



Relationship Between Mental Toughness and Competitive Anxiety in Kabaddi Athletes in Central Java

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Abstract

The physical performance of Kabaddi players is not simply determined by physical skills, but also by their mental preparedness for dealing with competitive stress. Perhaps competitive anxiety is experienced prior to and/or during competition and interferes with focus and performance. On the other hand, psychological resilience is instrumental in enabling athletes to maintain focus, confidence and pressure regulation. There has been less such data available for this parameter on Kabaddi athletes. The present study intends to examine the relationship between mental toughness with competitive anxiety of Kabaddi athletes in Central Java Province. This study used a quantitative correlational design. The research sample consisted of 24 Kabaddi athletes in Central Java Province, selected using a total sampling technique. Two measurement instruments, the Sports Mental Toughness Questionnaire (SMTQ) and the Sports Competitive Anxiety Test (SCAT), were used to gather data. Statistical analysis methods: tests for normality and linearity, t-tests, and correlation based on the Pearson Product-Moment r . The test of correlation results indicated that mental toughness was negatively and significantly related to competitive anxiety ($r = -0.517$; $p = 0.010$). This means that the higher the level of mental toughness, the lower the level of competitive anxiety experienced by athletes. The normality test also showed that both variables were normally distributed, and the linearity test results showed a linear relationship between the two. Mental toughness plays an important role in reducing competitive anxiety among Kabaddi athletes. Higher mental toughness helps athletes stay focused, calm, and confident in the face of competitive pressure. The results of this study can be used as a basis for coaches in designing psychological training programs to improve athlete performance.

How to Cite

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INTRODUCTION

Athletic achievements are determined not only by physical attributes such as skills, tactics, and techniques, but also by mental preparedness to withstand the pressure of competition. Competitive anxiety is one of the most common psychological problems that athletes face. It is a sport that requires physical strength, speed, and the ability to make split-second decisions under pressure, making the sportsman's mindset a massive factor in performance. Tennis professionals with high mental toughness can concentrate, handle pressure, and perform well throughout the game. On the other hand, unstable athletes feel nervous or anxious and lose their confidence when they have to compete.

Competitive Anxiety One of the most frequent psychological problems encountered among athletes is competitive anxiety. Competitive anxiety is a negative emotion characterized by tension, worry, and feelings of inadequacy as the challenge of competition approaches (Oktamarina et al., 2022). In sport, this anxiety presents itself in two forms: cognitive anxiety (in the form of negative thoughts, worry about performance, and fear of failure) and somatic anxiety (as heart rate or breathing difficulties). It is well documented that high levels of competitive anxiety may compromise athletes' concentration, technical accuracy, and decision-making speed (Nurmalasari et al., 2024), thereby negatively affecting their performance.

Psychological strength, or mental toughness, is what athletes need to endure such pressure. Mental toughness is the ability of individuals to remain focused, confident, and consistent under pressure (Annisa & Kurniawan, 2022). In the 4Cs of the Mental Toughness model (Clough, Earle, & Sewell), mental toughness is represented by challenge, commitment, control, and confidence (Birch et al., 2017). These four factors represent the degree to which an athlete can sustain commitment and maintain his or her self-efficacy. Therefore, mental toughness acts as a buffer, minimizing the ever-increasing competitive anxiety among athletes. Kabaddi is a physically intense, high-speed game of agility and strength, with intricate formations as players execute complex game tactics. The sport is an Indian invention and has been gaining popularity in Asia, including Indonesia (International Kabaddi Federation, 2023). In Kabaddi, athletes have to use quick thinking and reflexes while balancing body weight and breath control under high pressure. Besides the extreme

demands of fitness, Kabaddi is predominantly a mental game, as it is a contact sport with a high likelihood of injury. These conditions cause a phenomenon that, many times, is experienced by Kabaddi players when there is an important match: competitive anxiety. In these scenarios, psychological toughness plays an important role in helping the athlete stay calm under match pressure.

A negative relationship between mental toughness and competitive anxiety has been reported in some previous studies across different sports. Rosalina & Zulfata (2025) found that mental toughness is positively related to volleyball players: the higher the level of mental toughness, the lower the competitive anxiety. Sakti et al., (2021) reported similar results among futsal athletes, in which mental toughness was a predictor of pressure control. Putra & Nugroho (2020) found that mental toughness helps soccer athletes cope with stress and anxiety. However, studies on the association between these two variables (anxiety and resilience) among Kabaddi players are pretty scarce, even though, compared to non-contact games, there is a dire need for more intense emotional control, calmness, and mental readiness in this sport. The studies on Kabaddi were limited, and a gap needed to be filled. In particular, the influence of mental toughness on competitive anxiety among Indonesian Kabaddi players could be an attractive study for Central Java, since the sport is continuously evolving.

The purpose of this study is to examine the correlation between mental toughness and competitive anxiety among Kabaddi athletes in Central Java Province. This study is novelty because it is one of the first studies to specifically analyze the relationship between mental toughness and competitive anxiety in Kabaddi athletes in Indonesia, particularly in Central Java Province, which is developing in this sport. Furthermore, this study expands theoretical understanding by presenting new evidence regarding the dynamics of psychological variables in high-contact sports, thereby filling a gap in the literature that has previously focused more on non-contact sports.

METHOD

In this research, the relationship between the independent variable (mental toughness) and the dependent variable (competitive anxiety) is examined quantitatively using a correlational design among Kabaddi athletes in Central Java Province. This correlational design enables researchers to assess the direction and magnitude

of covariation among variables, but without making treatment assignments. This research was carried out using a survey, and the instrument was a standardized questionnaire sent directly to the respondents.

The population in this research comprised all Kabaddi athletes in Central Java province, Indonesia, who were members of the provincial team PORKI (Indonesian Kabaddi Sports Association) of Central Java. The investigation was conducted on 24 active athletes: 14 male and 10 female, who their coaches provided. Total sampling was employed here, as the population was relatively small and all participants met the research criteria. Accordingly, the research sample comprised 24 Kabaddi athletes in Central Java Province.

The toughness trait was measured using an instrument designed by the author, the Sport Mental Toughness Questionnaire (SMTQ), based on Behnke (2019), which included 20 statement items distributed across five main factors: Emotional Control, Self-Talk, Confidence, Imagery, Goal Setting, and Focus. The second scale, the Sport Competition Anxiety Test (SCAT), was developed by Martens, Vealey, and Burton (Sari, 2016). SCAT is a tool for evaluating athletes' anxiety levels before and during competition. This scale includes 15 items for measuring two components: Cognitive Anxiety, Somatic Anxiety, and a few neutral items to control response bias.

The statistical methods used in this study were parametric. The first step of the analysis was the prerequisites analysis, which included normality (Kolmogorov-Smirnov) and linearity tests. As a result, the data were regular and linear, and correlation (Pearson Product-Moment test) was used to analyze the association between mental toughness and competitive anxiety. All statistical analyses were conducted based on IBM SPSS Statistics version 25.0. Analyses were reported as correlation coefficients (r), significance values (p), and determination coefficients (r^2) for the independent variables relative to the dependent variables.

RESULTS AND DISCUSSION

This study involved 24 participants, consisting of male and female athletes. Based on descriptive statistical analysis, the mental toughness variable had a mean (M) of 3.82, a standard deviation (SD) of 0.45, a minimum of 3.1, and a maximum of 5.0. Meanwhile, the competition anxiety variable had a mean (M) of 18.58, a standard deviation (SD) of 2.36, a minimum of 15, and a maximum of 23.

Tabel 1. Characteristics of Research Subjects

Variabel	Min	Max	Mean	Standar Deviasi	Description
Mental Toughness	3.1	5.0	3,815	0.4529	Passably
Competitive Anxiety	15	23	18,58	2.358	Moderate

According to the descriptive analysis, athletes' mental toughness status is moderate, with a mean score of 3.815 and a standard deviation of 0.4529, and a 3.1 to 5.0 score range. On the other hand, in athletes, competitive anxiety levels show greater dispersion ($M = 18.58$; $SD = 2.358$) and a standard deviation for the subgroup with the most extreme scores of 15 to 23. These results suggest that while there may be some consistency in mental toughness among track and field athletes, with a relatively low frequency of changes, the response to competitive situations is broader about anxiety.

Tabel 2. Results of Normality, Linearity, and Correlation Tests

Test Item	Asymp.Sig.	Description
Normalitas	mental toughness 0,100 > 0,05	Normal
	competition anxiety 0,087 > 0,05	Normal
Linearitas	0,013 < 0,05	Linear
Correlations	0,010 < 0,05	Correlation

The Shapiro-Wilk normality test for the mental toughness and competition anxiety variables found no significant differences ($p = 0.100$ and $p = 0.087$, respectively), indicating that both distributions conformed to the standard normal distribution assumption ($p > 0.05$). Moreover, the discrimination of linearity is indicated by a Linearity value of 0.013 ($p < 0.05$). Therefore, it can be regarded that mental toughness and competition anxiety are linear to each other. According to the Pearson Product-Moment correlation test, the results showed a significant negative correlation with ($r = -0.517$) with significance value (p) of 0.010 ($p < 0.05$). These findings demonstrate that competition anxiety among athletes has a significantly negative relationship with mental toughness. Thus, the greater the level of mental toughness exhibited, the lower the competition anxiety will be. The correlation between the two is moderate and negative.

The purpose of this investigation was to examine the association between mental toughness and competitive anxiety in athletes. According to the Pearson Product-Moment correlation test, 24 respondents obtained $r = -0.517$ and $p = 0.010$ ($p < 0.05$). The above findings suggest

that there is a significant inverse relationship between mental toughness and competitive anxiety. This suggests that the more an athlete experiences mental toughness, the less likely they are to experience competitive anxiety. Therefore, the hypothesis of the present research is supported.

Given these results, mentally tough athletes may be better able to handle pressure and emotions in a competitive setting, as evidenced by decreased state anxiety. On the other hand, a less mentally tough player is likely to feel more anxiety when competing. These findings extend previous research that has demonstrated mental toughness to be negatively associated with competitive anxiety, thus understanding the mechanism by which sport performers focus and execute under pressure. Results of this study indicate a significant negative relationship exists between mental toughness and competitive anxiety ($r = -0.517$; $p = 0.010$) among the athletes. What it means: The more mental toughness an athlete has, the less competitive anxiety there will be. Alternatively, athletes with low mental toughness will likely exhibit higher competitive anxiety. Negotiating is a form of mental toughness that includes attributes such as emotional control, self-talk, belief in one's capabilities, and positive imagery and goal-setting/focusing (Kusuma & Rindaningsih, 2024). These five factors can heavily influence an athlete's ability to be mentally prepared for competition by helping them stay relaxed and focused. Those athletes who may have a predisposition to regulate their emotions and maintain their focus are "better at" managing fear and nervousness before and during competition.

These conclusions align with Nisa & Jannah, (2021) hypothesis regarding mental toughness, a person's ability to concentrate with unlimited confidence under heavy pressure. Athletes with more mental toughness were actually able to regulate their feelings and thoughts when they were under competitive pressure, which led to a decrease in anxiety symptoms, which seemed to be a significant one for all involved in sport or other activities at this point (Maulidya & Jurusan, 2021; Kiswanto, 2016). This effect enables the athlete to perform at his highest level even under high-pressure conditions.

One of the fundamental factors in mental toughness is self-confidence, which is also a central element of competitive anxiety (Isyani & Firdausi, 2024). This item suggests that highly mentally tough athletes tend to be very self-confident, fearless about taking risks, and that the negative thoughts and emotions they experience in challenging situations are under their control. Athletes with much confidence are convinced their performance will turn out well as a matter of

course; self-confidence is the belief an individual has in themselves that they can succeed (Mirhan & Jusuf, 2016). More concretely, in this study, high scorers on the Mental Toughness Scale tend to have low competitiveness. (psychological anxiety) In other words, a higher Mental Toughness Scale results in higher levels of self-confidence, which directly leads to lower levels of competitive anxiety symptoms.

Athletes with self-belief in their ability to handle pressure and bounce back from adversity will display calmer composure during competition. This also demonstrates that self-management serves as a mediator between mental toughness and competitive anxiety, and the enterprise also highlights self-confidence as an additional component of this construct (Dayu, 2025). Self-confidence is a critical factor in coping with anxiety, maintaining focus, and achieving peak performance during Kabaddi games, which are physically demanding. Accordingly, improving self-confidence through psychological training (e.g., positive self-talk, imagery, and goal-setting) should be considered an appropriate means to develop mental toughness and reduce competitive anxiety (Sukartidana & Syahrani, 2025).

The descriptive analysis indicates that, in general, most athletes' mental toughness is very good, and some are simply good. This provides evidence that the athletes' mental toughness is satisfactory, but further work on emotional control and self-confidence should be implemented to reduce their competitive anxiety.

In general, the findings of this study support previous studies indicating that mental toughness is a critical factor in helping athletes cope with psychological pressure before and during competition (Nurcahyadi & Trihandayani, 2024). Therefore, psychological training aimed at enhancing mental toughness (e.g., visualization, positive self-talk, emotional control) can help attenuate competition anxiety and improve athlete performance. Moreover, the findings of this research are corroborated by Ramadhani (2024), who reports that athletes with high del factor motivation and high mental resilience tend to withstand pressure to play. Highly mentally tough individuals usually welcome pressure and tend to adopt a positive approach to it, turning it into motivating challenges. On the other hand, low mentally tough athletes tend to experience higher levels of anxiety and distraction in competitive contexts.

Kusuma & Rindaningsih (2024) note that mental toughness can be enhanced through targeted psychological skills training, such as goal setting, self-talk, and stress management. Such exercises may help athletes develop emotional control and build positive thinking during

competition. Therefore, higher levels of mental toughness, resulting from reduced weakness through mental training and competitive experience, reduce competition anxiety levels.

It may be concluded from this description that resilience plays an important role in maintaining athletes' emotional stability during competition. Athletes high in mental toughness are subsequently more relaxed, confident, and focused under pressure, which results in them feeling less competitive anxiety. This study supports the theoretical suggestion that the development of some characteristics of mental toughness can be an effective means by which competition anxiety in athletes can be reduced.

CONCLUSION

The relationship between mental toughness and sports competitive anxiety among kabaddi athletes in Central Java Province is inversely correlated. Thus, the greater an athlete's level of mental toughness, the less competitive anxiety they experience. The negative relationship shows that mental toughness is important in not allowing competitive anxiety (both cognitive and somatic) to occur. Highly mentally tough athletes are calm, focused, and confident during competition. This demonstrates that self-confidence, one of the mental toughness dimensions, is among the factors that can contribute to emotion control and reduced competitive anxiety among competitors.

The relationship between mental toughness and competitive anxiety in this study was moderate ($r = -0.517$; $p = 0.010$), compared with high-quality results reported in recent studies (Mojtahedi et al., 2023; Kalinin et al., 2019). The results suggest that the majority of kabaddi players are high in mental toughness. However, it should be further improved, particularly in emotion regulation and self-confidence, to reduce CA symptoms during competition.

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