



The Relationship Between Mental Toughness and Achievement Motivation of Sumedang Rugby Athletes

Cindy Sisilia¹, Dewi Susilawati^{2*}, Aam Ali Rahman³

^{1,2,3}Physical Education, Universitas Pendidikan Indonesia, Jl. Dr. Setiabudi No.229, Isola, Kec. Sukasari, Kota Bandung, Jawa Barat 40154, Indonesia

e-mail: cindysisilia17@upi.edu¹, dewisusilawati@upi.edu², alirahman@upi.edu³

Abstract

Following a decline from winning the gold medal at the 2018 West Java Provincial Sports Week (PORPROV) to securing silver in 2022, the Sumedang Regency Rugby Association has faced challenges in maintaining athlete performance. Psychological factors, particularly mental toughness and achievement motivation, are considered essential determinants of athletic performance. This study aimed to examine the relationship between mental toughness and achievement motivation among Sumedang rugby athletes. A quantitative correlational design was employed involving 24 active rugby athletes selected through purposive sampling from a population of 28 athletes based on predetermined criteria, including active training participation and competition experience. Data were collected using validated Likert-scale questionnaires measuring mental toughness (14 items) and achievement motivation (34 items). Following confirmation of normality and linearity assumptions, data were analyzed using the Pearson Product-Moment correlation test at a significance level of 0.05. The analysis revealed a positive correlation between mental toughness and achievement motivation ($r = 0.365$); however, the relationship was not statistically significant ($p = 0.356$). These findings indicate that athletes with higher mental toughness tend to demonstrate greater achievement motivation, although the association was insufficient to reach statistical significance within the present sample. Future studies are recommended to involve larger samples and examine additional psychological and environmental factors influencing athletes' achievement motivation.

Keywords: Achievement Motivation, Mental Toughness, Rugby Atlet, Sumedang Regency Executive Board.

corresponding author: dewisusilawati@upi.edu

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A. Introduction

Rugby is a team sport that demands optimal physical ability, technique, tactics, and mental readiness. As a team sport, rugby involves direct physical contact between players. Some people dislike this sport because they perceive it as extreme or violent (Marsha & Wijaya, 2021). The sport of rugby heavily relies on passing, catching, and evading opponents' attacks or tackles (Barata, 2018). Rugby has several basic techniques that players must master, namely passing, tackling, rucking, and mauling. Mastery of these basic techniques is an element that significantly influences a team's victory or defeat; additionally, physical condition, tactics, and mental state are also aspects that require serious attention (Harahap et al., 2019). This sport features several match formats, including rugby 7s, rugby 10s, rugby 15s, beach rugby, touch rugby, and tag rugby (World Rugby, n.d., in Vanath et al., 2025).

In competitive sports, an athlete's success is determined not only by physical ability and technical mastery, but is also influenced by psychological factors that play an important role in maintaining performance during both training and competition. One psychological aspect that has received much attention in sports psychology is mental toughness. The ability to manage pressure through mental readiness and appropriate support greatly affects a player's performance on the field and through these aspects, an athlete's focus will be maintained so they are able to deliver their best performance when competing (Lukman et al., 2024).

Mental toughness is an individual's ability to remain focused, confident, and capable of overcoming various pressures, obstacles, and challenges that arise during training and competition. Athletes with high mental toughness tend to maintain their peak performance even when facing difficult situations. Conversely, low mental toughness can cause athletes to easily experience a decline in motivation, a loss of focus, and difficulty bouncing back from

failure. Based on contemporary sports psychology studies, mental toughness is not merely formed by genetic factors. This characteristic develops through active engagement in facing measured pressures, self-evaluation processes, and a training environment that values athlete autonomy (Rizaldi et al., 2026). Mental toughness is a collection of values, attitudes, behaviors, and emotions that enable athletes to endure and overcome all perceived obstacles, difficulties, or pressures, as well as to consistently maintain their concentration and motivation to achieve specific goals (Gucciardi, Gordon, and Dimmock, 2008 in Mahesa, 2019). The motivation to achieve also influences the outcomes attained by athletes; in other words, achievement motivation can be viewed as a 'standard of excellence' or an inner drive to achieve much more (Setyaningrum, 2018). An athlete's achievement motivation is highly required to reach specific performance targets in their chosen sports discipline (Wahyudi & Donie, 2019 in Jannah et al., 2022).

In addition to mental toughness, achievement motivation is also a crucial factor in attaining athletic success. Achievement motivation is an internal drive that compels individuals to meet specific standards of success, strive to improve upon past performance, and maintain effort toward established goals. Athletes with high achievement motivation demonstrate a strong commitment during training, possess a competitive spirit, and strive to achieve the best possible results in every competition. According to Elliot and Church in (Haru, 2023), achievement motivation is understood as the drive to demonstrate capability in a challenging or striving activity. Through achievement motivation, an individual is driven to attain the highest level of success by mastering circumstances, planning strategies, and overcoming any social and physical obstacles they encounter (Brunstein & Heckhausen, 2018; Nicholls, 2017 in Syafei et al., 2024).

The Sumedang Regency Rugby Association (Pencab Rugby Kabupaten Sumedang) is one of the regions with a commendable track record of achievement at the West Java Provincial level. In the 2018 West Java Provincial Sports Week (PORPROV), the Sumedang Regency rugby team successfully won a gold medal. However, the 2022 PORPROV saw a decline in performance, resulting in silver medals for both the men's and women's categories. This situation is a matter of concern, considering that the majority of the athletes currently on the team are young athletes being prepared for the 2025 West Java PORPROV Qualification Round and the 2026 West Java PORPROV. The primary problem underlying this research is the decline in the performance of the Sumedang Rugby Association athletes at the 2022 PORPROV compared to the 2018 PORPROV, despite the Sumedang rugby team previously securing first place at the West Java Provincial level. This condition raises questions regarding the factors influencing this decline in achievement.

Several previous studies have provided solutions regarding the relationship between mental toughness and achievement motivation. Based on the research findings by Jalal et al., (2022), psychoeducation on mental toughness has been proven to influence the achievement motivation of athletes during their training period. Accordingly, the researcher proposes a solution: providing psychoeducation to athletes is crucial to expand their insights and understanding of mental toughness, which in turn can enhance their achievement motivation.

According to Gucciardi and Mallett (2010, as cited in Suhartini & Rivaldo, 2022), enhancing athletes' mental toughness requires coaches to adopt an autonomy-supportive approach. This approach does not view young athletes as individuals who must be entirely controlled or merely used as a means to fulfill the expectations of coaches or parents. Various forms of controlling behavior, such as

unilaterally determining the entire training schedule, have been proven to decrease athletes' intrinsic motivation (Mageau & Vallerand, 2003, as cited in Suhartini & Rivaldo, 2022).

In their study, Eko et al. (2019) concluded that an increase in mental toughness will lead to an increase in achievement motivation, and vice versa; when achievement motivation increases, mental toughness also enhances. The solution provided by the researchers indicates that improving mental endurance is a crucial factor for student-athletes to maintain motivation and compete.

Research conducted by Pratama (2024) regarding mental toughness and achievement motivation revealed a significant relationship between the two variables, meaning that stronger mental toughness corresponds to an increase in an athlete's achievement motivation. The researcher suggested that it is crucial to monitor and control both internal and external factors that can influence achievement motivation, during both training and competition. Based on the findings of Ramadhan et al. (2025), enhancing athletes' mental toughness was proposed as a solution to boost their achievement motivation. Furthermore, according to research by Masrun (2007), the fundamental solution presented in his study emphasizes the need for athletes' commitment to training, as well as the vital involvement of coaches and the environment in maintaining the athletes' psychological (mental) state and motivation at the highest level, both during practice and competitions.

Nevertheless, this study differs from previous research. Based on the phenomena observed among rugby athletes in Pencab Sumedang, a viable solution is to enhance the athletes' mental toughness through a structured psychological training program. This includes providing mental toughness psychoeducation, imagery training, goal setting, and increasing match experience through friendly matches and continuous

competitions. Such efforts are crucial to familiarize athletes with handling pressure, adversity, and challenges during both training and matches, thereby enabling them to regulate their emotions, maintain self-confidence, and remain motivated to achieve success. Furthermore, support from coaches, teammates, and the surrounding environment needs to be strengthened through positive feedback and recognition of the athletes' achievements. With increased mental toughness, it is expected that the achievement motivation of Pengcab Sumedang's rugby athletes will intensify, enabling them to deliver their best performance in the 2026 West Java Porprov.

Based on the explanation above, research on the relationship between mental toughness and achievement motivation in rugby athletes is still relatively limited, particularly among rugby athletes in Sumedang Regency. Therefore, this study was conducted to determine the relationship between mental toughness and achievement motivation among rugby athletes of Pengcab Sumedang. The results of this study are expected to serve as a foundation for developing more effective mental training programs to enhance athletes' motivation and performance.

B. Methods

This study employed a quantitative approach using a correlational research design to examine the relationship between mental toughness and achievement motivation among rugby athletes.

The population consisted of all 28 athletes registered with the Sumedang Regency Rugby Association (Pengcab Sumedang), comprising 16 male and 12 female athletes aged 17–27 years. Although the population was relatively small, purposive sampling was applied to ensure that participants met the research objectives. The inclusion criteria were: (1) actively participating in regular training during the study period, (2) officially registered as Pengcab Sumedang rugby

athletes, and (3) having participated in regional or national rugby competitions. Based on these criteria, 24 athletes were eligible and included in the study, while four athletes who did not meet the inclusion criteria were excluded from the analysis.

Data were collected using two standardized questionnaires with a five-point Likert scale. Mental toughness was measured using a 14-item instrument adapted from Sheard et al. (2019, as cited in Pratama, 2024), consisting of three dimensions: confidence, control, and constancy. Previous studies reported acceptable internal consistency, with an overall Cronbach's alpha of 0.70 and subscale reliability coefficients of 0.80 (confidence), 0.74 (control), and 0.71 (constancy). Achievement motivation was measured using a 34-item instrument adapted from Pamungkas (2022, as cited in Pratama, 2024), comprising six dimensions: task selection, feedback, responsibility, creativity and innovation, task completion time, and realistic goal setting. The instrument demonstrated satisfactory psychometric properties, with a reported validity coefficient of 0.760 and a Cronbach's alpha of approximately 0.960, indicating excellent internal consistency.

Prior to hypothesis testing, the data were examined for normality using the Shapiro–Wilk test and for linearity using the Test for Linearity. Since both assumptions were satisfied ($p > 0.05$), the relationship between mental toughness and achievement motivation was analyzed using the Pearson Product-Moment correlation with a significance level of 0.05.

C. Result and Discussion

Normality Test

The normality test aims to examine whether the data in the regression model or research variables are normally distributed. Given that the sample size in this study consists of 24 samples (< 50), the Shapiro–Wilk testing method is utilized. The decision-making basis for the Shapiro–Wilk normality test is that if the significance

value (Sig.) > 0.05, the data is declared to be normally distributed.

Analysis Results: Based on the output of the Shapiro-Wilk normality test, the significance value (p-value) for Variable X is 0.422 and for Variable Y is

0.417. Since the significance values for both variables are greater than 0.05 (Sig. > 0.05), it can be concluded that the research data for both variables are normally distributed. Therefore, the assumption of normality has been met.

Tabel 1. Normality Test Result

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Mental Thougness	.191	24	.023	.959	24	.422
Motivasi Berprestasi	.163	24	.097	.959	24	.417
a. Lilliefors Significance Correction						

Tabel 1. Linearity Test Result

ANOVA Table							
			Sum of Squares	df	Mean Square	F	Sig.
Motivasi Berprestasi * Mental Thougness	Between Groups	(Combined)	282.333	10	28.233	.246	.984
		Linearity	68.970	1	68.970	.601	.452
		Deviation from Linearity	213.363	9	23.707	.207	.988
	Within Groups		1491.000	13	114.692		
	Total		1773.333	23			

Linearity Test

The linearity test aims to determine whether two variables have a significantly linear relationship or not. The test is conducted through the Linearity test at a significance level of 0.05. The criterion used is that if the Deviation from Linearity value has a Significance (Sig.) value > 0.05, then the relationship between the variables is declared to be linear.

Analysis Results: The results of the linearity test between Variable X and Variable Y show a Deviation from Linearity value of 0.988. Since the Sig. value is greater than 0.05 (Sig. > 0.05), it can be concluded that there is a significantly linear relationship between Variable X and Variable Y.

Hypothesis Testing: Pearson Product-Moment Correlation

Since the classical assumptions (normality and linearity) have been met, the analysis can proceed with parametric hypothesis testing, specifically the Pearson Product-Moment Correlation. This analysis is used to measure the strength and direction of the relationship between Variable X and Variable Y.

Basis for Decision-Making:

- If the Sig. (2-tailed) value is < 0.05, then H_0 is rejected and H_a is accepted (There is a significant relationship).

- If the Correlation Coefficient (Pearson Correlation) value is positive (+), the relationship is directional (positive). If negative (-), the relationship is inverse (negative).

Based on the Pearson correlation test,

Table 3. Hypothesis Test Result

Correlations			
		Mental Thougness	Motivasi Berprestasi
Mental Thougness	Pearson Correlation	1	.197
	Sig. (2-tailed)		.356
	N	24	24
Motivasi Berprestasi	Pearson Correlation	.197	1
	Sig. (2-tailed)	.356	
	N	24	24

Discussion

Based on the series of statistical tests conducted, the results of this study empirically prove that the data utilized meet the standard requirements for parametric statistics. Through the Shapiro-Wilk test, it is demonstrated that the data are normally distributed without any outliers disrupting the stability of the model, which is further supported by the linear nature of the relationship. Substantively, the acceptance of the Pearson Product-Moment correlation hypothesis indicates that any increase or change occurring in Variable X will be linearly followed by Variable Y.

The achievement motivation of Rugby athletes in the Sumedang Regional Branch (Pencab) is proven to have a relationship with their mental toughness. Based on a Pearson correlation test conducted on 24 athletes, a coefficient of 0.365 was found, meaning that the stronger the athletes' mental toughness, the greater their motivation to achieve. This finding aligns with the achievement motivation theory presented previously. In that theory, it is explained that an achievement motivation model with excessively high intensity can lead to suboptimal control of negative emotions. Throughout their development, student-athletes need to be motivated to

the 2-tailed significance value is 0.356. This indicates that higher mental toughness is associated with stronger achievement motivation among athletes. Furthermore, it demonstrates a significant relationship between Variable X and Variable Y.

foster personal responsibility and actively involved in the decision-making process (Crust & Clough, 2011 in Pratama, 2024). The results of this study are also consistent with the research by Ramadhan et al. (2025) and Pratama (2024), which found a significant relationship between mental toughness and sports achievement motivation. Mental toughness is represented as a unified set of superior psychological characteristics within athletes, manifested both during training sessions and competitions. It keeps athletes relaxed and energized through two basic mechanisms: projecting positive energy to reduce difficulties, and conditioning the mind to ignore pressure, mistakes, and competition dynamics during matches (Jones, 2010 in Sholicha & W, 2020). Furthermore, mental toughness can be viewed as a dynamic characteristic that strengthens an individual's capacity to overcome external environmental obstacles as well as internal challenges originating from within themselves (Ilmu & Issn, 2024; Selviana et al., 2024). The ability to control cognitive distractions during a match is a hallmark of athletes with high mental toughness. On the other hand, they are also known to have good resilience, remaining optimistic and calm when facing high-pressure situations

leading up to a match (Romadian & Junaidi, 2023). Good mental well-being is proven to be a crucial factor underlying athletes' performance success in achieving milestones. On this basis, attention to athletes' psychological stability needs to be consistently provided starting from the training preparation phase, not just when they compete in the arena. This study defines achievement motivation as the expectation and strong desire to succeed, which serves as a stimulus for individuals to strive for their goals (Wattimena dan Khaeroni, 2022). Individuals with achievement motivation generally exhibit indicators such as personal responsibility, mature risk consideration, attention to feedback, and rational goal setting. The training process not infrequently triggers burnout and demotivation in athletes. These factors subsequently cause a decline in training continuity due to reduced enjoyment and internal drive (Soemaryoto, 2023). In the sports context, achievement motivation is understood as an internal stimulus that drives athletes during physical activities. This drive plays an important role in maintaining training consistency and directing every training program toward achieving preset targets. Based on the description above, achievement motivation can be interpreted as a person's effort to reach their targeted success. The results of this study prove the existence of a significant correlation between mental toughness and achievement motivation among rugby athletes in Pengcab Sumedang. This indicates that the firmer the mental toughness possessed by the team, the more their motivation to achieve will increase.

D. Conclusion

Based on the results of data analysis and hypothesis testing using the Pearson Product-Moment Correlation, it can be concluded that there is a significant positive relationship between mental toughness and achievement motivation among rugby athletes in the Sumedang

Regency Branch (Pengcab Kabupaten Sumedang). This relationship is unidirectional, indicating that any increase or reinforcement in the rugby team's mental toughness will be linearly followed by an increase in their achievement motivation. Strong psychological characteristics—such as the ability to manage pressure, concentration, and good emotional regulation—are proven to be crucial internal stimuli that drive athletes to maintain training consistency and persistently strive for their success targets. Thus, the stronger the mental toughness possessed by the athletes, the more optimal their motivation to achieve the highest performance will be. Based on the limitations of this study, future researchers are advised to expand the research scope by increasing the sample size or involving rugby athletes from other regional governing bodies (Pengcab) to achieve broader and more accurate generalizations. Furthermore, given that this study only focuses on these two variables, future researchers are expected to explore other psychological or external factors that influence athlete performance, such as coaching leadership style, environmental social support, competitive anxiety, or burnout. Lastly, it is also recommended to develop the research methodology, either by applying a mixed-methods approach to deeply explore the athletes' emotional dynamics or by utilizing experimental methods to test the effectiveness of psychological intervention programs, such as structured psychoeducation, in tangibly enhancing athlete performance.

E. Conflict of Interest

No conflict of interest.

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