, fluctuation, contradiction, and a lack of ability to control and express their emotions. These emotional patterns closely resemble those of children, with the key difference lying in the nature of the stimuli. For instance, adolescent athletes may react strongly to criticism, being denied certain privileges, or interference in their personal affairs. While such reactions may lead to

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symptoms of maladjustment, emotional behavior in adolescents tends to improve year by year.

As they approach adulthood, emotional development becomes more stable. The surrounding environment significantly influences an individual's thinking, often shaping and conditioning it. A psychologically healthy environment fosters sound thinking and supports individual growth. Conversely, a weak or unstable environment filled with chaotic events may lead to cognitive disturbances and challenges in adapting to such an environment" (Mikhail, 2022) (16).

Undoubtedly, life is filled with pressures imposed on societies according to their status and significance, which have increasingly impacted individuals. Stress is an inevitable condition that every person encounters throughout their life journey, regardless of their lifestyle, living patterns, or behaviors that shape their short- and long-term life goals" (Al-Shammari, 2005) (6).

Furthermore, "modern life is replete with stress, particularly in areas requiring adaptation to multiple challenges. Individuals differ in the methods and strategies they employ to cope with psychological pressures and stressful events they encounter. The concept of coping refers to the techniques individuals use to manage the psychological and social pressures they face" (Al-Barzanji, 2010) (1).

It cannot always be assumed that stress is negative; its effects can sometimes be positive. The impact of stress depends on its intensity. Mild stress may enhance an individual's efficiency, as it acts as a stimulus for activity. In some cases, stress can even serve as a revitalizing element for human energy. Without stress, life may lose its meaning, as the absence of stress essentially equates to the absence of life" (Abdullah, 2014) (10).

The researcher believes that the practical applications of psychology should focus on supporting the psychological factors of athletes in both training and competition environments through scientifically grounded and academic methods, free from speculative diagnoses and arbitrary judgments.

The theoretical significance of this research lies in its potential to enhance coaches' understanding of the importance of improving the psychological well-being of gymnasts, which, in turn, strengthens their ability to endure or overcome psychological pressures in these two sporting contexts.

The practical significance of the research results is that they may assist gymnasts in addressing the negative effects of psychological pressures imposed by situations in both training and competitive environments.

Through the researcher's academic work in sports and gymnastics psychology, it became evident that measuring the psychological well-being of athletes in the Iraqi league for artistic gymnastics is essential. This necessity arises from the fact that gymnastics is often described in psychological studies as an individual sport requiring exceptional aesthetic performance. Athletes in this discipline face significant challenges in meeting its demands, and coaches often resort to pressuring their athletes to provoke responses.

To avoid premature judgments about artistic gymnasts, it has become imperative to rely on direct measurement of both psychological well-being and psychological pressures. This approach aims to assess these levels and explore the relationship between them, ultimately contributing to the psychological support of this group of athletes. Accordingly, the research problem centers on addressing the following questions:

1. What is the level of psychological well-being among junior artistic gymnasts?
2. What is the level of competition stress among junior artistic gymnasts?
3. What role does psychological well-being play in reducing competition stress among junior artistic gymnasts?

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The research aims to develop two scales: one for psychological well-being and another for competition stress among junior artistic gymnasts. It seeks to assess the level of psychological well-being among these athletes, determine the level of competition stress they experience, and explore the role of psychological well-being in reducing competition stress. The research hypothesizes that there is a significant correlation, contribution, and impact between the results of the psychological well-being scale and the competition stress scale among the sample studied.

Methodology and Procedures:

The research adopted a descriptive approach using the correlational method. The population consisted of junior artistic gymnasts actively training during the 2023/2024 sports season, distributed across 15 gymnastics centers in Baghdad and other provinces, totaling 146 athletes. This group was identified as the population of the current research problem and was comprehensively studied using a full census approach (100%). From this population, 6 athletes were randomly selected as the pilot sample, representing 4.11% of the original population. Additionally, 75 athletes were randomly chosen for the scale construction sample, accounting for 51.37% of the original population, ensuring that the number in the construction sample exceeded that in the application sample for adequate statistical reliability. The remaining 65 athletes were allocated to the primary application sample, representing 44.521% of the original population.

The researcher developed a scale for each of the two phenomena under investigation: the level of psychological well-being and the level of competition stress. This was necessitated by the absence of existing scales tailored to the specific conditions of the training and competitive environments of junior artistic gymnasts. The construction of these psychometric tools adhered to the principle of economy, minimizing the need for repeated applications to reduce measurement errors. The process followed the scientific steps of scale development in sports psychology, ensuring that the tools met the required scientific criteria for acceptance.

Initially, the researcher prepared 18 positive statements for the psychological well-being scale for junior artistic gymnasts, based on the theoretical literature related to the concept of psychological well-being, considering it a desirable psychological phenomenon in sports psychology. Similarly, 20 negative statements were developed for the competition stress scale, as increased competition stress is viewed as an undesirable psychological phenomenon in sports psychology. The content of the statements was specifically tailored to address the conditions of both the training and competitive environments, aligning with the orientations of sports psychology. Each statement was accompanied by a three-point response scale: "Always applies," "Sometimes applies," and "Never applies"

The scoring key for the three-point scale varied between the two constructs. For the psychological well-being scale, the responses were scored as 3, 2, and 1, respectively. For the competition stress scale, the scoring was reversed, with responses scored as 1, 2, and 3, respectively, following the Likert method.

Both face and content validity were established through the preparation of two paper-based opinion surveys, which included the two scales. Expert agreement at a rate of 80% was sought regarding the content, relevance, clarity of the items, and their alignment with the scale's purpose. The scales were presented to 17 experts specializing in testing and measurement, sports psychology, and artistic gymnastics from Wednesday, February 7, 2024, to Thursday, February 15, 2024. The experts unanimously (100%) agreed to remove 4 items from the competition stress scale, reducing it to 16 items.

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Thus, both face and content validity were confirmed.

To ensure the clarity of the items, their response options, and the instructions for the two scales, they were tested on the pilot sample of 6 athletes on Sunday, February 18, 2024. The average response time was calculated as 6 minutes for the psychological well-being scale and 5 minutes for the competition stress scale for junior artistic gymnasts.

The statistical analysis of the items commenced with the application of the scales to the construction sample of 75 athletes to verify construct validity, including both discriminative validity and internal consistency, during the period from February 19, 2024, to February 26, 2024. For discriminative validity, the items were ranked in descending order using the extreme groups method, with 27% of the sample allocated to each group. This resulted in 20 athletes per group (rounded from 20.25). Differences in responses for each item were analyzed using the independent samples t-test, as detailed in Tables 1 and 2.

Table (1)

Shows the results of the discriminative power analysis for the items of the psychological well-being scale for junior artistic gymnasts

Item	Extreme group	Count	Arithmetic Mean	Standard ± Deviation	(t)	(Sig)	Difference
1	Upper	20	2.55	0.51	7.589	0.000	Significant
	Lower	20	1.35	0.489			
2	Upper	20	2.5	0.513	10.466	0.000	Significant
	Lower	20	1.1	0.308			
3	Upper	20	2.35	0.489	5.06	0.000	Significant
	Lower	20	1.55	0.51			
4	Upper	20	2.4	0.503	7.667	0.000	Significant
	Lower	20	1.25	0.444			
5	Upper	20	2.45	0.51	8.535	0.000	Significant
	Lower	20	1.2	0.41			
6	Upper	20	2.75	0.444	13.653	0.000	Significant
	Lower	20	1.1	0.308			
7	Upper	20	2.3	0.47	8.629	0.000	Significant
	Lower	20	1.15	0.366			
8	Upper	20	2.6	0.503	7.179	0.000	Significant
	Lower	20	1.45	0.51			
9	Upper	20	2.8	0.41	12.329	0.000	Significant
	Lower	20	1.2	0.41			
10	Upper	20	2.95	0.224	15.286	0.000	Significant
	Lower	20	1.25	0.444			
11	Upper	20	2.75	0.444	10.025	0.000	Significant
	Lower	20	1.3	0.47			
12	Upper	20	2.1	0.308	5.802	0.000	Significant
	Lower	20	1.35	0.489			
13	Upper	20	2.85	0.366	14.674	0.000	Significant
	Lower	20	1.15	0.366			
14	Upper	20	2.9	0.308	14.82	0.000	Significant
	Lower	20	1.2	0.41			

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15	Upper	20	2.95	0.224	14.173	0.000	Significant
	Lower	20	1.3	0.470			
16	Upper	20	2.05	0.224	7.193	0.000	Significant
	Lower	20	1.25	0.444			
17	Upper	20	2.9	0.308	9.55	0.000	Significant
	Lower	20	1.7	0.47			
18	Upper	20	2	0.000	13.077	0.001	Significant
	Lower	20	1.1	0.308			

An item is considered significant if the significance level (Sig) is greater than 0.05 (Sig > 0.05) at a significance level of 0.05 and a degree of freedom of 38.

Table (2)

Shows the Results of the Discriminative Power Analysis for the Items of the Competition Stress Scale for Junior Artistic Gymnasts

Item	Extreme group	Count	Arithmetic Mean	Standard ± Deviation	(t)	(Sig)	Difference
1	Upper	20	2.45	0.51	6.555	0.000	Significant
	Lower	20	1.4	0.503			
2	Upper	20	2.4	0.503	8.988	0.000	Significant
	Lower	20	1.15	0.366			
3	Upper	20	2.3	0.47	4.549	0.000	Significant
	Lower	20	1.6	0.503			
4	Upper	20	2.35	0.489	6.92	0.000	Significant
	Lower	20	1.3	0.47			
5	Upper	20	2.4	0.503	7.667	0.000	Significant
	Lower	20	1.25	0.444			
6	Upper	20	2.7	0.470	11.63	0.000	Significant
	Lower	20	1.15	0.366			
7	Upper	20	2.25	0.444	4.333	0.000	Significant
	Lower	20	1.6	0.503			
8	Upper	20	2.55	0.51	6.489	0.000	Significant
	Lower	20	1.5	0.513			
9	Upper	20	2.75	0.444	7.033	0.000	Significant
	Lower	20	1.9	0.308			
10	Upper	20	2.9	0.308	12.733	0.000	Significant
	Lower	20	1.3	0.47			
11	Upper	20	2.7	0.47	8.897	0.000	Significant
	Lower	20	1.35	0.489			
12	Upper	20	2.15	0.366	5.393	0.000	Significant
	Lower	20	1.4	0.503			
13	Upper	20	2.8	0.41	12.329	0.000	Significant
	Lower	20	1.2	0.41			
14	Upper	20	2.85	0.366	12.426	0.000	Significant
	Lower	20	1.25	0.444			
15	Upper	20	2.9	0.308	9.814	0.000	Significant
	Lower	20	1.85	0.366			
16	Upper	20	2.1	0.308	3.481	0.001	Significant
	Lower	20	1.65	0.489			

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An item is considered distinctive if the significance level (Sig) is greater than 0.05 (Sig > 0.05) at a significance level of 0.05 with a degree of freedom of 38.

To verify the internal consistency validity of both scales under study, the simple Pearson correlation coefficients were calculated between the score of each item and the total score of the scale it belongs to. This was done using the scores obtained from the same construction sample consisting of (...) athletes, as shown in the results of Tables (3) and (4).

Table (3)

Shows the Internal Consistency of the Items' Correlation with the Total Score of the Psychological Well-Being Scale

Seq.	Item-Total Correlation	(Sig)	Seq.	Item-Total Correlation	(Sig)
1	0.822*	0.000	10	0.659*	0.000
2	0.809*	0.000	11	0.777*	0.000
3	0.779*	0.000	12	0.823*	0.000
4	0.712*	0.000	13	0.619*	0.000
5	0.639*	0.000	14	0.833*	0.000
6	0.815*	0.000	15	0.718*	0.000
7	0.718*	0.000	16	0.809*	0.000
8	0.622*	0.000	17	0.669*	0.000
9	0.717*	0.000	18	0.859*	0.000

An item is considered consistent if the significance level (Sig > 0.05) at a degree of freedom (73) and a significance level of (0.05).

Table (4)

Shows the Internal Consistency of the Items' Correlation with the Total Score of the Competition Stress Scale

Seq.	Item-Total Correlation	(Sig)	Seq.	Item-Total Correlation	(Sig)
1	0.733*	0.000	9	0.903*	0.000
2	0.751*	0.000	10	0.771*	0.000
3	0.559*	0.000	11	0.593*	0.000
4	0.752*	0.000	12	0.872*	0.000
5	0.774*	0.000	13	0.661*	0.000
6	0.675*	0.000	14	0.875*	0.000
7	0.761*	0.000	15	0.809*	0.000
8	0.677*	0.000	16	0.652*	0.000

An item is considered consistent if the significance level (Sig > 0.05) at a degree of freedom (n - 2 = 73) and a significance level of 0.05.

To verify the reliability of the two scales, the same scores obtained from the construction sample of 75 athletes were used. The Cronbach's Alpha coefficient was calculated, yielding a value of 0.881 for the Psychological Well-Being Scale for junior artistic gymnasts and 0.906 for the Competition Stress Scale for the same group, at a degree of freedom (73) and a significance level (0.05). Additionally, the suitability of the scales for these athletes, belonging to the junior artistic gymnastics category, was statistically verified by assessing their normal distribution. The results are presented in Table (5).

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Table (5)
Shows the Final Statistical Parameters and Normal Distribution Values for the Two Scales

Variable Name	Number of Items	Total Score	Arithmetic Mean	Standard ± Deviation	Skewness
Psychological Well-Being Scale for Junior Artistic Gymnasts	18	54	43.23	4.361	0.072
Competition Stress Scale for Junior Artistic Gymnasts	16	48	20.28	4.507	0.495

The construction sample consisted of 75 players. The distribution is considered normal if the skewness value falls within the range of (±1).

After completing this procedure, the researcher finalized the construction of the two scales in their final forms (Appendices 1 and 2). The total score for the Psychological Well-Being Scale for junior artistic gymnasts ranges from 18 to 54, with a hypothetical mean of 36. Similarly, the total score for the Competition Stress Scale for junior artistic gymnasts ranges from 16 to 48, with a hypothetical mean of 32. A higher score on either scale indicates a greater presence of the respective phenomenon in the respondent.

After completing the construction of the two scales, which were designed as paper-and-pencil tools, the researcher conducted a survey by administering the scales to the application sample, consisting of 65 athletes. This involved carrying out the main survey study and directly measuring the athletes during their training sessions. The researcher capitalized on their presence at the training centers, with the cooperation of administrators and coaches from 15 gymnastics centers in Baghdad and other provinces, to facilitate the completion of the survey. The survey was conducted from Wednesday, February 28, 2024, to Thursday, March 14, 2024, at the athletes' training locations, with the assistance of the supporting team. Upon completion of each athlete's responses, their paper-based survey forms were collected, and the data was extracted for statistical analysis.

The research data results were processed automatically using the Statistical Package for the Social Sciences (SPSS). The analysis included calculating percentages, means, standard deviations, the t-test for independent samples, the simple Pearson correlation coefficient, the Cronbach's Alpha formula, the Pearson skewness coefficient, the t-test for a single sample, and the simple linear regression coefficient.

Results and Discussion:

Table (6)
Shows the Results of Comparing the Arithmetic Mean with the Hypothetical Mean for Each Scale

Scale	Total Score	Hypothetical Mean	Arithmetic Mean	Standard Deviation	Difference Between Means	(t)	(Sig)	Significance
Psychological Well-Being	54	36	42.46	4.909	6.462	10.613	0.000	Significant
Competition Stress	48	32	21.26	5.032	-10.738	17.205	0.000	Significant

The difference is considered significant if (Sig > 0.05) at a degree of freedom (n-1) = 64) and a significance level of 0.05, with the unit of measurement being "scores."

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Table (7)
Shows the Results of the Correlation Between the Scores of the Two Scales, Simple Linear Regression, Contribution Percentage, and Standard Error.

Predictor	Criterion	Simple Correlation Coefficient (R)	Simple Linear Regression Coefficient (R^2) (Coefficient of Determination)	Contribution Percentage	Standard Error of Estimate
Psychological Well-Being	Competition Stress	0.946	0.895	0.894	1.641

N = 65

Table (8)
Shows the Results of the F-Test to Examine the Goodness of Fit of the Linear Regression Model for the Scores of the Two Scales.

Predictor	Criterion	Variance	Sum of Squares	Degrees of Freedom (df)	Mean Squares	(F)	(Sig)	Significance
Psychological Well-Being	Competition Stress	Regression	1450.929	1	1450.929	538.886	0.000	Significant
		Errors	169.625	63	2.692			

The value of (F) is significant if the significance level (Sig) is greater than 0.05 (Sig > 0.05) at a significance level of 0.05.

Table (8)
Shows the Results of the Estimated Values for the Constant Term and Slope (Effect) of the Scores of the Two Scales.

Criterion	Variables	Beta β	Standard Error	(t)	(Sig)	Significance of Effect
Competition Stress	Constant Term	62.448	1.786	34.968	0.000	Significant
	Psychological Well-Being	0.97	0.042	23.214	0.000	Significant

The value of (t) is significant if the significance level (Sig) is greater than 0.05 (Sig > 0.05) at a significance level of 0.05.

Referring to the results presented in Table (6), it is evident that the arithmetic means for both phenomena under investigation among junior artistic gymnasts exceeded the hypothetical mean for each phenomenon. This indicates the desired level for both phenomena is present. The regression model results in Table (7) show that psychological well-being is correlated with and contributes to competition stress among junior artistic gymnasts. This is further confirmed by the results in Table (8), which demonstrate the goodness of fit of the regression model between the two phenomena. As for the remaining contribution percentage shown in Table (7), it is attributed to other random, unexamined factors. Additionally, the results in Table (9) indicate that an increase in the level of psychological well-being positively affects the reduction of competition stress among junior artistic gymnasts. These findings suggest that psychological well-being plays a significant role in reducing competition stress for these athletes, making them less susceptible to psychological tension and competition-related stress. The

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researcher attributes these results to the inclination of the application sample athletes to easily compensate for lost training time in artistic gymnastics and their ability to maintain a balanced schedule for their training hours. They achieve mental clarity and psychological tranquility after completing their training tasks within the allotted time at the center with ease. They consistently reinvigorate themselves after strenuous training sessions, effectively managing stressful situations at the center with calmness. They are characterized by internal regulation when facing unpleasant events of personal concern and are receptive to evaluations with open-mindedness. They avoid negative thinking in both training and competitive environments, which helps them foster a sense of joy and enjoyment in their daily routines. Additionally, they possess the ability to deal with challenges and difficulties efficiently and effectively, forgetting moments of disappointment in both the training and competitive settings. They firmly believe that excellence and success in achieving gymnastics championships fulfill their sense of self-worth. This outlook has contributed to reducing their frustration regarding the lack of clarity in determining the selection mechanism for participants in major championships. The researcher also attributes the results to factors such as the overlap of their training schedules with competition dates, the unstudied opinions presented by those claiming expertise in championship management, the centralized nature of instructions for local gymnastics championships, and the unrealistic directives, provocations, and interventions from these individuals. Additionally, the exclusion of players' opinions when scheduling competitions, leaving such decisions solely to the organizers, contributes to this dynamic. Other factors include analyzing their technical performance in gymnastics during competitions, reducing the discomfort caused by coaches' criticism of their training conditions during competitions, and alleviating the burden of long waiting hours for their turn in the competition. The players also experience reduced dissatisfaction with the conditions of local gymnastics competitions, and the challenges of balancing the demands of training and competition—often leading to embarrassment and undermining their confidence—are mitigated. Moreover, feelings of mental fatigue before participating in competitions are lessened. These responses collectively highlight the clear positive role of the relationship, contribution, and impact of psychological well-being in reducing competition stress among junior artistic gymnasts. These findings align with the unique nature of artistic gymnastics, where mastering the technical performance of skills reflects positively on the emotional state of the athletes.

"It is essential to avoid many discouraging factors, such as the fear of failure, mental fatigue caused by a lack of support from the coach or management, or the absence of enjoyment in training and competition. These factors weaken the athlete's determination to continue training with the same intensity and enthusiasm" (Yassin, 2016) (17).

"Situations that do not impose stress on the nervous system facilitate the occurrence of desirable, stable responses that are easier to recall compared to stressful situations, which individuals intentionally strive to forget due to their unpleasant details. Therefore, it is crucial to avoid coercing individuals when attempting to establish desirable responses to be recalled in new situations" (Marcora, 2008) (13).

"Undoubtedly, emotions and feelings play a significant role in shaping thought and human behavior and in defining an individual's relationship with the external world. Psychological heritage, both ancient and modern, is rich with topics highlighting the reciprocal interaction between an individual's emotions and their psychological structure (or personality)" (Maghribi, 2008) (13).

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"It is essential for an individual, despite setbacks, disappointments, and failures, to remain positive in their outlook on themselves, their abilities, potential, opportunities, and practices. They must not allow despair to infiltrate their self-assessment or lead to self-reproach. For every disappointment, there are numerous achievements and successes; for every shortcoming, there are abilities and potentials; and for every setback, there are viable opportunities. These positives must be leveraged to overcome obstacles and failures" (Hijazi, 2012) (2).

"A positive thinker uses affirmative words to express emotions and thoughts, views things optimistically, focuses on successes, and avoids dwelling on losses. Instead, they program themselves to always aim for victory" (Abdullah, 2012) (9).

"Recognizing the value of an individual's achievements and fulfilling their need for appreciation requires encouraging and motivating them to continue their creative efforts, ensuring sustained progress and growth. It also involves acknowledging their dedication, precision in performance, and commitment to excellence" (Kines et al., 2011) (20).

"The ability to precisely recognize emotions during situations includes maintaining peak responses to challenges, situations, and individuals. On the other hand, high self-awareness demands readiness to bear the impact of emotions, which may sometimes be negative" (Al-Khalidi, 2014) (3).

"There are organic defensive mechanisms within the human body that help maintain a state of balance, enabling the individual to face changes and return to equilibrium once the conditions causing these changes subside. Any external demand, however, can disrupt this balance if the body fails to manage it, which is considered stress. 'Cannon' emphasized the role of the sympathetic nervous system as a branch of the autonomic nervous system, highlighting its critical function in preparing the body to face various stressful situations. Cannon's objective was to illustrate the physiological role of stress and subsequently measure stress under different conditions to ultimately determine the body's internal balance. The diagram below illustrates this concept" (Malika, 2011) (14).

"One of the best and easiest ways to build confidence is for an athlete to focus on enhancing their performance. Thoughts, emotions, and behavior influence one another; the more confident the performance, the greater the sense and thought of confidence. This approach becomes especially crucial when an athlete begins to lose confidence and their competitor becomes aware of it. This underscores the importance of reinforcing confidence through performance" (Rabea, 2009) (5).

"A good psychological state enables the athlete to transform negative thoughts into positive ones. They recall the pleasant events and emotions experienced during past successes, which positively impact their competitive behavior. Conversely, a poor psychological state reminds the athlete of negative and unsuccessful events and emotions, which then negatively affect their competitive behavior" (Al-Ghurairi, 2005) (12).

"Psychology has borrowed the biological concept of adaptation to refer to an individual's attempt to adjust to the surrounding psychological and social conditions, which constantly require them to align themselves with these circumstances. Adaptation is thus defined as a set of reactions through which an individual modifies their psychological structure or behavior to respond to specific environmental conditions or new experiences. It is also an ongoing interactive process that continues as long as life persists, resulting in various interactions between the individual’s drives and desires and their attempts to satisfy them. This process leads to changes initiated by the individual in themselves and their

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environment, which are reflected in their observable behavior" (Dibarti, 2015) (4).

"An individual's self-esteem, self-awareness, self-evaluation, and perception of their abilities and potential play a crucial role in determining their future behavior. When individuals accept themselves, they continue to nurture and develop their abilities and potential. However, if they do not accept themselves, they tend to redirect their energy towards destruction rather than construction. Self-esteem, therefore, is a dynamic component capable of altering, organizing, and regulating an individual's behavior" (Abdul-Ghani, 2019) (8).

Conclusions:

1. The Psychological Well-Being Scale and the Competition Stress Scale for gymnastics are suitable for their intended purposes, align well with the characteristics of junior artistic gymnasts, and meet the scientific foundations and criteria for acceptance in sports psychology.
2. Junior artistic gymnasts possess a level of psychological well-being that enables them to reduce competition stress effectively.
3. An increase in psychological well-being contributes to a decrease in competition stress in gymnastics, demonstrating a linear, positive relationship with significant impact.

Recommendations:

1. Gymnastics coaches should place greater emphasis on creating a conducive training environment to enhance psychological well-being, given its positive role and contribution in reducing competition stress among junior artistic gymnasts.
2. Regular psychological monitoring of the two contrasting phenomena under investigation (psychological well-being and competition stress) is essential for junior artistic gymnasts. The current research scales should be utilized for such longitudinal assessments.
3. It is necessary to avoid overburdening gymnasts with excessive training tasks, reduce the pressure placed on them, and prevent exhaustion. Efforts should focus on bolstering their self-confidence to mitigate the risk of heightened competition stress among junior artistic gymnasts.

Author's declaration:

Conflicts of interest: None

We confirm that all tables and figures in this article are ours and written by the researchers themselves.

Ethical-Clearance: this manuscript approved by local ethical committee of physical education and sport sciences college for women on (September /2024)

Author's contributions:

All contributions of this study were done by the researchers (B.T.) who get the main idea and work on writing and concluding also with number of experts, Aid Al-Nusairy (Faculty of Nursing – University of Baghdad) in Statistics, Hiafaa Jawad in revision, Inaam Ghalib in translating, Mazin Hadi in proofreading

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Appendix (1): Displays the Psychological Well-Being Scale for Junior Artistic Gymnasts.

Seq.	Item Statements	Response Options for the Items		
		Always Applies	Sometimes applies	Never applies
1	I find it easy to make up for the lost time during my artistic gymnastics training.			
2	I feel mentally refreshed after completing my training tasks within the specified time.			
3	I maintain my balance by organizing my training hours at the center.			
4	I find it easy to guide myself to adapt to events with happiness.			
5	I can easily revitalize myself after intense training sessions.			
6	I face stressful situations at the center with complete calmness.			
7	I set positive future expectations to prepare for any emergencies in both the training and competitive environments.			
8	I feel a sense of psychological tranquility after completing my training tasks at the center.			
9	I exhibit self-regulation when encountering unpleasant events that concern me.			
10	I respect the coach's evaluation of my training condition with openness.			

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11	I am able to fulfill the requirements of my training tasks at the center with ease.	
12	I feel that I spend my weekdays joyfully at the center.	
13	It is easy for me to forget the actions of those who disappointed me in both the training and competitive environments.	
14	I avoid negative thinking in both the training and competitive environments.	
15	I handle challenging situations with ease in both the training and competitive environments.	
16	I have the ability to deal with problems and difficulties in both the training and competitive environments efficiently and effectively.	
17	I believe that my distinction and success in achieving gymnastics championships fulfill my sense of self.	
18	I tend to ensure that my days in both the training and competitive environments are filled with joy and enjoyment.	

Appendix (2): Displays the Competition Stress Scale for Junior Artistic Gymnasts.

Seq.	Item Statements	Response Options for the Items		
		Always Applies	**Sometimes applies**	**Never applies**
1	I am bothered by the lack of clarity in determining the selection mechanism for participants in important championships.			
2	I suffer from the coach's criticism of my training condition during competitions.			
3	I am annoyed by the burden of long waiting hours for my turn in competitions.			
4	I find it difficult to balance the demands of training with the demands of competition.			
5	I am frustrated by the overlap between my training schedules and competition dates.			
6	I feel restricted by the centralized regulations of local gymnastics championships.			
7	I am drained by some unrealistic directives issued by championship organizers.			
8	I feel restricted by the commitment to gymnastics competition schedules.			
9	I am annoyed by the unstudied opinions presented by those who claim expertise in championship management.			
10	I am disturbed by administrative interventions when it is my turn to participate in competitions.			
11	I feel embarrassed by the insufficient time for experimental preparation before participating in a competition.			
12	I experience mental fatigue before participating in a competition.			
13	I am bothered by the lack of consideration for players' opinions in setting competition schedules, which are solely determined by the organizers.			

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14	I feel that unfair competition diminishes my value.
15	I am frustrated by the analysis of my technical performance in gymnastics during competitions.
16	I feel dissatisfied with the conditions of local gymnastics competitions.

دور الرفاهة النفسية في خفض ضغوط المنافسة للاعبي جمناستك الأجهزة الشباب

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مستخلص البحث

هدف البحث إلى بناء مقياسي الرفاهة النفسية وضغوط المنافسة للاعبي جمناستك الأجهزة الشباب، والتعرف على مستوى الرفاهة النفسية لدى لاعبي جمناستك الأجهزة الشباب، والتعرف على مستوى ضغوط المنافسة لدى لاعبي جمناستك الأجهزة الشباب، والتعرف على دور الرفاهة النفسية في خفض ضغوط المنافسة للاعبي جمناستك الأجهزة الشباب، لتكون فرضية البحث بإنه توجد علاقة إرتباط معنوية وإسهام وأثر لنتائج مقياس ضغوط المنافسة بنتائج مقياس ضغوط المنافسة لدى عينة البحث، وأعتمد المنهج الوصفي بإسلوب العلاقات الإرتباطية على عينة من لاعبي جمناستك الأجهزة الشباب للموسوم الرياضي (2024/2023) والموزعين بطبيعتهم على (15) مركزاً للجمباز في بغداد والمحافظات، البالغ عددهم (146) لاعباً، وأختيروا عمدياً جميعهم بإسلوب الحصر الشامل بنسبة (100%)، كما أختير منهم (6) لاعبين عشوائياً للعينة الإستطلاعية بنسبة (4.11 %) من المجتمع الأصل، كما أختير منهم (75) لاعباً عشوائياً لعينة بناء مقياسي البحث بنسبة (51.37 %) من المجتمع الأصل، والمتبقي منهم (65) لاعباً أختيروا لعينة تطبيق البحث الرئيسة بنسبة (44.521 %) من المجتمع الأصل، وبعد الإنتهاء من بناء المقياسين، تم إجراء المسح للمدة الزمنية من يوم (2024/2/28) ولغاية يوم (2024/3/14)، على طالبات لاعبي التطبيق، ومن ثم معالجة النتائج ألياً بنظام الحقيبة الإحصائية **SPSS**، لتكون الاستنتاجات بإن مقياسي الرفاهة النفسية وضغوط المنافسة بالجمناستك يصلحان لِما تم بنائهما من أجله ويلائمان لاعبي جمناستك الأجهزة الشباب ويتمتعان بالأسس والمعاملات العلمية لقبولهما في علم النفس الرياضي، ويتوافر لدى لاعبي جمناستك الأجهزة الشباب مستوى من الرفاهة النفسية لتمكينهم من خفض ضغوط المنافسة، وتسهم زيادة مستوى الرفاهة النفسية في خفض مستوى ضغوط المنافسة بالجمناستك بعلاقة أرتباط تنحدر خطياً في زيادتها الطردية والأثر الإيجابي، أما التوصيات فكانت بإنه لابد من زيادة أهتمام مدربي الجمناستك بتهيئة البيئة التدريبية الملائمة لرفع مستوى الرفاهة النفسية لدورها وإسهامها وأثرها الإيجابي خفض مستوى ضغوط المنافسة لدى لاعبي جمناستك الأجهزة الشباب، ولابد من الأهتمام بمتابعة قياس كل من الظاهرتين المتضادتان المبحوثتين للاعبي جمناستك الأجهزة الشباب بالقياس النفسي الدوري واعتماد مقياسي البحث الحالي في هذا القياس التتبعي، ومن الضروري عدم المبالغة في فرض مهام تدريبية عالية لاعبي الجمناستك وتقليل الضغط عليهم وعدم إجهادهم، والعمل على دعم ثقتهم بإنفسهم لتجنب ارتفاع ظاهرة ضغوط المنافسة لدى لاعبي جمناستك الأجهزة الشباب. وهذا ما يحقق احد اهداف التنمية المستدامة للامم المتحدة في العراق (التعليم الجيد).

الكلمات المفتاحية | **الرفاهة النفسية، ضغوط المنافسة، جمناستك الأجهزة الشباب.**