

COMPARATIVE STUDY OF MENTAL TOUGHNESS BETWEEN MALE BADMINTON AND TABLE TENNIS PLAYERS OF MANIPUR

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Received: 10th July, 2025

Revised & Accepted: 15th November, 2025

Published: 25th December, 2025

DOI: <https://doi.org/10.65985/AS.2026502013>

ABSTRACT

Objective: The current study aimed to explore significant differences in mental toughness between national-level badminton and table tennis players of Manipur. **Method:** A total of 30 male players, aged ranged between 16 to 21 years, were purposively selected from Yening Badminton Academy and Manipur Table Tennis Association, ensuring national-level participation. The Mental Toughness Questionnaire-48 (MTQ48) by Peter Clough et al. (2002), which measures control, commitment, challenge, and confidence, was used. Data were analysed using IBM SPSS version 27, starting with descriptive statistics for mental toughness sub-variables. The Shapiro-Wilk test confirmed normal distribution ($p > 0.05$). An independent t-test, with a significance level of 0.05, was conducted to determine differences in mental toughness between the two groups. **Results:** Statistical analysis revealed significant difference in the commitment sub-variable. In the commitment sub-variable, the t-test showed a significant difference with a t-value of 3.240 and p-value of 0.003, and a large effect size (Cohen's $d = 1.183$), indicating higher levels of commitment in Badminton players. No significant differences were found in control life, challenge, confidence in ability, and confidence in interpersonal relationships. **Conclusion:** The findings suggest significant differences in specific components of mental toughness between national-level badminton and table tennis players, with Table Tennis players exhibiting better control over their emotions and Badminton players showing higher levels of commitment. These differences may be attributed to the distinct demands and characteristics of each sport.

Keyword: Mental Toughness, Badminton, Table-Tennis, MTQ48.

INTRODUCTION

Mental toughness, a highly valued quality in sports, allows athletes to maintain consistent performance regardless of external factors, stay confident and focused under pressure, handle distractions, tolerate pain, remain persistent, and bounce back from setbacks. Mental preparation differentiates winners from losers, enabling athletes to perform at their best during critical moments in competition. Mental toughness is crucial for athletes aiming to achieve their goals, as it helps them endure adversity and remain focused on their objectives. Established badminton players, for example, must maintain their pace and accuracy until the last point, demonstrating the importance of mental toughness in sustaining performance. The discussion on mental toughness in sports has gained prominence over the past 15 to 20 years, with more athletes recognizing its importance. Techniques such as visualization, relaxation, energization, self-talk, and goal setting are commonly used to enhance mental toughness. Visualization helps athletes prepare mentally by imagining themselves responding effectively

to various situations. True mental toughness is often revealed in how a person reacts to adversity. It involves resilience and the ability to persist despite repeated failures. This study aimed to develop a mental toughness questionnaire and establish norms for measuring mental toughness, providing a standard tool for further research in this area.

The significance of mental toughness in competitive sports has been extensively documented in literature, including the works of Goldberg (1998), Hodge (1994), Tunney (1987), and Williams (1988). Norris (1999) also emphasized its crucial role in shaping champion athletes. Gould et al. (2002) examined the psychological traits of Olympic champions, identifying mental toughness as a key factor in enhancing sports performance.

Mental toughness is an essential skill for athletes, aiding in their preparation for various tournament scenarios and directly impacting their performance and achievements (Anderson, 1995; Eric, 2006). Numerous studies have explored the relationship between athletes trained mental skills and their mutual influence (Davenport, 2006; Golby & Sheard, 2004; Kruer, 2002; Gary & Jolly, 2007; Lorentzen, 1981; Nicholls et al., 2008). These studies consistently affirm that mental toughness affects sports performance. Therefore, it is vital to recognize the role of mental toughness in the success of a football team.

The concept of mental toughness in sports has been extensively explored and developed (Golberg, 1998; Loehr, 1986). Both athletes and coaches agree that psychological factors related to mental toughness account for at least fifty percent of success (Loehr, 1982; 1986).

MATERIALS AND METHODS

A total of 30 male players, aged ranged between 16 to 21 years, were purposively selected from Yening Badminton Academy and Manipur Table Tennis Association, ensuring national-level participation. The Mental Toughness Questionnaire-48 (MTQ48) by Peter Clough et al. (2002), which measures control, commitment, challenge, and confidence, was used.

Statistical Analysis

Data were analysed using IBM SPSS (International Business Machines Corporation Statistical Package for the Social Sciences) version 27, starting with descriptive statistics for mental toughness sub-variables. The Shapiro-Wilk test confirmed normal distribution ($p > 0.05$). An independent t-test, with a significance level of 0.05, was conducted to determine differences in mental toughness between the two groups.

RESULTS

The results are presented in the following table and graph.

Note. C E = control emotion; CL = control life; Cha. = challenge; Com. = commitment; CA = confidence ability; CI = confidence interpersonal.

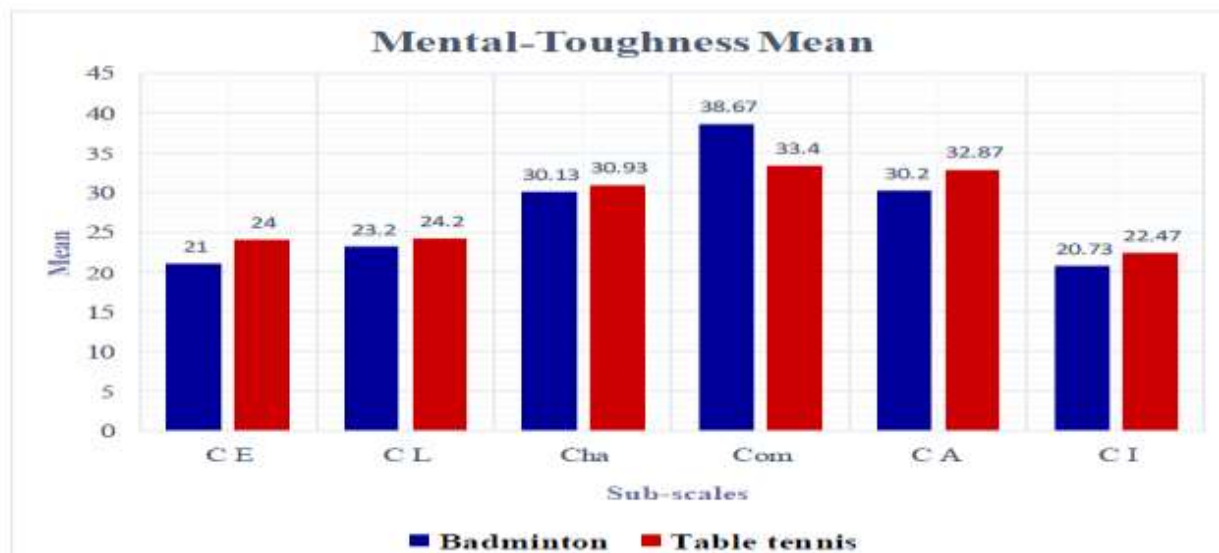


Figure 1

Graphical representation of mean for Mental toughness between Badminton and Table Tennis players

This figure shows the graphical representation of the mean scores for Mental Toughness, in six subscales i.e., control emotion, control life, challenge, commitment, confidence ability, and confidence interpersonal.

Table: 1
Results of Independent t test in Control Emotion between Badminton and Table Tennis players

Variable	Badminton		Table Tennis		‘t’ ratio	p
	M	SD	M	SD		
Control Emotion	21	2.07	24	3.38	1.711	0.104
Control life	23.20	1.26	24.20	1.65	1.858	0.074
Challenge	30.13	2.74	30.93	3.71	0.671	0.508
Commitment	38.67	5.06	33.40	3.73	3.240*	0.003

Confidence Ability	30.20	4.69	32.87	4.03	1.669	0.106
Confidence Interpersonal	20.73	3.32	22.47	1.50	1.838	0.077

*Significant at .05 level
't'.05 (28) = 2.048

Statistical analysis revealed that in commitment a sub-variable of Mental Toughness the calculated 't' values in case of badminton and table tennis was found to be statistically significance as the value obtained was 3.240 whereas, the tabulated value was 2.048 which 28 degrees of freedom at .05 level of significance. No significant differences were found in the control emotion, control of life, challenge, confidence in ability, and confidence in interpersonal relationships between the two groups.

DISCUSSION

The study found significant differences in commitment between national-level badminton and table tennis players in Manipur. Badminton players showed higher levels of commitment. No significant differences were found in the control emotion, control of life, challenge, confidence in ability, and confidence in interpersonal relationships between the two groups. These findings suggest that sport-specific demands influence certain aspects of mental toughness similarly.

The results indicates that Badminton players exhibit higher levels of commitment compared to Table Tennis players. The higher commitment in Badminton players could be attributed to the sport's longer game duration and higher physical demand, which might foster a greater sense of dedication. Supporting this, a study by Scanlan et al. (1993) found that athletes in endurance sports often report higher levels of commitment due to the sport's demanding nature.

CONCLUSION

Within the limitations of this study, the findings suggest that badminton players exhibit a higher level of commitment to their sport. However, both badminton and table tennis analyzed demonstrate similar effects on controlling emotions, managing life, and facing challenges. This indicates that the type of sport an individual engages in can influence their psychological and behavioural responses in comparable ways. Further research could explore the underlying reasons for these differences and examine additional factors, such as training intensity and social support, that may contribute to these outcomes.

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