



Analysis of the Correlation Between Anxiety Levels and the Performance of Wushu *Taolu* Athletes in the Qualifying Round of the 2026 Central Java Provincial Sports Championships

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Abstrak

Tingkat kecemasan dapat memengaruhi performa atlet, khususnya dalam olahraga seperti wushu taolu, yang menuntut konsentrasi, ketepatan teknik, dan stabilitas emosional. Babak Kualifikasi Pekan Olahraga Provinsi Jawa Tengah (PORPROV) Wushu Taolu XVII/2026 merupakan ajang kompetitif bertekanan tinggi karena menentukan kemajuan atlet ke tahap selanjutnya, sehingga berpotensi meningkatkan kecemasan sebelum kompetisi. Situasi ini dapat menyebabkan penurunan performa jika tidak dikelola dengan baik. Penelitian ini dilakukan untuk menguji korelasi antara kecemasan dan performa atlet wushu taolu dalam kompetisi tingkat provinsi. Penelitian ini menggunakan metode kuantitatif deskriptif dengan pendekatan korelasional dan desain cross-sectional. Sampel terdiri dari 49 responden yang dipilih melalui purposive sampling. Kecemasan diukur menggunakan CSAI-2R, dan performa berdasarkan skor juri. Analisis data dilakukan menggunakan uji korelasi peringkat Spearman nonparametrik dengan bantuan SPSS versi 30. Hasil menunjukkan bahwa tingkat kecemasan atlet berada dalam kategori rendah (10%), kategori sedang (76%), dan kategori tinggi (14%). Sementara itu, performa atlet dikategorikan sebagai rendah (11%), sedang (56%), dan tinggi (33%). Uji korelasi peringkat Spearman menghasilkan koefisien korelasi sebesar 0,642 dengan tingkat signifikansi $p < 0,001$, menunjukkan hubungan yang kuat antara tingkat kecemasan dan performa atlet wushu taolu. Terdapat korelasi yang signifikan antara tingkat kecemasan dan performa atlet wushu taolu. Hubungan ini positif, artinya peningkatan kecemasan diikuti oleh peningkatan performa selama kompetisi.

Kata kunci: Babak Kualifikasi PORPROV, Kecemasan, Performa, Wushu taolu

Abstract

Anxiety levels can affect an athlete's performance, particularly in sports like wushu taolu, which demand concentration, technical precision, and emotional stability. The Qualifying Round of the XVII/2026 Central Java Provincial Sports Week (PORPROV) Wushu Taolu is a high-pressure competitive event because it determines athletes' advancement to the next stage, thereby potentially increasing anxiety before competition. This situation can lead to a decline in performance if not properly managed. This study was conducted to examine the correlation between anxiety and the performance of wushu taolu athletes in provincial-level competitions. This study employed a descriptive quantitative method using a correlational approach and a cross-sectional design. The sample consisted of 49 respondents selected through purposive sampling. Anxiety was measured using the CSAI-2R, and performance was based on judges' scores. Data analysis was performed using the nonparametric Spearman's rank correlation test with the assistance of SPSS version 30. The results showed that the athletes' anxiety levels were in the low category (10%), moderate category (76%), and high category (14%). Meanwhile, athletes' performance was categorized as low (11%), moderate (56%), and high (33%). The Spearman rank correlation test produced a correlation coefficient of 0.642 with a significance level of $p < 0.001$, indicating a strong relationship between anxiety levels and athlete performance in wushu taolu. There is a significant correlation between anxiety levels and athlete performance in wushu taolu. This relationship is positive, meaning that an increase in anxiety is followed by an increase in performance during competition.

(33%). The Spearman Rank correlation test yielded a correlation coefficient of 0.642 with a significance level of $p < 0.001$, indicating a strong relationship between anxiety levels and the performance of wushu taolu athletes. There is a significant correlation between anxiety levels and the performance of wushu taolu athletes. This relationship is positive, meaning that an increase in anxiety is followed by an increase in performance during competitions.

Keywords: PORPROV Qualifying Round, Anxiety, Performance, Wushu taolu

INTRODUCTION

Mental and physical health are two interrelated and inseparable aspects that support an individual's performance. In the context of sports, an athlete's mental state is a critical concern because it influences their readiness for competition. Mental health is a field of study within psychology that examines human psychological conditions, including those related to athletic activity. The branch of psychology that studies behavior, mental processes, and psychological aspects within the context of sports is called sports psychology. Sports psychology plays a role in enhancing athletes' mental readiness when facing competition. Athletes often face situations that require them to make quick and accurate decisions. A stable mental state helps athletes stay focused and maintain consistency in their movements. However, psychological disturbances can hinder an athlete's ability to perform at their best. Through a sports psychology approach, athletes are taught to manage their emotional responses.

One psychological aspect frequently experienced by athletes is a sense of discomfort resulting from the pressure of competition. Competition anxiety is an unpleasant emotional reaction that often arises before a match; it can lead to outcomes that fall short of expectations, such as losing the match (Arrasyid et al., 2024). Even though athletes have thoroughly prepared their physical, technical, and tactical aspects, poorly managed competitive anxiety can still hinder their maximum potential and reduce expected performance. This is supported by research (Mojtahedi et al., 2023) emphasizing the importance of *mental toughness* to maintain performance under pressure, a comprehensive review by Bhardwaj & Devi (2024) showing that anxiety can be a major barrier to optimal performance, and according to Beenen et al. (2025), who warn of the severe consequences of unaddressed *performance anxiety*, which can even lead athletes to withdraw from competitions.

An athlete's performance during competition encompasses both the physical and mental readiness displayed on the field of play. According to Gomez-Ruano et al. (2020), Khoirunisa et al. (2024) performance encompasses everything an athlete displays or demonstrates during a match. revealed that psychological factors play a primary role in determining an athlete's level of achievement, with an estimated contribution of up to 80%. This indicates that an athlete's success in competition depends not only on physical strength or technical skills but is also heavily influenced by mental factors, such as concentration, self-confidence, and the ability to handle pressure. The remaining 20% stems from other supporting variables, including physical condition, game strategy, and tactical readiness.

Wushu is a martial art originating from Chinese culture that continues to grow rapidly in Indonesia. Growing public interest and the achievements of athletes at both the national and international levels have made wushu a highly competitive sport in various official competitions. The development of wushu in Indonesia is managed by the Indonesian Wushu Executive Board (PBWI) through various events, such as Regional Championships (Kejurda), National Championships (Kejurnas), and *multi-sport* events like the Provincial Sports Week (Porprov) and the National Sports Week (PON). Through these championships, many talented athletes are selected to become the mainstays of the national wushu team. The athletes' success is also evident in their achievements at prestigious events such as *the SEA Games, Asian Games, and World Wushu Championships*.

As participation in wushu continues to grow, it is crucial to understand the relationship between psychological states—particularly anxiety levels—and athletes' performance in competition. Manalu et al. (2024) emphasize that psychological approaches are just as important as physical aspects in helping wushu athletes achieve their best performance. Additionally, research (Nurhadi et al., 2023) indicates that anxiety has a significant impact on an athlete's ability during competition. Competition pressure and concerns about performance often trigger anxiety. This condition can be addressed through sports psychology interventions, such as mental training, support from teammates, and emotional regulation skills. When anxiety is effectively managed, performance can be optimized.

Based on the author's observations as a wushu athlete who has participated in several



competitions, anxiety often arises before entering the competition arena, characterized by feelings of nervousness, fear of not being able to perform at one's best, and pressure to achieve the best results, which frequently emerge as the competition approaches. Similar conditions are experienced by some other athletes who exhibit comparable signs, such as tension, cold sweats, restlessness, difficulty concentrating, and trembling. These experiences indicate that pre-competition anxiety is common among wushu athletes and has the potential to affect their performance during competition. Some athletes appear to make minor mistakes such as wobbling upon landing, lacking explosiveness during jumps, and losing rhythm in certain moves.

This study was conducted during the Qualifying Round of the 17th Central Java Provincial Sports Week (PORPROV) 2026 with the aim of determining whether there is a correlation between anxiety levels and the performance of wushu *taolu* athletes. At this stage, athletes selected to represent their regions strive to deliver their best performances to qualify for the Central Java PORPROV. In addition to the pressure to advance to the next stage, athletes also compete in multiple forms, requiring them to perform repeatedly within a relatively short timeframe. These conditions increase the athletes' physical and mental strain and heighten the likelihood of anxiety before and during the competition's "phase. Athletes face intense competition, and in this situation, the perceived burden tends to be greater compared to competitions at lower levels. According to (Dahari et al., 2024), the type or level of competition an athlete participates in significantly determines how their anxiety manifests. In this context, the emergence of anxiety is a natural occurrence because athletes are in a situation demanding optimal physical and mental performance.

This study primarily focuses on the mental state of athletes before a competition, as this period is a critical moment that can determine success or failure in the competition. However, after the author reviewed previous research, discussions regarding the correlation between anxiety levels and athletic performance among wushu *taolu* athletes remain scarce. Furthermore, most previous studies did not directly measure the correlation between anxiety and judges' scores during the Central Java PORPROV Qualifying Round. Therefore, this study is novel because it focuses on wushu *taolu* athletes in the XVII/2026 Central Java PORPROV Qualifying Round, specifically measures pre-competition anxiety, and links it to performance as assessed by judges.

METHODS

This study employed a quantitative approach with a correlational design and a cross-sectional approach. The study aimed to analyze the relationship between levels of competitive anxiety and the performance of wushu *taolu* athletes in the Qualifying Round of the XVII Central Java Provincial Sports Week (PORPROV) 2026. The study was conducted at the Prof. Soegiyono Laboratory Building, Faculty of Sports Science (FIK), UNNES. The research location was selected based on the venue of the XVII/2026 Central Java PORPROV Qualifying Round. The population of this study consisted of all 105 wushu *taolu* athletes participating in the XVII/2026 Central Java PORPROV Qualifying Round. The sample comprised 49 athletes selected using purposive sampling based on predetermined inclusion and exclusion criteria. The data collection technique in this study was conducted online using Google Forms; the data will be analyzed to determine the correlation between anxiety levels and the performance of wushu *taolu* athletes in the XVII/2026 Central Java PORPROV Qualifying Round. The instrument used to measure anxiety levels is the *Competitive State Anxiety Inventory-2 Revised* (CSAI-2R), Cox et al. (2003), developed by which measures the components of cognitive anxiety, somatic anxiety, and self-confidence. Athlete performance was obtained from the official scores of the judges' evaluations during the competition in accordance with the standards of the *International Wushu Federation (IWUF)*, taken from the reference on *wushu-taolu* competition rules and judging methods (Indonesian Version/translation) (2023). The validity and reliability of the instrument were tested prior to the study. Data analysis used the Spearman Rank nonparametric correlation test because the data were not normally distributed, with the assistance of SPSS version 30. The significance level was set at $\alpha = 0.05$.

RESULTS AND DISCUSSION

Research Results

Respondent Description

In this study, the sample of respondents was drawn from wushu *taolu* athletes participating in the Qualifying Round of the XVII/2026 Central Java PORPROV Championship. All respondents were officially registered athletes who competed in accordance with the applicable regulations for wushu *taolu*.

Table 1. Respondent Characteristics

Criteria	Number	Percentage
Athlete gender:		
a. Female	21	42.86%
b. Male	28	57.14

Based on the results of the questionnaire analysis and the total scores obtained, the detailed information presented in Table 1 shows that there were 21 female athletes (42.86%) and 28 male athletes (57.14%) out of a total sample of 49 respondents. This data indicates that there were fewer female athletes than male athletes in this study sample.

Results of Descriptive Analysis

Anxiety

Descriptive statistics for the anxiety data of wushu *taolu* athletes in the Qualifying Round of the XVII/2026 Central Java PORPROV are presented in Table 4.2 as follows.

Table 2. Descriptive Analysis of Anxiety

Variable	N	Min	Max	Mean	Standard Deviation
Anxiety	49	46	134	93.12	21,300

Source: Data processed in 2026

Based on the descriptive statistical analysis in Table 2, the data show that the anxiety scores of the 49 respondents ranged from a minimum of 46 to a maximum of 134. The mean anxiety score of 93.12 reflects the average score of the respondents who completed the anxiety questionnaire. Meanwhile, the standard deviation of 21.300 indicates the dispersion of data among the 49 respondents.

When presented in Table 3, the results of the anxiety assessment of wushu *taolu* athletes in the Qualifying Round of the XVII/2026 Central Java PORPROV are as follows.

Table 3. Anxiety Assessment Results

No	Interval	Category	Frequency	Percentage
1	$X < 71.82$	Low	5	10%
2	$71.82 \leq X < 114.42$	Moderate	37	76%
3	$X > 114.42$	High	7	14%
Total			49	100%

Source: Data processed in 2026

Based on the assessment results in Table 3, the anxiety levels of wushu *taolu* athletes in the Qualifying Round of the XVII Central Java PORPROV 2026 can be seen in Figure 1.

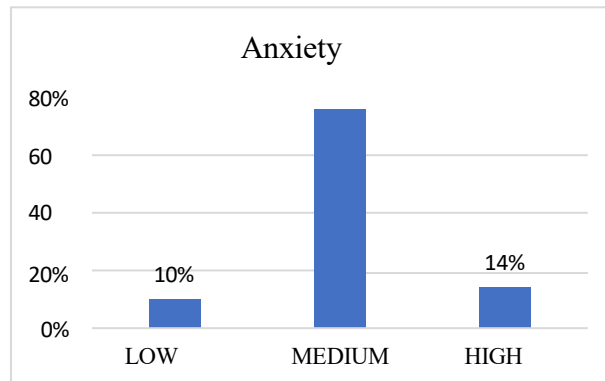


Figure 1. Anxiety Histogram

Based on the analysis of average anxiety levels among wushu taolu athletes participating in the Qualifying Round of the 17th Central Java Provincial Sports Week (PORPROV) 2026, the results fell into the “low” category at 10% (5 athletes), the “moderate” category at 76% (37 athletes), and “high” at 14% (7 athletes).

a. Performance

The performance of wushu *taolu* athletes participating in the XVII/2026 Central Java PORPROV Qualifying Round was determined by judges’ scores. Descriptive statistics of the performance of wushu *taolu* athletes participating in the XVII/2026 Central Java PORPROV Qualifying Round are presented in Table 4.4 as follows.

Table 4. Descriptive Analysis of Performance

Variable	N	Min	Max	Mean	Standard Deviation
Performance	49	7,676	9.428	8.95173	0.431925

Source: Data processed in 2026

Based on the descriptive statistical analysis in Table 4, the data shows that the performance measurement results for the 49 respondents ranged from a minimum of 7.676 to a maximum of 9.428 based on the scores awarded by the judges. The average performance score of 8.95173 reflects the average score of the wushu *taolu* athletes participating in the Qualification Round of the XVII/2026 Central Java Provincial Sports Week (PORPROV). Meanwhile, the standard deviation of 0.431925 indicates the data dispersion of the performance scores, with a value of 0.431925 across the 49 respondents.

The descriptive analysis of the scoring categories based on Judge B for wushu taolu athletes is presented in Table 5: Scoring Categories Based on Judge B as follows.

Table 5. Evaluation Categories Based on Judge B

Level	Level	Score Range
<i>Superior</i>	1	3.00 - 2.91
	2	2.90 - 2.71
	3	2.70 - 2.51
<i>Average</i>	4	2.50 - 2.31
	5	2.30 - 2.11
	6	2.10 - 1.91

<i>Inferior</i>	7	1.90 - 1.61
	8	1.60–1.31
	9	1.30 - 1.01

Source: Reference for Wushu-Taolu Competition Rules & Judging Methods (Indonesian Version/Translation) (2023).

The evaluation categories are divided into three levels: *Superior*, *Average*, and *Inferior*, each consisting of three sub-levels. The *Superior* level covers sub-levels 1 through 3 with a score range of 2.51–3.00. The *Average* level spans levels 4 through 6 with a score range of 1.91–2.50. Meanwhile, the *Inferior* level covers levels 7 through 9 with a score range of 1.01–1.90. This category applies only to aspects evaluated by Judge B and does not represent the overall total performance score.

When presented in Table 6, the Performance Assessment Results for wushu *taolu* athletes participating in the XVII/2026 Central Java PORPROV Qualifying Round are as follows.

Table 6. Performance Assessment Results

No	Interval	Category	Frequency	Percentage
1	$X < 16.814$	Low	5	11%
2	$16,814 \leq X < 27,338$	Medium	27	56%
3	$X > 27,338$	High	16	33%
Total			49	100%

Source: Data processed in 2026

Based on the assessment results in Table 4.6, the performance of the wushu *taolu* athletes who participated in the Qualifying Round of the XVII/2026 Central Java Provincial Sports Week (PORPROV) is presented in Figure 4.2, the Performance Histogram, as follows.

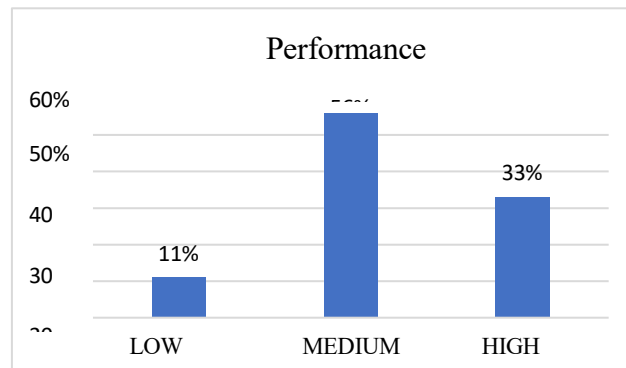


Figure 2. Performance Histogram

Based on the analysis of average performance among wushu *taolu* athletes participating in the XVII/2026 Central Java PORPROV Qualifying Round, 11% (16 athletes) fell into the “low” category, 56% (27 athletes) into the “moderate” category, and “high” at 33% (16 athletes).

Discussion

Wushu *taolu* is a sport that focuses on technical precision, the fluidity of movement sequences, body stability, expressive interpretation, and emotional control. In the Qualifying Round of the XVII/2026 Central Java PORPROV, athletes face high competitive pressure due to performance demands, strict judging, competition among athletes, and the hope of qualifying for the PORPROV. These conditions have the potential to cause pre-competition anxiety.

The research results indicate a strong positive correlation between anxiety levels and athlete performance ($r = 0.642$; $p < 0.001$). This finding suggests a relationship between anxiety levels and the performance of wushu *taolu* athletes. The positive direction of the relationship suggests that anxiety does not always have a negative impact on performance; rather, at a certain level, anxiety can serve as a stimulus and enhance concentration during performance.



The relationship between anxiety and performance is explained by the Inverted U Theory (Yerkes-Dodson Law), which states that optimal performance is achieved at moderate anxiety levels; anxiety that is too low or too high can impair performance. An increase in anxiety within reasonable limits may be associated with improved performance. Performance can reach its peak when anxiety levels are moderate. Research by Nieuwenhuis (2024) explains that performance tends to be at an optimal level when individuals are in a state of moderate psychological readiness, as they are able to focus their attention effectively.

The Spearman rank test was used because the anxiety variable was normally distributed, whereas the performance variable was not. The non-normal distribution of performance was influenced by the narrow range of judges' scores and strict evaluation criteria. This causes the performance data to cluster around certain values rather than being evenly distributed. Internal athlete factors also play a role, such as differences in technical proficiency, physical condition during the competition, competitive experience, and the athlete's ability to maintain concentration during the event.

The results of this study align with previous research using the Spearman Rank correlation test; Widorotama et al. (2024) demonstrated a significant relationship between anxiety levels and athlete performance in competitive situations among silat athletes. Research by Virginia (2020) indicates that anxiety has a significant relationship with athletic performance; furthermore, the effect of anxiety on performance is not singular but is influenced by the characteristics of the sport and the athlete's ability to manage competitive pressure.

Based on the analysis results, there were 24 wushu taolu athletes competing in the 3-form category during the Qualification Round of the XVII/2026 Central Java PORPROV. Among them, 19 athletes exhibited moderate anxiety levels, 3 athletes high anxiety levels, and 2 athletes low anxiety levels. The majority of athletes experienced anxiety at a level that remained manageable. Meanwhile, the performance of the athletes who performed 3 routines showed that 16 athletes were in the high category, 8 in the moderate category, and none in the low performance category. This indicates that most athletes were able to manage their anxiety effectively, thereby delivering optimal performance.

Based on the analysis conducted, it can be concluded that anxiety plays a significant role in the performance of wushu *taolu* athletes during the Qualifying Round of the XVII Central Java Provincial Sports Week (PORPROV) 2026. Anxiety does not always have a negative impact; rather, at a certain level, it can serve as a motivator to enhance the athletes' focus and the quality of their performances. However, excessively high anxiety has the potential to disrupt performance stability, particularly for athletes performing more than two routines, who face a greater mental burden. Therefore, anxiety management is a crucial aspect of athlete development.

CONCLUSION

The research results indicate a correlation between anxiety levels and the performance of wushu taolu athletes, as demonstrated by the non-parametric Spearman Rank correlation test with a correlation coefficient of 0.642 and a significance level of < 0.001 . These results indicate that the relationship between anxiety levels and athlete performance falls into the strong category and is positive, meaning that increased anxiety is followed by improved performance in competition. Based on these findings, the research hypothesis stating that there is a correlation between anxiety levels and the performance of wushu taolu athletes in the Qualification Round of the XVII/2026 Central Java PORPROV is accepted. Based on the researcher's direct experience during this study, several limitations exist, such as challenges in the data collection process because some athletes were unwilling to complete the questionnaire due to the sensitive nature of the research topic and its relation to psychological aspects, resulting in a relatively limited sample. This study was constrained by the event's duration of 4 days, meaning respondents likely experienced higher stress levels, which may have influenced anxiety levels due to physical condition factors. This study only examined the correlation between anxiety levels and

athlete performance without delving deeper into other factors. This study did not analyze performance based on specific competition routines. The athletes' performance data in this study were based on the total scores given by the judges, without obtaining separate detailed scores from Judges A, B, and C.

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