

# Psychological Dynamics in Sports: Exploring Motivation, Extrinsic Factors, and Anxiety Among Badminton Players

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## Abstract

The study delves into the psychological aspects of motivation and anxiety among football players, employing Deci and Ryan's Self-Determination Theory (1985) as the theoretical framework. This study offers a nuanced understanding of the psychological underpinnings of football players' motivation and anxiety, contributing to the broader understanding of self-determination theory in sports. The findings provide coaches, sports psychologists, and researchers with valuable information to tailor interventions that enhance intrinsic motivation while addressing anxiety concerns. Recognizing the interplay of intrinsic and extrinsic motivational factors is crucial for creating a supportive environment that nurtures players' psychological well-being and, consequently, their on-field performance. Amotivation, representing a lack of motivation, emerges as a noteworthy factor but remains within a moderate range, suggesting that, on average, players maintain a degree of motivation. The data also highlights the players' emotional state, as anxiety levels are assessed, with mean scores indicating a moderate level of anxiety. This psychological exploration provides valuable insights into the nuanced motivational landscape of football players, informing coaching strategies and player support mechanisms.

**Keywords:** Sports, Badminton, Psychological Dynamics, Motivation, Extrinsic Factors, Anxiety.

## 1. Introduction

Sports psychology has emerged as a pivotal field in understanding the intricate interplay between an athlete's psychological state and their athletic performance. Within this domain, the examination of psychological aspects such as motivation and anxiety has garnered significant attention. This paper delves into a comprehensive exploration of these psychological dimensions, drawing insights from a study that assessed intrinsic and extrinsic motivation, along with anxiety levels, among athletes.

The essence of sports lies not only in the physical prowess displayed on the field but also in the mental

fortitude that shapes an athlete's approach to their game. Motivation, a driving force that propels individuals to achieve their goals, holds particular significance in the sporting arena. Deci and Ryan's Self-Determination Theory (1985) categorizes motivation into intrinsic and extrinsic types, each influencing an athlete's engagement and persistence in their sporting endeavors (Deci and Ryan, 1985). The intrinsic motivation to know, to accomplish, and to experience stimulation reflects an athlete's internal desires, curiosity, and the thrill derived from the sport itself. On the other hand, extrinsic motivation, whether identified or introjected, emanates from external sources and may impact the athlete's behavior and commitment to varying degrees.

The study conducted on athletes involved a meticulous examination of these motivational aspects. The findings, as illustrated in the presented table, provide a nuanced understanding of the athletes' motivational landscape. Intrinsic motivation scores reflected a commendable mean across dimensions, indicating a generally high level of internal drive among the participants. The inclination toward experiencing stimulation suggests a collective zest for the dynamic and unpredictable elements that sports inherently offer. Extrinsic motivation, encompassing identified, introjected, and externally regulated motivations, shed light on the external factors influencing athletes. The scores within these categories demonstrated a balanced yet diverse spectrum of motivations. The athletes displayed a level of internalization of external motivations, emphasizing a connection between personal values and the sporting pursuits.

Intriguingly, the study also explored the presence of amotivation, representing a lack of motivation or a sense of helplessness. Amotivation refers to the absence of inherent drive to participate in an activity (Deci and Ryan, 1985), stemming from motivation that lacks self-determination (Markland and Tobin, 2010). The identified range in amotivation scores signifies the existence of athletes who may not derive a clear sense of purpose or direction in their sporting engagement. Understanding and addressing amotivation is crucial for sports psychologists and coaches, as it can significantly impact an athlete's commitment and performance

(Banerjee and Halder, 2021). Beyond motivation, the study delved into the psychological realm of anxiety, a pervasive element in the sports landscape. Anxiety, manifested in different forms such as cognitive and somatic, can either propel an athlete to heightened performance or impede their capabilities. The scores presented in the table capture the range of anxiety levels among the participants. The mean anxiety score of 22.96 indicates a moderate level, suggesting that athletes experience a certain degree of apprehension and arousal in the context of their sport.

Fundamentally, delving into the psychological dimensions of motivation and anxiety yields a comprehensive comprehension of the mental landscape navigated by athletes. The intricate balance between intrinsic and extrinsic motivations, coupled with the nuanced manifestation of anxiety, paints a vivid picture of the psychological dynamics at play in the realm of sports. As sports continue to evolve, insights from such studies become instrumental in tailoring effective interventions, training methodologies, and mental conditioning strategies to enhance athletes' well-being and performance. This psychological exploration provides valuable insights into the nuanced motivational landscape of football players, informing coaching strategies and player support mechanisms.

## 2. Research Methodology

### Selection of the Sample

This study chose 60 Badminton players from under the 19-age class in a state level. The grouping is completely founded on school date which is referenced in the birth register. Likewise, most of the subjects were from the working class and less was connected with the privileged family. Likewise, while making center around the eating routine level, it was observed that every one of the understudies are veggie lover and non - vegan in nature.

### Measurement of Criteria:

The chosen criterion measure for evaluating changes in Physical Fitness and Psychological Profile included various elements from multiple assessment models that significantly influenced the performance of badminton players. This section of the research study provides a comprehensive overview of the different aspects associated with these psychological parameters, detailing their descriptions, procedures, scoring methods, record-keeping, and the equipment utilized for measurement and recording.

### Psychological Variables:

This segment provides a comprehensive overview of the psychological parameters studied in the research,

including their descriptions, procedures, scoring, and the equipment used for measurement. The variables covered are:

#### I) *Motivation (SMS-28):*

Description: The motivation level of participating players was measured using the Sport Motivation Scale (SMS-28), designed to assess various motivational elements.

Procedure: Players were given a questionnaire with 28 questions, allowing them to choose from seven response options in the subscale structure. The questions delved into the reasons for players' engagement in the sport, exploring various types of motivation. The responses, covering seven subscale parameters, were recorded for each player.

Record: Recorded responses provided information on players' motivation levels across different subscales.

Equipment: The Sport Motivation Scale (SMS-28) Questionnaire

#### II) *Anxiety (SCAT Test):*

Description: The anxiety level of participating players was measured using the SCAT questionnaire.

Procedure: Players were given a questionnaire with 15 questions, and there was no specific time limit for responses. The questions were designed to assess how players perceive the game. The scoring involved assigning marks to each response, and the total score determined the SCAT score for each player.

Record: Scores were recorded based on players' responses, providing insight into their anxiety levels.

Equipment: SCAT questionnaire

### Statistical Approach:

Selective statistical tests were carried out analyzing the data collected from the profiles of participating players using various statistical parameters, including mean, standard deviation, skewness, kurtosis, and correlation among variables. Raw scores obtained from questionnaires, anthropometric measurements, physical tests, and physiological measurements will be transformed into an understandable format. Descriptive technique was employed to analyze the data. Statistical tools refer to the instruments applied for collecting, analyzing, and presenting the vast dataset. The utilization of these tools aims to identify patterns and trends among the participating respondents, offering valuable insights for the research study. In the ongoing exploration of the Psychological profiles of badminton players, mean scores were employed as a key statistical tool. This approach ensures precise measurement across all variables associated with the study.

### 3. Results and Discussion

The Spearman rank-order correlation values, indicating the relationship between selected achievement motivation characteristics and the performance score of top-level badminton players, are clearly presented in Table 1. The findings reveal a significant association for Intrinsic Motivation (IM) to know, with Extrinsic Motivation (EM) acknowledging the need for external regulation. However, no correlation is observed between IM To Experience Stimulation and EM Contributed. The correlation coefficients for IM To Know, IM To Accomplish, EM Identified, EM External Regulation,

Amotivation, and Total Achievement Motivation Score with the performance score are 0.916, 0.797, 0.784, 0.911, 0.829, and 0.954, respectively. These coefficients are found to be significant at the 0.05 level, highlighting the noteworthy relationships between the specified achievement motivation factors and the badminton performance of high-level players. This displays the Spearman order-ranking correlation, providing a comprehensive overview of the relationships between various motivation factors and the performance of top-level badminton players.

Table 1. Spearman Order Ranking Correlation between selected Achievement motivation factors and the badminton performance of high-level players

S. No.	Parameters	$r_s$
1	IM To know	0.916**
2	IM To accomplish	0.797**
3	IM To experience stimulation	0.221
4	EM identified	0.784**
5	EM interjected	0.130
6	EM external regulation	0.911**
7	A motivation	0.829**
8	Total	0.954**

\*\*Correlation is considerable 0.05 level

Table 2. distinctly presents the Spearman rank-order correlation values among selected achievement motivation variables and the performance score of low-level badminton players. The findings reveal a significant relationship for Extrinsic Motivation (EM) identified, EM contributed, and the Total Achievement Motivation Score with correlation coefficients of 0.689, 0.720, and 0.769, respectively. These values are deemed

significant at the 0.05 level. However, no significant correlation is observed for Intrinsic Motivation (IM) To Know, IM To Accomplish, IM To Experience Stimulation, EM External Regulation, and Amotivation. Table 4.5.1(d) provides a comprehensive overview of the Spearman order-ranking correlation, elucidating the relationships between various achievement motivation factors and the badminton performance of low-level players.

Table 2. Spearman Order Ranking Correlation between selected Achievement motivation factors and the badminton performance of low-level players

S. No.	Parameters	$r_s$
1	IM To know	0.316
2	IM To accomplish	0.193
3	IM To experience stimulation	0.329
4	EM identified	0.689**
5	EM interjected	0.720**
6	EM external regulation	0.129
7	A motivation	0.283
8	Achievement Motivation Total	0.769**

\*\*Correlation is considerable 0.05 level

Table 3 clearly presents the Spearman rank-order correlation values between the performance score of high-level badminton players and selected anxiety variables. The correlation coefficients are 0.943, 0.822, 0.811, and 0.984 for Somatic, Cognitive, Self-Confidence, and Anxiety Total Score, respectively. These values are deemed significant at the 0.05 level, indicating a strong relationship between the mentioned anxiety factors and the performance score. The Spearman order-ranking correlation, as illustrated in Table 4.5.1(e), provides valuable insights into the interplay between anxiety factors and the badminton performance of high-level players.

Table 3. Spearman Order Ranking Correlation between selected Anxiety factors and the badminton performance of high-level players

S. No.	Parameters	$r_s$
1	Somatic	0.943**
2	Cognitive	0.822**
3	Self confidence	0.811**
4	Anxiety Total	0.984**

\*\*Correlation is considerable 0.05 level

Table 4. Displays the Spearman rank-order correlation values between the performance score of low-level badminton players and selected anxiety variables. Notably, significant relationships are observed for the Cognitive and Anxiety Total Score, with correlation coefficients of 0.672 and 0.782, respectively, significant at the 0.05 level. However, there appears to be no relationship between the Somatic and Self-Confidence variables and the performance score. The correlation analysis sheds light on the nuanced connections between specific anxiety factors and the badminton performance of low-level players.

Table 4. Spearman Order Ranking Correlation between Selected Anxiety Factors and Badminton Performance of Low-Level Players

S. No.	Parameters	$r_s$
1	Somatic	0.223
2	Cognitive	0.672**
3	Self confidence	0.238
4	Anxiety Total	0.782**

The correlation analysis underscores the intricate relationship between motivation, anxiety, and badminton performance. For high-level players, intrinsic motivation

and specific extrinsic motivators significantly impact performance, while anxiety factors also play a pivotal role. The findings suggest tailored interventions focusing on motivation and anxiety may enhance badminton players' performance across skill levels. Abou Elmagd (2016) demonstrated that sport psychology is a valuable resource for both professional and amateur athletes, aiding them in addressing challenges, optimizing performance, and attaining their objectives. Beyond the sports arena, sports psychology extends its benefits to a broader audience. It is instrumental in fostering successful performance across various sports, empowering athletes to excel, manage competition pressures, recover from injuries, maintain consistent exercise routines, and derive enjoyment from their sporting endeavors. This conceptual paper aims to explore the overarching psychological factors influencing athletes' performance and sports engagement.

Ruffault et al. (2020) examined the impact of gender, expertise, training status before and during lockdown, and injury availability on anxiety and motivation to return to sport in 759 competitive athletes. Findings reveal higher anxiety scores in females, younger athletes, and those without a training program during lockdown. Older athletes, experts, and those at a lower competition level show lower motivation scores. Injured participants at the lockdown's onset report higher cognitive anxiety. The study suggests external pressures on elite athletes to return during lockdown and highlights the potential benefits of a structured training program in reducing anxiety and fostering self-determined motivation for sport resumption. A study carried out by Sengupta and Mukherjee (2021) examined perceived autonomy support and sport motivation in three badminton player groups, indicate that the environment is more autonomy-supportive for recreational and potential players than established players. Potential players show higher intrinsic motivation. These findings can inform tailored motivational interventions for mental health issues in Indian sports, enhancing players' psychological well-being and performance. This analysis reveals the intricate relationship between motivation, anxiety, and badminton performance, emphasizing the significant impact of intrinsic motivation and specific extrinsic motivators for high-level players. Tailored interventions addressing motivation and anxiety may enhance performance across skill levels.

#### 4. Conclusion

The Spearman rank-order correlation analysis reveals significant associations among achievement motivation,

anxiety variables, and badminton performance. For high-level players, strong correlations exist for Intrinsic Motivation (IM) to Know (0.916), Extrinsic Motivation (EM) identified (0.784), EM External Regulation (0.911), and Total Achievement Motivation Score (0.954). Conversely, low-level players show significant correlations for EM identified, EM contributed, and Total Achievement Motivation Score (0.689, 0.720, and 0.769, respectively), with no significant correlations for Intrinsic Motivation (IM) factors and Amotivation. Regarding anxiety, high-level players exhibit strong correlations between Somatic, Cognitive, Self-Confidence, Anxiety Total Score, and performance (0.943, 0.822, 0.811, and 0.984, respectively). In low-level players, significant correlations are observed for Cognitive and Anxiety Total Score (0.672 and 0.782), indicating the impact of anxiety on performance. These correlations offer nuanced insights into the intricate relationships between motivation, anxiety, and badminton performance, providing considerations for tailored training and support strategies across skill levels.

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