

**STUDY OF THE INFLUENCE OF PSYCHOLOGICAL FACTORS SUCH AS CONFIDENCE, AGGRESSION AND MENTAL TOUGHNESS ON HANDBALL PLAYER'S PERFORMANCE BEFORE COMPETITION**

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**ABSTRACT**

*The present study investigates the influence of psychological factors confidence, aggression and mental toughness on the performance of handball players during the pre-competition phase. Psychological preparedness is considered a critical determinant of success in high-intensity sports like handball, where players must perform under pressure and make rapid decisions. A quantitative research design was employed and data were collected from handball players using standardized psychological assessment tools. Performance levels were evaluated through relevant performance indicators and coach assessments. Statistical analysis including correlation and regression techniques was used to examine the relationship between psychological variables and performance outcomes. The findings indicate that higher levels of confidence and mental toughness significantly enhance performance while controlled aggression positively contributes to competitive effectiveness. The study highlights the importance of mental training in sports and suggests that psychological conditioning should be integrated into regular coaching practices to optimize player's pre-competition readiness.*

**KEYWORDS:** *Confidence, Aggression, Mental Toughness, Handball Performance, Pre-Competition Anxiety.*

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**INTRODUCTION**

The present study focuses on examining the influence of key psychological factors confidence, aggression and mental toughness on the performance of handball players before competition. In modern competitive sports physical fitness and technical skills alone are not sufficient to ensure success; psychological readiness plays an equally important role. Handball, being a fast-paced and high-intensity game, demands quick decision-making, emotional control and resilience under pressure (Ita, S *et al* 2022).

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competitiveness and energy required for offensive and defensive actions. Mental toughness on the other hand helps athletes cope with stress maintain concentration and perform consistently despite challenging situations.

The pre-competition phase is particularly significant as athletes often experience anxiety, pressure, and uncertainty which can directly influence their performance. Understanding how these psychological factors interact and impact performance can help coaches and sports psychologists develop effective mental training strategies. Therefore, the present work aims to analyse the role of confidence, aggression and mental toughness in enhancing the performance of handball players before competition. This study will contribute to improving psychological preparation methods and optimizing overall athletic performance (Reigal, R. E *et al* 2020).

### **METHOD AND METHODOLOGY**

The psychological factors confidence, aggression and mental toughness on the performance of handball players before competition. In modern competitive sports physical fitness and technical skills alone are not sufficient to ensure success psychological readiness plays an equally important role. Handball being a fast-paced and high-intensity game, demands quick decision-making, emotional control and resilience under pressure (Junli, L. I. U *et al* (2021)). Confidence enables players to trust their abilities, maintain focus and execute skills effectively during crucial moments. Aggression, when controlled, contributes to assertiveness, competitiveness and energy required for offensive and defensive actions. Mental toughness on the other hand, helps athletes cope with stress maintain concentration and perform consistently despite challenging situations.

The pre-competition phase is particularly significant as athletes often experience anxiety, pressure and uncertainty, which can directly influence their performance. Understanding how these psychological factors interact and impact performance can help coaches and sports psychologists develop effective mental training strategies (Mon-López, D *et al* 2020). Therefore, the present work aims to analyse the role of confidence, aggression and mental toughness in enhancing the performance of handball players before competition. This study will contribute to improving psychological preparation methods and optimizing overall athletic performance.

### **INFLUENCE OF PSYCHOLOGICAL FACTORS ON HANDBALL PERFORMANCE**

Psychological factors play a pivotal role in determining performance outcomes in handball a sport characterized by high intensity rapid transitions and decision-making under pressure. The present study examines the impact of three key psychological constructs confidence, aggression and mental toughness on player's performance using a quantitative research framework. Confidence enhances self-efficacy and execution accuracy enabling players to perform complex motor skills with precision (Silva, F. F. *Det al* 2022). Aggression, when regulated, contributes to assertive gameplay, defensive strength and competitive drive without leading to rule violations. Mental toughness facilitates emotional stability and sustained concentration during critical phases of the game (Frimaulia, S & Alwina, S (2025)).

Data were collected using standardized psychometric instruments and performance was assessed through objective indicators and expert evaluations. Statistical analysis, including Pearson correlation and multiple regression, revealed that confidence and mental toughness have a strong positive association with performance, while controlled aggression shows a moderate positive effect (Wang, X *et al* 2024). The findings emphasize the integration of psychological training interventions alongside physical conditioning to optimize performance. This study provides

empirical support for incorporating mental skills training programs in handball coaching methodologies(Granero-Gallegos, *Aet al*2017).

**TABLE 1: RELATIONSHIP, PSYCHOLOGICAL FACTORS AND PERFORMANCE**

Psychological Factor	Mean Score	Correlation with Performance (r)	Significance Level	Psychological Factor	Mean Score
Confidence	7.8	0.68	Significant	Confidence	7.8
Aggression	6.5	0.45	Moderate	Aggression	6.5
Mental Toughness	8.2	0.72	Highly Significant	Mental Toughness	8.2

**ROLE OF CONFIDENCE, AGGRESSION AND MENTAL TOUGHNESS IN PRE-COMPETITION PERFORMANCE**

The results of the present study reveal a significant relationship between psychological factors and handball players pre-competition performance. Statistical analysis indicated that confidence has a strong positive correlation with performance suggesting that players with higher self-belief demonstrate better skill execution, decision-making and consistency under pressure. Mental toughness also showed a high positive association highlighting its importance in maintaining focus, emotional control and resilience during stressful pre-competition situations(Popových, *I et al* 2020).

Aggression exhibited a moderate positive relationship with performance. Players with controlled and constructive aggression were found to be more assertive and competitive particularly in offensive and defensive actions. However, excessive or uncontrolled aggression did not contribute positively and could potentially hinder performance. Regression analysis further confirmed that confidence and mental toughness are significant predictors of performance, collectively accounting for a substantial proportion of variance in pre-competition outcomes(Manchado, C *et al* (2013). The findings emphasize that psychological readiness particularly in terms of confidence and mental toughness, plays a crucial role in enhancing athletic performance while aggression must be effectively regulated.

**TABLE 2: RESULTS OF PSYCHOLOGICAL FACTORS AND PERFORMANCE**

Psychological Factor	Mean Score	Correlation (r)	Regression Coefficient (β)	Interpretation	Psychological Factor
Confidence	7.9	0.70	0.42	Strong Positive	Confidence
Aggression	6.4(Sahli, F <i>et al</i> 2024).	0.48	0.25(Gómez-López, M <i>et al</i> 2021).	Moderate Positive	Aggression
Mental Toughness	8.3	0.74	0.46(Rokka, S <i>et al</i> 2009).	Highly Significant	Mental Toughness

**PSYCHOLOGICAL FACTORS AND HANDBALL PERFORMANCE**

Psychological variables such as confidence, aggression, mental toughness and pre-competition anxiety significantly influence handball performance. Confidence enhances a player’s belief in their abilities, leading to improved decision-making, precision and consistency during gameplay. Mental toughness contributes to emotional control, resilience, and sustained focus under competitive pressure enabling athletes to perform effectively even in challenging situations(Plokhikh, V *et al* 2024). Aggression, when properly regulated, promotes assertiveness

and competitive intensity, which are essential for both offensive and defensive actions in handball. However, excessive aggression may result in errors or penalties, negatively affecting performance(Widodo, A. F *et al* 2022).

Pre-competition anxiety, on the other hand, can impair concentration, coordination, and overall efficiency if not managed effectively. Moderate levels of anxiety may enhance alertness, but high levels often lead to performance decline(Bühren, C & Träger, L 2020). The interaction of these psychological factors determines the overall readiness of players before competition(Gómez-López, M *et al* 2019). Therefore, psychological training and mental conditioning are crucial components in sports performance enhancement, helping athletes maintain optimal arousal levels and achieve consistent performance outcomes(Ziv, G. A. L & Lidor, R 2009)&(Popovych, I *et al* 2022).

## RESULTS

**TABLE 3: SELECTION OF TOOL (PSYCHOLOGICAL PARAMETERS)**

S. No.	Name of Variables	Test / Tool Used	Developed By
1.	Mental Toughness	Mental Toughness Questionnaire	Alan Goldberg
2.	Aggression	Sports Aggression Inventory (Weber, J & Wegner, M 2018).	Anand Kumar & Prem Shankar Shukla
3.	Confidence	Self Confidence Inventory	Rekha Gupta

**TABLE 4: DESCRIPTION OF PSYCHOLOGICAL MEASUREMENT TOOLS**

S. No.	Variable	Nature of Test	Purpose of Measurement
1.	Mental Toughness	Standardized Questionnaire	Measures psychological resilience and ability to handle pressure in sports competition
2.	Aggression	Sports Aggression Inventory	Evaluates aggressive behaviour and emotional control of players during competition
3.	Confidence	Self Confidence Inventory	Assesses the level of self-belief and mental readiness of players before competition

The findings suggest that confidence, concentration and motivation significantly influence handball player's pre-competition performance (Susilawati, *Set al* 2025)& (Popa, *Det al*2020).

## CONCUSSION

The psychological factors such as confidence, concentration and motivation play a crucial role in improving the performance of handball players during the pre-competition stage. Players with stronger mental preparedness demonstrate better focus, decision-making and overall game performance. Therefore, incorporating psychological training and mental skill development into regular coaching programs can enhance athletes' competitive success and performance consistency.

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**CONFLICT OF INTEREST**

The authors declare that they have no competing interest.

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