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COMPARATIVE STUDY OF ANXIETY LEVEL OF MALE AND FEMALE BOXERS PARTICIPATED IN THE NORTH EAST GAMES 2024

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Abstract

The pre-competition anxiety level of the players plays a role in the performance of the boxers. This study was conducted on the comparative study of the anxiety level of male and female boxers who participated in the North East Games 2024. This study aims to perform the analysis of pre-competition anxiety levels in both male and female boxers. For the purpose of the study, the sample comprises a total of 30 boxers, male (n=15) and female (n=15), who were selected using convenience sampling. For the purpose of data collection, the Sports Competition Anxiety Test (SCAT) Questionnaire was used. The result, which was analyzed by using statistics, indicated a significant difference between male and female boxers in the pre-competition anxiety level. The t-value (t=3.465) shows that there is a significant difference between the male and female boxers (where p=0.001<0.05). The p-value is less than the 0.05 level of significance. The result shows that the female boxers have higher pre-competition anxiety levels than the male boxers who have participated in the North East Games 2024. From the result, it is found that the anxiety level of female boxers has a higher mean difference of (μd=4.067).

Keywords: *Pre-competition anxiety, Sports psychology, Boxing, Gender differences, Sports Competition Anxiety Test (SCAT)*

Introduction

Boxing is a combat sport where two opponents use their fists to score points or achieve a knockout while wearing padded gloves. Matches are divided into rounds, typically lasting three minutes with one-minute intervals, aiming to land clean punches on the opponent's body or head (Weinberg & Gould, 2015). The ultimate goal is to outscore the opponent through judges' points or to render them unable to continue. The sport demands high physical fitness, encompassing constant movement, punching, footwork, coordination, and weight management (Ford, 2017). Safety measures, including protective gear and supervision by trained coaches, are crucial to minimizing injuries. Boxing's rules have evolved, beginning with "The Rules of the London Prize Ring" in 1838, which standardized ring size and combat regulations. The Marquis of Queensbury further refined these rules in 1866, promoting amateur boxing

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competitions (Davison, 2008). Historically, boxing was a measure of strength, second only to horse racing in popularity. Anxiety plays a significant role in sports, including boxing, affecting performance through cognitive and physiological pathways (Bouras & Holt, 2007). Anxiety triggers stress responses, releasing cortisol and adrenaline, which can enhance or impair physical capabilities (Robinson et al., 2019). Techniques like mindfulness and cognitive-behavioral approaches are effective in managing sports-related anxiety (Nakao et al., 2021). Athletes benefit from structured training, psychological support, and strategic pre-performance rituals to manage anxiety and improve performance (Patel et al., 2010; Mola et al., 2025). Coaches and sports psychologists are pivotal in fostering mental resilience and ensuring the holistic well-being of athletes (Miceli & Castelfranchi, 2014). Boxing remains a testament to human endurance and skill, embodying both physical prowess and mental fortitude.

Statement of Problem

This research study aimed to determine the anxiety level of boxers who participated in the North East Games 2024. In many reviews of related literature about the study, it has been found that anxiety has an enormous prominent effect on performance.

Objectives of the Study

a. To assess the competition anxiety of boxers before the bout, at the 3rd North East Games 2024, which was held in Nagaland from March 18 to March 23, 2024.
b. To examine gender differences in anxiety among boxers.

Hypotheses

There will be a significant gender difference in anxiety levels among boxers.

Research Questions

a. How will competition anxiety affect a boxer's performance?
b. Will there be any difference in the performance of boxers with low competition anxiety and high competition anxiety?
c. Is there a gender difference in the anxiety levels of boxers?

Significance of the Study

This research aims to assess the effect of competition anxiety levels on boxers before a bout. According to reviews of related research, if anxiety levels are high, performance levels tend to be low; if anxiety levels are low, performance levels tend to be high. This study will help the researcher understand boxers' anxiety levels. Any minor disturbance caused by anxiety can affect a boxer's performance. Therefore, it is necessary to study the anxiety levels of boxers and explore interventions that could help them manage this anxiety. If such anxiety exists, this study will contribute to understanding how it can be managed in boxing. There are very few studies that have explored the impact of anxiety among boxers, which the researcher finds necessary to examine. Additionally, while many studies have focused on the anxiety levels of boxers and their effects on performance, fewer studies have specifically examined anxiety levels before a bout. The findings of this study will contribute to a better understanding of anxiety in boxing and provide valuable data on boxers' anxiety levels.

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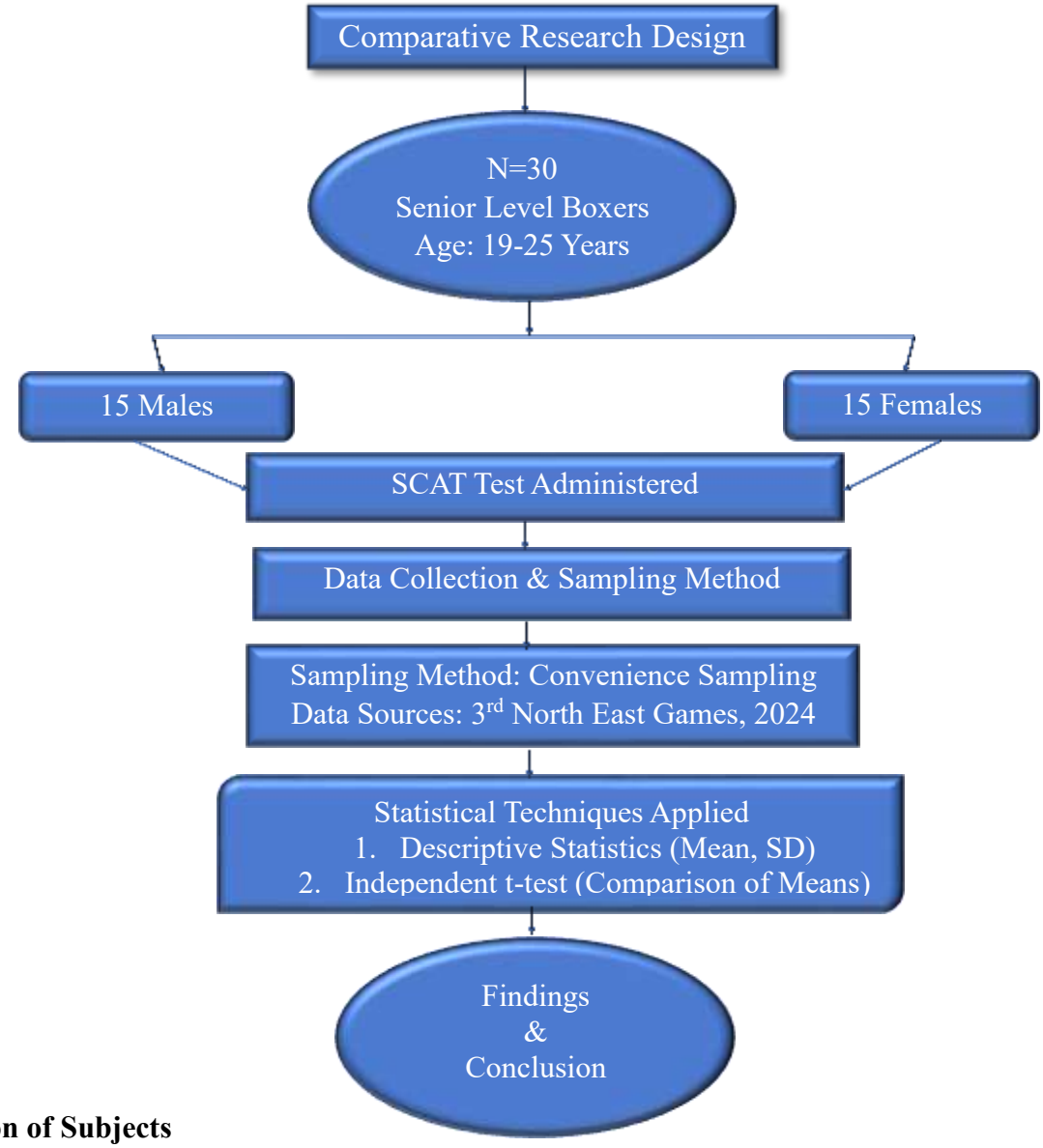
Methodology

Research Design



Selection of Subjects

For this study, a total of 30 boxers (15 males and 15 females) aged 19 to 25 years, were selected from the North East Games 2024. The sample criteria included national-level senior players. Convenience sampling was used for sample selection.

Selection of the Variable

The variable selected for this study was sports competition anxiety, measured using the Sports Competition Anxiety Test (SCAT), a standardized tool developed by Martens (1977).

Criterion Measures Assessed by SCAT

1. **Pre-Competition Trait Anxiety:**

Assesses a player's general tendency to experience anxiety before or during a sports competition**.**

2. **Cognitive Anxiety (Worry):**

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Measures thoughts related to fear of failure, self-doubt, and worry about performance outcomes.

3. **Somatic Anxiety (Physiological Response):**

Evaluates physical symptoms of anxiety, such as increased heart rate, sweating, muscle tension, and nausea before competition.

4. **Overall Anxiety Score:**

The SCAT provides a single composite score that represents the athlete's competitive trait anxiety level.

Higher scores indicate greater anxiety, while lower scores indicate a more relaxed response to competition.

SCAT Evaluation and Scoring

The Sports Competition Anxiety Test (SCAT) consists of 15 statements, 10 of which measure symptoms associated with anxiety, while the remaining five are not scored to reduce the likelihood of an internal response-set bias. The scores for the 10 measured statements are summed to provide an overall anxiety measure, with a higher score indicating a greater tendency to experience competitive anxiety. A score of less than 17 indicates a low level of anxiety, a score between 17 and 24 indicates an average level of anxiety, and a score above 24 indicates a high level of anxiety.

Tools for Collecting Data

The Sports Competition Anxiety Test (SCAT) questionnaire, developed by Martens in 1977, takes approximately 10 to 15 minutes to complete. This test was used to assess and evaluate the anxiety levels of male and female boxers. The questionnaire consisted of statements that players used to describe themselves. Before distributing the questionnaire, the research scholar explained the purpose of the study and provided instructions on how to complete it.

Administration of the SCAT Questionnaire (Martens, 1977)

The Sports Competition Anxiety Test (SCAT), developed by Martens (1977), is administered in a structured manner to ensure the accurate assessment of an athlete's competitive trait anxiety. The process begins with the researcher or test administrator explaining the purpose of the questionnaire and providing clear instructions on how to respond. Participants are informed that the questionnaire consists of 15 statements designed to assess their anxiety levels in sports competition, with responses recorded on a 3-point Likert scale (Hardly Ever, Sometimes, Often). Additionally, five filler questions are included to minimize response bias. The questionnaire is then distributed to the athletes 40–45 minutes before the bout, and they complete it individually in a quiet setting within 10 to 15 minutes. Once completed, the questionnaires are collected for scoring, where higher SCAT scores indicate greater levels of competitive anxiety. The results help categorize athletes into low, moderate, or high anxiety levels, aiding coaches, sports psychologists, and researchers in developing appropriate mental training strategies. Throughout the administration process, ethical considerations such as maintaining confidentiality and ensuring voluntary participation are upheld to create a safe and supportive assessment environment.

Statistical Analysis

To assess the significant difference in selected variables between males and females, the following statistical techniques were applied at a significance level of 0.05.

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1. Descriptive Statistics
2. Independent t-test

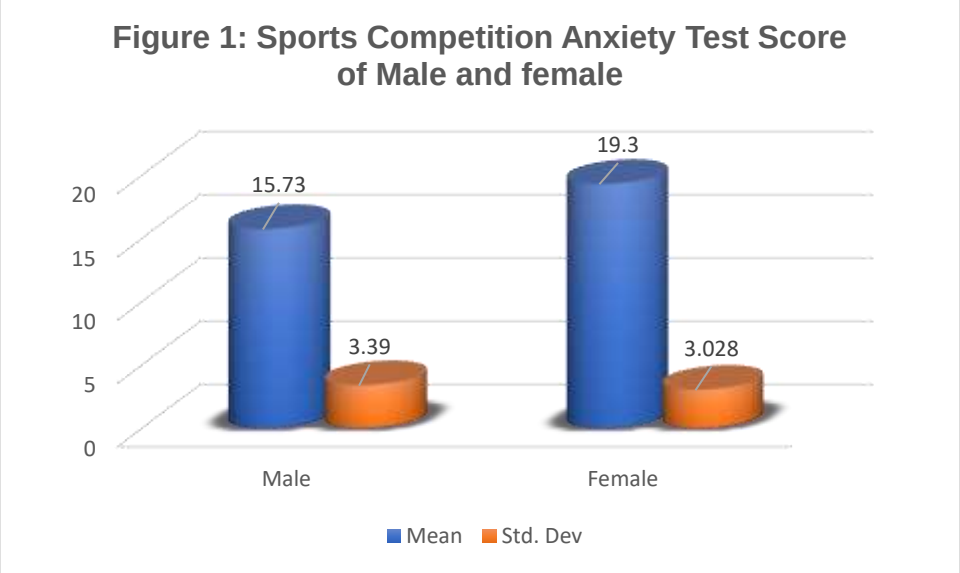
Results

Table 1.1: **Independent Sample t-test Results for Sports Competition Anxiety (SCAT)**

Variable	Male		Female		t (28)	p	Cohen's d
	M	SD	M	SD			
SCAT	15.7	3.39	19.8	3.028	3.465	.001	1.265

Mean significant at a .05 level

Along with descriptive statistics, the p-value and Cohen's d were included to assess the effect size of any significant differences obtained. Mean values for each analysis are presented for females (n = 15) and males (n = 15), along with the results of tests (assuming equal variance) comparing SCAT score estimates between the two genders.



The data suggest that female athletes tend to experience higher anxiety levels in competition sports than male athletes. However, the variation (standard deviation) is relatively similar for both genders, indicating that individual differences in anxiety levels are present but not drastically different between the groups.

Discussion of findings

Sports competition anxiety is a crucial psychological factor influencing athletic performance across various sports. This study provides valuable insights into how pre-competition anxiety impacts athletes, particularly in boxing and other combat sports. The study found a significant gender difference in anxiety levels among male and female boxers in the North East Games 2024, with a p-value of 0.05 confirming statistical significance. Alejo et al. (2020) suggest that high levels of anxiety negatively affect reaction time, decision-making, and overall performance. The study highlights the importance of psychological training in managing anxiety to enhance athletic outcomes. Arun Mozhi and Vinu (2019) indicate that female athletes

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tend to experience higher levels of competition anxiety compared to their male counterparts. These findings suggest that gender-based psychological interventions may be necessary to optimize performance across different sports disciplines. Fernandes et al. (2013) identified factors such as self-confidence, external pressure, and experience level as key determinants of anxiety. Athletes with higher self-confidence exhibited lower anxiety levels, reinforcing the role of mental conditioning in competitive sports. Gligor et al. (2021) suggest that athletes who struggle to manage anxiety effectively often experience performance declines, which, in turn, exacerbate their anxiety. The research emphasizes the need for early psychological interventions in student-athletes to prevent long-term negative effects. Hatzigeorgiadis and Chroni (2007) found that athletes with higher self-efficacy and positive coping mechanisms demonstrated lower levels of anxiety. This suggests that mental training programs focusing on self-confidence enhancement could be beneficial in managing pre-competitive anxiety. Jones and Hanton (2001) investigated how athletes interpret their anxiety before competitions. Their study found that successful athletes tend to perceive anxiety as a facilitative factor that enhances performance, whereas less experienced athletes often interpret anxiety as debilitating. This highlights the importance of cognitive appraisal in managing anxiety, reinforcing that athletes who develop a positive mindset toward competition stress may perform better under pressure. Kumar et al. (2017) found that athletes in contact sports (e.g., boxing, wrestling) tend to exhibit higher levels of intrinsic motivation compared to non-contact athletes. This may be attributed to the physical and psychological demands of contact sports, which require greater mental resilience and motivation. Lucibello et al. (2019) revealed that consistent training reduces anxiety responses, particularly in highly anxious individuals. This supports the notion that regular physical activity acts as a buffer against anxiety and can be an effective strategy for athletes to manage pre-competition stress. Malik (2019a) found that medallists exhibited higher self-confidence, focus, and emotional control, suggesting that psychological training is crucial for competitive success. In another study, Malik (2019b) found that while both genders displayed strong mental attributes, male boxers showed higher aggression and risk-taking tendencies, whereas female boxers demonstrated superior emotional regulation. Mojtahedi et al. (2023) found that athletes with higher mental toughness experienced lower levels of anxiety, as they were better equipped to handle competitive pressure. The research emphasized that psychological resilience, developed through structured mental training, plays a crucial role in mitigating anxiety and improving performance in high-stakes competitions. Nayek (2013) found that national-level athletes exhibited lower anxiety levels compared to their state-level counterparts, likely due to greater exposure to high-pressure situations and enhanced psychological preparation. This suggests that experience and psychological conditioning play a vital role in managing pre-competition stress. Phor (2014) found that elite-level boxers exhibited higher aggression and a stronger will to win, while their anxiety levels were lower compared to amateur boxers. This suggests that competitive experience and exposure to high-pressure situations contribute to better psychological regulation. Singh (2019) revealed that female boxers experienced higher anxiety levels than their male counterparts, possibly due to differences in social expectations, psychological coping mechanisms, and competition exposure. Singh and Paradhi (2021) found that boxers experienced slightly higher anxiety levels than wrestlers, likely due to the nature of the sport, which involves direct striking and quick decision-making. Singh et al. (2022) found that taekwondo players exhibited higher anxiety levels than judo players, potentially due to the greater emphasis on striking and speed in taekwondo compared to the grappling-focused nature of judo. These findings reinforce the idea that anxiety responses vary across combat sports, and psychological interventions should be tailored to the specific demands of each sport. Singh (2022) indicated that school-level

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boxers experience higher anxiety levels than college-level athletes, likely due to limited competition exposure and lower psychological preparedness. College-level boxers, with more experience in high-pressure situations, demonstrated better anxiety management strategies. Tazegul et al. (2015) found that boxing and taekwondo athletes exhibited higher anxiety levels than wrestlers and judokas. This may be due to the striking-based nature of boxing and taekwondo, which involves rapid decision-making and direct physical contact. In contrast, grappling-based sports like wrestling and judo involve a more controlled approach, leading to lower anxiety levels. Weinberg and Gould (2018) emphasize the relationship between arousal, stress, and performance, proposing that moderate levels of anxiety can enhance performance, while excessive anxiety can hinder it. They highlighted strategies such as goal setting, visualization, and relaxation techniques to manage competitive anxiety effectively.

Conclusion

Based on the results obtained through statistical analysis and considering the study's limitations, the following conclusions were drawn:

1. A significant difference in anxiety levels between males and females athletes was identified using the Sports Competition Anxiety Test (SCAT).

Ethical Consideration

The study was approved by the Institutional Human Ethical Committee of Manipur University, Canchipur, Imphal (India), under reference number MU/IHEC/2024/13, ensuring compliance with ethical guidelines for research involving human subjects. After data collection, participants were debriefed on the study's findings and the importance of their contributions and were offered resources or referrals for psychological support if needed.

Conflict of Interest Statement

The authors declare that they have no conflict of interest regarding the publication of this study.

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