

# THE RELATIONSHIP BETWEEN PHYSICAL CONDITION AND MENTAL READINESS OF FOOTBALL PLAYERS IN FACING COMPETITION

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**Abstract:** This study examined the relationship between physical condition and mental readiness in football players preparing for competition. Twenty-five players from Club Persigar Garut (aged 23) were assessed ahead of the 2024/2025 Indonesian Liga 4 season. Physical condition was measured through tests of flexibility, strength (e.g., Hurdle Jump for lower-body power), speed, agility, power, and endurance, while mental readiness was evaluated using the Mental Skills Test-Football (MST-f). Results indicated high mental readiness (mean = 86.36%) with low variability. Speed and agility showed the highest scores; leg muscle strength was the lowest. A very strong, significant positive correlation was found between physical condition and mental readiness ( $r = 0.965$ ;  $p < 0.01$ ), highlighting the need for integrated physical and psychological training to optimize performance.

**Keywords:** Physical Condition, Mental Readiness, Football

## INTRODUCTION

Football is a sport that demands comprehensive readiness from every individual, both from the physical and mental aspects. In the pre-competition phase, players are required to achieve optimal conditions in a limited amount of time and under the pressure of high expectations, both from the team and the external environment. Physical preparation that includes strength, endurance and speed is often the main focus of training, as it is considered the foundation of performance. On the other hand, mental preparedness such as emotion regulation, concentration, and confidence also largely determine how players respond to pressure and make decisions on the field (Weinberg & Gould, 2019; Sarkar & Fletcher, 2014).

In training practice, there is still a lot of separation between physical and psychological approaches. Conventional approaches tend to place the two in separate training tracks. In fact, biopsychosocial theory in sport emphasises that athletic performance is the result of complex interactions between biological (physical), psychological and social dimensions (Engel, 2012; Uphill et al., 2016). Some contemporary models of athletic performance also underline the importance of integration between physiological and psychological states, especially in the run-up to competition where mental stress and physical load reach their peak (Eklund & Tenenbaum, 2014; Gucciardi et al., 2017).

Although the research gap is well defined, a concrete example may strengthen the argument. While prior studies have focused on either physical performance or mental health in isolation (Coutinho et al., 2016; Slimani et al., 2017), few have systematically examined the direct relationship between specific physical condition parameters and mental readiness indicators. In reality, these factors interact dynamically, especially during the pre-competition phase. For example, an athlete with excellent physical conditioning may still underperform if lacking composure or focus under pressure—key aspects of mental readiness. The integrative approach in modern sport science emphasizes this interaction, highlighting how both elements jointly contribute to consistent performance in high-stakes situations (Fletcher & Sarkar, 2016; Permadi et al., 2021).

This gap signalled the need for research exploring the reciprocal relationship between physical condition and mental readiness in the specific context of pre-competition football. This study aims to examine whether good physical condition can improve players' mental readiness, and whether mental readiness also contributes to perceptions of fatigue as well as subjective physical readiness. Hypothesising that there is a significant positive relationship between physical condition and mental readiness, this study contributes to building a more integrative and evidence-based training framework to support the optimal performance of professional football players.

## METHODS

This study used a correlational quantitative approach with a cross-sectional design to analyse the relationship

between physical condition and mental readiness of soccer players ahead of competition. The research subjects were 25 players from Club Persigar Garut who will participate in the 2024/2025 Indonesian League 4 Season, with an average age of 23 years. To measure mental readiness, the Mental Skills Test-Football (MST-f) (Rasmussen, 2019) instrument was used, while physical condition was measured through the Football Physical Test which includes six main components: flexibility, strength, speed, agility, power, and endurance. All measurements were taken within one week of the competition. Data were analysed using the Pearson correlation test to determine the relationship between physical condition and mental readiness variables, with the help of SPSS software and a significance level of  $p < 0.05$ .

The Mental Skills Test-Football (MST-f) used in this study consists of six categories: Match Preparation, Visualization, Self-Talk and Self-Confidence, Energy Management, Concentration, and Goal Setting and Motivation, comprising a total of 42 items. Each item is rated on a 5-point ordinal scale, reflecting the frequency or intensity of mental skill use. The MST-f has demonstrated strong internal consistency in previous studies, with Cronbach's alpha values ranging from 0.78 to 0.91 across subscales, and has been applied in similar research involving competitive football players (Slimani et al., 2017). Physical condition was assessed through several standardized tests commonly used in football performance evaluation. Flexibility was measured using the Sit and Reach Test, while lower-body explosive power was evaluated with the Hurdle Jump Test. Speed and agility were assessed through the 30-Meter Sprint and the Illinois Agility Test, respectively. Power was further tested using the Standing Broad Jump, and endurance was measured through the Multistage Fitness Test. These instruments were selected for their established validity and reliability in measuring key physical components relevant to football performance.

**Table 1.** Mental Skills Test - football (MST-f)

Source	Categories	Scale	Items
Mental Skills Test - football (MST-f)	Match Preparation	Ordinal	A1 – A7
	Imagery		B1 – B7
	Self-talk and Self-confidence		C1 – C7
	Energy Management		D1 – D7
	Concentration		E1 – E7
	Goal Setting and Motivation		F1 – F7

For the performance test, here is the instrument to measures the performance of football players. The entire test is carried out by a team of analysts or it could be a coach to assess the extent to which the players are performing based on the aspects of the assessment during conditions on the field.

## RESULTS

**Table 2.** Physical Condition Test Results of Persigar Players

Components	Average Results	Targets	Achievement Percentage (%)
Sit and Reach	16	30	53.33%
Trunk Lift	37	66	56.06%
Strength (Hindle Jump)	60	200	30.00%
Speed (20 m)	97.22	100	97.22%
Agility (Illinois Run)	97	100	97.00%
Power (Standing Board Jump)	204	300	68.00%
Endurance (Bleep Test)	41	60	68.33%

Table 2. shows the physical condition test results of Persigar players based on seven fitness components, namely flexibility (Sit and Reach), back strength (Trunk Lift), leg muscle strength (Hindle Jump), speed (20 m sprint), agility (Illinois Run), leg muscle explosiveness (Standing Board Jump), and endurance (Bleep Test). The Target values in this table represent the maximum capability expected for each physical component, based on ideal performance standards for football players. These values are not average benchmarks but serve as upper-limit goals, indicating the optimal levels athletes are encouraged to reach through high-level training and conditioning. Achievement percentages, therefore, reflect how close each player is to their sport-specific physical potential. From the data, speed and agility had the highest achievement of 97.22% and 97.00% respectively, while leg muscle strength had the lowest achievement of 30.00%. Other achievement percentages ranged from 53.33% to 68.33%, indicating the need for improvement in some physical aspects.

**Table 3.** Descriptive Statistics of Mental Skills Test (N = 25)

Statistic	Value
Average	86.36%
Median	86.91%
Standard Deviation	±4.40%
Highest Score	93.45%
Lowest Score	76.19%
Score Range	17.26%

These statistics show the performance of participants with a mean score of 86.36% and a median score of 86.91%, which indicates a fairly even distribution of scores. The highest score reached 93.45% and the lowest score 76.19%, with a range of 17.26%. The standard deviation of  $\pm 4.40\%$  indicates that the variation between participants is low, so their performance is relatively consistent.

**Pearson correlation analysis was conducted:**

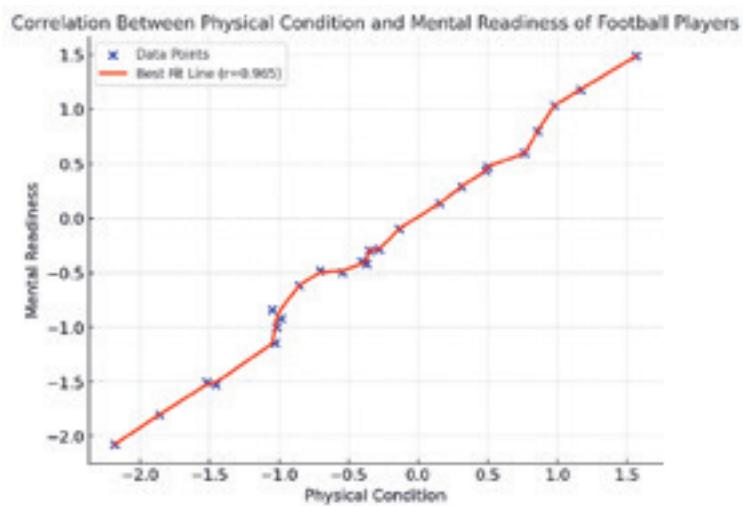
**Figure 1.** Correlation of Physical Condition and Mental Readiness of Football Players

Figure 1 illustrates a very strong correlation between physical condition and mental readiness of football players. This graph shows a significant positive relationship, where the dotted data shows a very strong pattern between the two variables, with the best fit line reflecting a correlation of  $r = 0.965$  (very strong correlation). Significance (p-value):  $p < 0.01$ .

## DISCUSSION

This study showed a very strong and significant relationship between physical condition and mental readiness of football players ahead of competition ( $r = 0.965$ ;  $p < 0.01$ ). The findings confirm that players with optimal physical condition tend to show higher mental readiness. Good physical condition plays an important role in influencing aspects of athletes' mental readiness, such as confidence, focus, and emotional control, all of which are key components in preparing athletes for competition (Weinberg & Gould, 2019). This is in line with recent research findings which confirm that physical fitness is directly related to psychological readiness and overall athlete performance.

It also supports research conducted by Mujika et al. (2018), which revealed that athletes who underwent a structured physical training programme showed improved psychological readiness, including increased focus and calmness in the face of competition. The research is in line with the results obtained by Papadopoulos et al. (2020), which states that improvements in physical fitness, such as VO<sub>2</sub>max and muscle fitness, significantly contribute to the mental resilience of athletes, especially in elite level football. Research shows that increasing physical capacity can improve the mental stability of players in stressful situations.

In addition, the results of this study also reinforce the findings of Raglin (2014), who showed that athletes who are in a state of physical fatigue are more susceptible to mental stress, which can affect their cognitive performance. This issue was further emphasised by Martens et al. (2015), who highlighted the importance of a combination of

physical and mental training in preparing athletes for competition. In this study, it was found that physical training balanced with mental management resulted in better readiness in facing competitive challenges, compared to relying solely on physical or psychological aspects separately.

Overall, this research made a significant contribution to our understanding of the relationship between athletes' physical condition and mental preparedness. The findings confirm that the two factors are interrelated and inseparable in the context of competitive preparation, particularly in team sports such as football. Compared to previous research that often separates physical and psychological analyses, this study offers a holistic approach that integrates both quantitatively, providing strong empirical evidence that the integration of physical and mental factors can strengthen athletes' competition readiness. However, the study's findings should be interpreted with caution due to certain limitations, including the relatively small sample size and the specificity of the sample, which consisted solely of players from one club (Persigar Garut) competing in Indonesia's Liga 4. These factors may limit the generalizability of the results to broader populations or higher competition levels.

## CONCLUSION

This study found a very strong and significant relationship between physical condition and mental readiness of football players ahead of competition ( $r = 0.965$ ;  $p < 0.01$ ). Players with good physical condition showed higher mental readiness, which contributed to increased confidence, focus, and emotional control. These results confirm that both factors—physical and mental—are interrelated and inseparable in preparing athletes for competition. This research provides evidence that a training approach integrating both aspects is more effective in enhancing athletes' readiness for competitive challenges. Based on these findings, coaches are encouraged to incorporate psychological skills training—such as goal setting, visualization, and emotional regulation—into regular physical training routines. Meanwhile, sports psychologists should collaborate closely with coaching staff to monitor and support athletes' mental development in tandem with physical conditioning, particularly during the pre-competition phase.

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