



## Anxiety Levels of Male and Female Kyorugi Taekwondo Athletes

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### ABSTRACT

Anxiety is one of the psychological factors that can affect athletes' performance during competition. In taekwondo athletes, anxiety may manifest through motor, affective, somatic, and cognitive symptoms that have the potential to disrupt concentration and decision-making. This study aimed to determine the anxiety levels of male and female kyorugi taekwondo athletes at Jala Dewa Taekwondo Club Dojang. This study employed a quantitative approach using a descriptive quantitative survey design conducted on December 20-21, 2025, at Pancasila Sports Hall, Surabaya. The study population consisted of 60 athletes, while the sample comprised 20 athletes selected through purposive sampling. Data were collected using the Sport Anxiety Scale developed by Nyak Amir (2013), consisting of 22 statement items, and were supported by observation and documentation. The data were analyzed using Microsoft Excel and SPSS version 25. The results showed that the athletes' overall anxiety level was categorized as relatively low and fairly well-controlled, with a mean score of 39.00. A total of 65% of the athletes were classified in the relatively low anxiety category, while 35% were categorized as having relatively high anxiety. The somatic aspect emerged as the most dominant dimension of anxiety. Furthermore, the comparative analysis revealed no significant differences in anxiety levels based on gender. Therefore, particular attention should be given to several athletes, and coaches are advised to implement structured anxiety management training programs.

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- A. Conception and design of the study;
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## INTRODUCTION

Sport is a structured activity that serves as a means of developing individuals holistically, not only in terms of physical fitness but also psychological well-being. Regular physical activity contributes to improved cardiovascular health, increased muscle mass, and overall well-being. In addition to its physical benefits, sport also fosters mental skills such as discipline and perseverance (Al-Habsy, et al., 2023). In Indonesia, taekwondo has become one of the fastest-growing sports. Taekwondo is a martial art that combines combat techniques with the values of discipline and ethics. The term "taekwondo" refers to the art of self-defense using both the feet and hands



(Rahman et al., 2023). This sport focuses not only on kicking and punching techniques but also on the mental aspects that are essential for athletes. Since gaining international recognition in the 1960s, taekwondo has emphasized a balance between physical and mental strength. Taekwondo consists of two main categories: Kyorugi (sparring) and Poomsae (forms), both of which require concentration and emotional control during competition (Al-Habsy, et al., 2023).

According to a study conducted by Hapiani (2020), 93,3% of taekwondo athletes at PGRI University of Palembang experienced high levels of anxiety prior to competition. The symptoms of anxiety included physical, emotional, and cognitive aspects. Physically, athletes experienced rapid heartbeat, trembling, and excessive sweating. Emotionally, they reported feelings of restlessness, anxiety, and fear of failure. Anxiety was also found to interfere with concentration and potentially affect competitive performance. Furthermore, Al-Habsy et al., (2023) reported that athletes' anxiety levels vary and are influenced by internal factors, such as self-confidence, as well as external factors, including competitive pressure and coaches' expectations. Unmanaged anxiety can disrupt focus, reduce technical performance, and impair athletes' decision-making abilities. Therefore, understanding the factors influencing anxiety is essential for designing effective interventions to help athletes manage stress and achieve optimal performance.

Athletes are expected to perform at their best in competitions and achieve the desired outcomes. However, psychological aspects are equally important, as they can either facilitate or hinder performance. One of the most influential psychological factors is anxiety, which is a natural response to challenging or threatening situations and is often characterized by tension and fear. Athletes, particularly before important competitions, may experience high levels of anxiety. In taekwondo athletes, anxiety can be classified into two types: state anxiety and trait anxiety. State anxiety is temporary and occurs immediately before or during competition, whereas trait anxiety is more chronic and represents a stable personality characteristic. Athletes with high trait anxiety tend to be more vulnerable to experiencing anxiety across various situations, not only during competitions (Spielberger, 2021).

In Surabaya, Jala Dewa Taekwondo Club Dojang was established on December 10, 2006, with the objective of training taekwondo athletes ranging from 10 years of age to adulthood. The researcher, who also serves as a coach at the club, has observed that athletes frequently experience anxiety during competitions. Common signs of anxiety include increased heart rate, cold sweating, stomach discomfort, restlessness, and difficulty concentrating. These observations motivated the researcher to conduct a study entitled "Anxiety Levels of Male and Female Kyorugi Taekwondo Athletes at Jala Dewa Taekwondo Club Dojang" to investigate the anxiety levels of athletes within the club. Based on the foregoing discussion, the primary objective of this study was to determine the anxiety levels of male and female kyorugi taekwondo athletes at Jala Dewa Taekwondo Club Dojang. It is expected that this study will contribute academically by enriching the existing literature and provide practical benefits for the development of sport psychology research, particularly in relation to athlete anxiety in taekwondo.

## METHODS

This study employed a descriptive quantitative approach using a survey method. The collected data were analyzed using Microsoft Excel and SPSS version 25. The research instrument was a questionnaire developed by Amir (2013), whose validity and reliability had previously been tested, with reliability coefficients ranging from 0.631 to 0.823. This instrument was selected to measure the anxiety levels of male and female kyorugi taekwondo athletes at Jala Dewa Taekwondo Club Dojang. The study was conducted at Graha Jala Weka Building, RW IV Community Hall, Jl. Raya Wisma Lidah Kulon, Jl. Wisma Lidah Kulon B No. 1A, Lidah Kulon, Lakarsantri District, Surabaya, East Java. Data collection took place on December 20–21, 2025, during the 2025 Surabaya KONI Cup Taekwondo Championship held at Pancasila Sports Hall (GOR Pancasila), Surabaya. The population consisted of 60 taekwondo athletes from Jala Dewa Taekwondo Club Dojang, including 32 male athletes and 28 female athletes. The inclusion criteria were: (1) registered athletes of Jala Dewa Taekwondo Club Dojang; (2) male and female athletes competing in the cadet, junior, and senior categories; (3) athletes aged between 13 and 20 years; and (4) participants in the 2025 Surabaya KONI Cup Taekwondo Championship. The final sample comprised 20 athletes, including 12 males and 8 females.

The research instrument was a questionnaire designed to assess competitive anxiety and its influence on athletic performance using the Sport Anxiety Scale developed by Amir (2013). Data were collected and categorized using a four-point Likert scale, consisting of Strongly Agree (SA)= 4, Agree (A)= 3, Somewhat Agree (SWA)= 2, and Strongly Disagree (SD)= 1. The research procedure began with selecting male and female kyorugi taekwondo athletes who met the predetermined criteria. Participants were then provided with instructions on how to complete the questionnaire. After receiving the explanation, the athletes completed the questionnaire independently. The final stage involved collecting and analyzing the data to determine the athletes' anxiety levels.

In addition to the questionnaire, documentation and observation techniques were employed. Observation was conducted to directly assess the athletes' anxiety levels during competition. Documentation was used to record research activities through photographs and related documents. These records supported the researcher in identifying and analyzing observable signs of anxiety among the athletes. The questionnaire items were adapted from the instrument developed by Amir (2013), which consisted of 46 validated statements demonstrating satisfactory internal consistency and reliability coefficients ranging from 0.531 to 0.856. The instrument measures four dimensions of anxiety: motoric, affective, somatic, and cognitive factors.

## RESULTS AND DISCUSSION

### Result

This study collected data on the anxiety levels of taekwondo athletes at Jala Dewa Taekwondo Club Dojang. Data were obtained using the Sport Anxiety Scale (SAS) questionnaire consisting of 22 items administered to 20 athletes. The study was conducted on December 20–21, 2025, at Pancasila Sports Hall (GOR Pancasila), Surabaya.

The collected data were analyzed using descriptive statistics, including mean, median, standard deviation, minimum and maximum scores, as well as percentage distributions of anxiety levels. Data processing and analysis were performed using Microsoft Excel and SPSS version 25 for Windows.

**Table 1.**  
 Gender Distribution of Participants

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	12	60.0	60.0	60.0
Female	8	40.0	40.0	100.0
<b>Total</b>	<b>20</b>	<b>100.0</b>	<b>100.0</b>	

The results of the questionnaire administered to 20 athletes revealed the demographic characteristics and anxiety levels of male and female kyorugi taekwondo athletes from Jala Dewa Taekwondo Club Dojang who participated in the 2025 Surabaya KONI Cup Taekwondo Championship. Of the total participants, 12 athletes (60%) were male and 8 athletes (40%) were female.

**Table 2.**  
 Distribution of Athletes' Anxiety Levels

No	Interval	Category	Frquency(n)	Percentage (%)
1	1 - 22	Low	0	0%
2	23 - 44	A bit low	13	65%
3	45 - 66	A bit high	7	35%
4	67 - 88	High	0	0%
<b>Total</b>			<b>20</b>	<b>100%</b>

The distribution of anxiety levels among athletes at Jala Dewa Taekwondo Club Dojang showed that 13 athletes (65%) were classified in the relatively low anxiety category, with scores ranging from 23 to 44. Meanwhile, 7 athletes (35%) were categorized as having relatively high anxiety, with scores ranging from 45 to 66. No athletes were classified in either the low or high anxiety categories. These findings indicate that, in general, athletes at Jala Dewa Taekwondo Club Dojang were able to manage their anxiety effectively. However, approximately 35% of the athletes may require psychological support or intervention to reduce anxiety prior to competition.

**Table 3.**  
 Descriptive Statistics of Anxiety Scores

	Score_ Motorik	Score_ Afektif	Score_ Somatik	Score_ Kognitif	Total_ Score
Valid	20	20	20	20	20
Missing	0	0	0	0	0
Mean	13.90	5.10	14.65	5.35	39.00
Median	12.00	4.00	14.50	5.00	35.50
Std. Deviation	4.541	2.125	3.407	2.033	10.702
Minimum	9	3	9	3	26
Maximum	24	9	21	10	62

Table 3 presents the descriptive statistics of anxiety among the 20 taekwondo athletes. The overall anxiety score had a mean of 39.00 ± 10.702, which falls within the

relatively low anxiety category. Among the four dimensions assessed, the somatic dimension recorded the highest mean score ( $14.65 \pm 3.407$ ) and was categorized as high. In contrast, the motoric dimension ( $13.90 \pm 4.541$ ), affective dimension ( $5.10 \pm 2.125$ ), and cognitive dimension ( $5.35 \pm 2.033$ ) were categorized as moderate. These findings suggest that athletes were more likely to experience physical manifestations of anxiety than emotional or cognitive symptoms.

**Table 4.**  
 Normality Test of Total Anxiety Scores

No	Tests of Normality					
	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Total_Skor	.210	20	.021	.913	20	.074

A normality test was conducted to assess whether the data met the assumptions required for subsequent inferential analyses. Since the sample size was fewer than 50 participants, the Shapiro-Wilk test was used as the primary criterion. The results indicated a significance value of 0.074 ( $p > 0.05$ ), suggesting that the total anxiety scores were normally distributed. Therefore, the assumption of normality was satisfied, and parametric statistical analysis, specifically the independent samples t-test, could be appropriately applied to compare anxiety levels between groups.

**Table 5.**  
 Group Statistics by Gender

	Gender	N	Mean	Std.Deviation	Std. Error Mean
Score_Motorik	Male	12	13.58	3.753	1.083
	Female	8	14.38	5.780	2.044
Score_Afektif	Male	12	5.00	2.000	.577
	Female	8	5.25	2.435	.861
Score_Somatik	Male	12	14.75	3.361	.970
	Female	8	14.50	3.703	1.309
Score_Kognitif	Male	12	5.33	1.775	.512
	Female	8	5.38	2.504	.885
Total_Score	Male	12	38.67	9.029	2.606
	Female	8	39.50	13.501	4.773

Table 5 presents the descriptive statistics of anxiety scores based on gender. Of the 20 athletes included in the study, 12 (60%) were male and 8 (40%) were female. Overall, no substantial differences were observed between male and female athletes across the anxiety dimensions assessed. The total anxiety score showed a mean of 38.67 (SD = 9.029) for male athletes and 39.50 (SD = 13.501) for female athletes.

The somatic dimension remained the highest-scoring aspect for both male (mean = 14.75) and female athletes (mean = 14.50), indicating that physical symptoms were the predominant manifestation of anxiety among both groups. These findings suggest that the pattern of anxiety experienced by male and female taekwondo athletes was generally comparable across all measured dimensions.

**Table 6.**  
Distribution of Anxiety Categories by Gender

			Anxiety Category		Total
			Somewhat Low	Somewhat High	
Gender	Male	Count	8	4	12
		% within Gender	66.7%	33.3%	100.0%
	Female	Count	5	3	8
		% within Gender	62.5%	37.5%	100.0%
<b>Total</b>		<b>Count</b>	<b>13</b>	<b>7</b>	<b>20</b>
		<b>% within Gender</b>	<b>65.0%</b>	<b>35.0%</b>	<b>100.0%</b>

The distribution of anxiety categories by gender revealed that among the 12 male athletes, 8 athletes (66.7%) were classified in the relatively low anxiety category, while 4 athletes (33.3%) were categorized as having relatively high anxiety. Among the 8 female athletes, 5 athletes (62.5%) were classified in the relatively low anxiety category, whereas 3 athletes (37.5%) fell into the relatively high anxiety category.

Overall, the proportion of athletes classified in the relatively low anxiety category was slightly higher among males (66.7%) than females (62.5%), although the difference was minimal. These findings indicate that both male and female athletes exhibited a similar distribution pattern of anxiety levels, with the majority of participants in both groups falling within the relatively low anxiety category.

**Table 7.**  
Independent Samples t-Test Results by Gender

Aspect	t	df	Sig. (2-tailed)	Keterangan
Motor	-0.373	18	0.713	Not Significant
Affective	-0.251	18	0.804	Not Significant
Somatic	0.157	18	0.877	Not Significant
Cognitive	-0.044	18	0.966	Not Significant
<b>Total Skor</b>	<b>-0.166</b>	<b>18</b>	<b>0.870</b>	<b>Not Significant</b>

An independent samples t-test was conducted to examine differences in anxiety levels between male and female athletes. The results are presented in Table 7. Statistical analysis revealed no significant differences ( $p > 0.05$ ) between male and female athletes across all anxiety dimensions, including motoric anxiety ( $t = -0.373$ ,  $p = 0.713$ ), affective anxiety ( $t = -0.251$ ,  $p = 0.804$ ), somatic anxiety ( $t = 0.157$ ,  $p = 0.877$ ), cognitive anxiety ( $t = -0.044$ ,  $p = 0.966$ ), and total anxiety scores ( $t = -0.166$ ,  $p = 0.870$ ). These findings indicate that gender was not a significant factor influencing anxiety levels among taekwondo athletes at Jala Dewa Taekwondo Club Dojang. In other words, both male and female athletes experienced comparable levels of anxiety prior to competition.

## Discussion

### Anxiety Levels

This study aimed to measure the anxiety levels of athletes at Jala Dewa Taekwondo Club Dojang who participated in the 2025 Surabaya KONI Cup Taekwondo Championship. The sample consisted of 20 athletes, including 12 males and 8 females. The findings indicated that the athletes' anxiety levels were generally categorized as relatively low.

This result is consistent with Spielberger's (2021) State Anxiety Theory, which suggests that situational anxiety (state anxiety) is temporary in nature and can be effectively managed. The findings revealed that 65% of the athletes were classified in the relatively low anxiety category, indicating that the coaching and development system implemented by the dojang since its establishment in 2006 has been effective in fostering athletes' coping mechanisms. This finding is in line with the study of Al-Habsy et al. (2023), which reported that variations in anxiety levels among taekwondo athletes are influenced by competitive experience and the quality of coaching programs. Nevertheless, 35% of the athletes were classified in the relatively high anxiety category, suggesting the need for additional attention and psychological support.

### **Dimensions of Anxiety**

#### **Somatic Dimension**

The somatic dimension recorded the highest mean score ( $M = 14.65$ ) and was classified as high compared with the other dimensions. This finding indicates that athletes' anxiety responses were predominantly manifested through physical symptoms such as increased heart rate, cold sweating, and muscle tension before competition. This phenomenon is commonly referred to as somatic anxiety, as described by Mercader-Rubio et al. (2023). Although physical symptoms were prominent, the affective and cognitive dimensions remained within the low to moderate range, suggesting that athletes were generally capable of regulating their cognitive interpretations of these physiological responses. This finding supports the Reversal Theory proposed by Aliberti et al. (2024), which suggests that athletes may experience heightened physiological arousal without necessarily perceiving it as negative anxiety when interpreted positively.

#### **Motoric Dimension**

The motoric dimension yielded a mean score of 13.90 and was classified as moderate. This dimension includes symptoms such as trembling, body stiffness, and a sensation of heavy legs. These symptoms are particularly relevant in taekwondo, an explosive sport that requires precise neuromuscular coordination. According to Hapiani (2020), unmanaged motoric symptoms may negatively affect the kicking performance of kyorugi athletes. However, the moderate level observed among athletes at Jala Dewa Taekwondo Club Dojang suggests that motoric disturbances had not reached a level that would substantially impair their technical performance during competition.

#### **Affective and Cognitive Dimensions**

The affective and cognitive dimensions exhibited relatively similar mean scores, with the affective dimension recording a mean of 5.10 and the cognitive dimension a mean of 5.35. Both dimensions were categorized as low, indicating strong psychological resilience among the athletes. The affective dimension encompasses feelings such as worry, carelessness, and hopelessness, whereas the cognitive dimension includes negative thoughts and self-doubt. These findings suggest that the athletes possessed adequate mental resilience, enabling them to regulate unpleasant emotions and maintain cognitive focus under competitive pressure. This finding is consistent with Spielberger's (2021) Trait Anxiety Theory, which posits that individuals with stable personality characteristics are

generally more capable of managing situational anxiety. Furthermore, the results may reflect the effectiveness of the character-building system in taekwondo training, which emphasizes discipline, self-control, and emotional regulation.

### **Gender Differences**

The results of the independent samples t-test indicated no significant differences ( $p > 0.05$ ) between male and female athletes across all dimensions of anxiety. This finding differs from several previous studies, including that of Zekha et al. (2023), which reported that female athletes tended to experience higher levels of competitive anxiety. One possible explanation may be derived from Socialization Theory. Taekwondo has long been recognized as a martial art that provides equal opportunities for both men and women in Indonesia, as reflected by the participation of female taekwondo athletes in international competitions, including the Olympic Games. Consequently, relatively similar gender norms may have developed within the competitive taekwondo environment. In addition, the training system implemented at Jala Dewa Taekwondo Club Dojang applies similar coaching methods and training intensities for both male and female athletes. This uniform training environment may contribute to comparable experiences of competitive stress and anxiety across genders.

### **Comparison with Previous Studies**

Compared with previous research, the findings of the present study indicate a more favorable psychological condition among athletes. Hapiani (2020) reported that 93.3% of athletes experienced high levels of anxiety, whereas in the present study only 35% of athletes were classified as having relatively high anxiety, and none were categorized as having high anxiety. This difference may be attributed to the greater competitive experience and more frequent participation in tournaments among athletes at Jala Dewa Taekwondo Club Dojang. Regular exposure to competitive environments may enhance athletes' ability to manage anxiety effectively. Furthermore, 65% of the athletes in the present study were categorized as having relatively low anxiety levels, which differs from the findings of Al-Habsy et al. (2023), who reported a more varied distribution of anxiety levels, consisting of 40% high, 36% low, and 24% moderate anxiety. Differences in measurement instruments may also contribute to these discrepancies. Al-Habsy et al. (2023) utilized the CSAI-2R (Revised Competitive State Anxiety Inventory), whereas the present study employed the anxiety instrument developed by Amir (2013), which was specifically designed and validated within the Indonesian context. Similarly, Zekha et al. (2023) reported that 73.3% of athletes experienced high anxiety levels. The higher anxiety observed in their study may be associated with the characteristics of pencak silat, which involves more intensive physical contact and potentially greater perceived risk during competition compared with taekwondo.

## **CONCLUSION**

Based on the findings and discussion, it can be concluded that the anxiety levels of male and female kyorugi taekwondo athletes at Jala Dewa Taekwondo Club Dojang were

generally classified as relatively low, with a mean score of 39.00. A total of 65% of the athletes were categorized as having relatively low anxiety, while 35% were classified as having relatively high anxiety. No athletes were found to have either low or high levels of anxiety. Variations were observed across the dimensions of anxiety, indicating that anxiety responses were predominantly physiological in nature. The somatic dimension recorded the highest mean score and was categorized as high ( $M = 14.65$ ), followed by the motoric dimension, which was categorized as moderate ( $M = 13.90$ ). Meanwhile, the cognitive and affective dimensions were classified as low, with mean scores of 5.35 and 5.10, respectively, suggesting that the athletes demonstrated good cognitive and emotional control in competitive situations. Furthermore, gender was not found to be a significant predictor of anxiety levels ( $p > 0.05$ ), indicating that the coaching system implemented at Jala Dewa Taekwondo Club Dojang provides comparable developmental experiences for both male and female athletes. Although no athletes exhibited extreme levels of anxiety, the presence of 35% of athletes within the relatively high anxiety category suggests the need for preventive psychological interventions aimed at reducing anxiety and preventing its escalation to levels that may negatively affect athletic performance.

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