

Relationship Between Competitive Anxiety and Performance in Badminton Players

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Abstract— The purpose of the study was to investigate the relationship between competitive anxiety and performance among 20 male inter-collegiate badminton players. The players' ages ranged from 18 to 23 years. They belonged to Seth Girdhari Lal Bihani S.D. P.G. College, Sri Ganganagar, Rajasthan. A correlational descriptive design was employed. Using the Sport Competition Anxiety Test (SCAT), competitive anxiety was measured before and after tournament matches. Performance scores were calculated based on official competition results. The Pearson product-moment correlation was used at the 0.05 level. Mean anxiety significantly decreased from pre-competition 29.3 ± 3.2 to post-competition 23.7 ± 2.9 . A very strong negative correlation ($r = -0.68$, $p = 0.001$) was found between pre-competition anxiety and performance. Likewise, a medium negative correlation ($r = -0.52$, $p = 0.020$) was found between post-competition anxiety and performance. Results indicate that more competitive anxiety leads to worse badminton performance. When athletes are taught to use relaxation, imagery, emotional regulation, and self-confidence techniques as a part of regular coaching, they may be able to perform under pressure.

Keywords—badminton, competitive anxiety, SCAT, sport performance, self-confidence.

I. INTRODUCTION

The effectiveness of modern sport performance currently depends on the synergistic application of the above disciplines. Anxiety is crucial in sport psychology as it can affect concentration, confidence, emotional control, decision-making,

and the execution of learned motor skills under pressure [7], [8].

Competitive anxiety denotes the mental and emotional response that an athlete experiences when he/she perceives an event as threatening. Symptoms one may experience include tension, worry and fear of failure. It can also occur due to reductions in confidence and autonomic arousal. Competitive anxiety is more of a sports-specific construct that can influence how an athlete interprets competition (Martens, Vealey and Burton, 1990) [1]. Contemporary models further suggest that not only the intensity of anxiety but also the athlete's interpretation and regulation of that anxiety determine performance [9], [10].

Badminton requires a lot of speed, agility, anticipation, visual focus, quick decisions, and emotional stability. Rallies are so rapid that small technical errors can determine the outcome of the match. Excessive anxiety, on the other hand, can compromise timing and coordination of movements and tactical judgment and shot selection. Research studies through competitive sport have generally presented an inverse relationship between poorly regulated anxiety and performance [2]–[6].

The increasing use of sport psychology is well recognized; however, little evidence is available regarding the relationship between competitive anxiety and objectively obtained performance scores among Indian intercollegiate badminton players. The current research therefore explored the link between pre-competition anxiety, post-competition anxiety, and performance of male badminton players aged 18–23 years. It was hypothesized that there

exists a significant negative association between competitive anxiety and performance.

II. RELATED LITERATURE

According to research by Martens et al., competitive anxiety is a sport-specific psychological quality with reliable measurement [1]. Mottaghi et al. subsequently reported that the relationship between competitive anxiety and performance is meaningful and of practical importance to athletes and coaches [2].

Comparative studies also show that anxiety levels differ across sports, levels of competition, and player groups. Rastogi and Katiyar evaluated sport competition anxiety among college players [3] and Biswas et al. studied competitive anxiety among national players of cricket and shuttle [5]. Uncontrolled anxiety can have a negative impact on one's attention, confidence and athletic performance [4], with a difference in effect for male players compared to female badminton players [6].

The literature on applied sport psychology suggests that athletes enhance through psychological skills training their capacity for interpreting arousal more constructively and regulating cognitive and somatic symptoms [7], [8]. According to [9] and [10], performance anxiety can happen with 3D and directional approaches, and anxiety may be facilitative or debilitating according to confidence, perceived control, and interpretation of the situation. Theoretical basis for viewing anxiety and badminton competition before and after the opponent's show.

III. METHODOLOGY

A. Research Design and Participants: The design does describe correlational research. The male badminton players selected as the sample for the study were taken from Seth Girdhari Lal Bihani S.D. P.G. College, Sri Ganganagar, Rajasthan. The players' ages ranged from 18 to 23 years. Using simple random sampling, participants were selected from the players participating in inter-collegiate

tournaments for the academic sessions 2024-25 and 2025-26.

B. Instrument: Competitive anxiety was measured using the Sport Competition Anxiety Test (SCAT) developed by Rainer Martens [1]. The instrument contains 15 items, of which 10 contribute to the anxiety score and five act as filler items intended to reduce response bias. The scored items were 2, 3, 5, 6, 8, 9, 11, 12, 14, and 15. Higher total scores indicated greater competitive anxiety.

C. Data-Collection Procedure: The researcher personally administered the questionnaire at the competition venue. Participants were instructed to answer independently and honestly, with confidentiality and anonymity ensured. Assessment of anxiety was done right before and after the match. The performance scores were determined from the official match results using the scoring system used in the study.

D. Statistical Analysis: Descriptive statistics for pre-competition, post-competition anxiety and performance were calculated. Pearson's product-moment correlation was employed to assess the relationship between anxiety and performance. Statistical significance was evaluated at $\alpha = 0.05$.

IV. RESULTS

TABLE I
DESCRIPTIVE STATISTICS OF
COMPETITIVE ANXIETY AND
PERFORMANCE

Variable	N	Mean	SD	Range
Pre-comp. anxiety	20	29.3	3.2	24–34
Post-comp. anxiety	20	23.7	2.9	19–29
Performance score	20	75.2	5.8	66–85

As shown in Table I, mean pre-competition anxiety was 29.3 ± 3.2 , whereas mean post-competition anxiety was 23.7 ± 2.9 . This represents a mean reduction of 5.6 points, or approximately 19.1% relative to the pre-competition mean. Performance

scores ranged from 66 to 85, with a mean of 75.2 ± 5.8 .

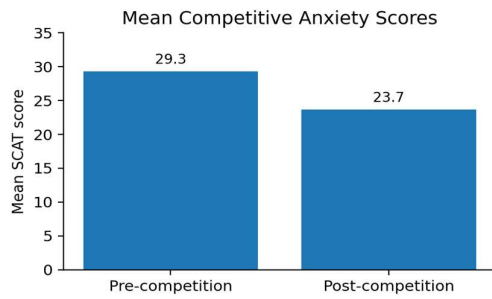


Fig. 1. Mean pre-competition and post-competition anxiety scores.

TABLE II
PEARSON CORRELATIONS BETWEEN ANXIETY AND PERFORMANCE

Relationship	r	p	Decision
Pre-anxiety–performance	−0.68	0.001	Significant
Post-anxiety–performance	−0.52	0.020	Significant

Table II shows statistically significant negative correlations between competitive anxiety and performance. Pre-competition anxiety had a strong negative relationship with performance ($r = -0.68$, $p = 0.001$), while post-competition anxiety had a moderate negative relationship ($r = -0.52$, $p = 0.020$). Therefore, the null hypothesis of no significant relationship was rejected. The magnitude of the pre-competition correlation indicates that anxiety experienced before the match was more strongly associated with performance than anxiety measured after participation.

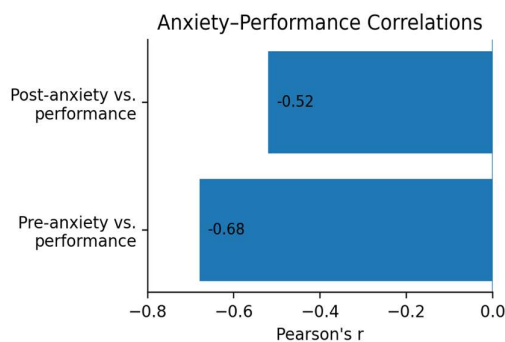


Fig. 2. Correlation coefficients for competitive anxiety and badminton performance.

V. DISCUSSION

Results indicate competitive anxiety has an inverse relationship with badminton performance. Players with greater anxiety scores tended to get lower performance scores. The result corresponds to the finding that a high level of cognitive worry and somatic arousal decreases attentional control, confidence, coordination, and decision quality when competing [2], [4], [7], [9]. In badminton, these effects may emerge as mistimed strokes, poor tactical decisions, hesitation, or a greater occurrence of unforced errors.

The stronger association identified with pre-competition anxiety stresses upon pre-match timing. Before play takes place, one's attentional resources may become consumed with worry of anticipation, fear of failure, and uncertainty with the opponent. The anxiety directional approaches indicate that if an athlete interprets one's arousal as controllable or a performance enhancer, one will cope better than an athlete who interprets those same symptoms as threatening [10].

The decrease of post-competition anxiety mean should not be interpreted as evidence that competition per se lowers trait anxiety. Rather it outlines the immediate difference between the two assessment occasions in this sample. Although match completion may clarify uncertainty, post-match reactions can also emanate from the outcome, satisfaction, fatigue and hindsight.

VI. LIMITATIONS

The limited sample (only male and comprised a single college) restricts the study. The correlational design does not imply causality, whereas the performance-score calculation was unique to the competition procedure used in this study. The study did not control for potential confounders, including playing experience, skill level, opponent strength, match importance, sleep, and prior psychological training. Further research should utilize larger and more diverse samples, report instrument reliability,

standardize performance measures, and apply repeated measures or multivariate models.

VII. CONCLUSION

The selected intercollegiate male players have a significant negative association between competitive anxiety and badminton performance. Before competition, the association was stronger than after competition, indicating that psychological readiness before the match may be key. This result supports the inclusion of anxiety management, emotion regulation, and confidence-building strategies in badminton coaching.

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