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A comparative analysis of anxiety levels among male players in inter-collegiate basketball and weightlifting

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Abstract

The primary objective of this research was to conduct a comparative analysis of sports competition anxiety among male players participating in college-level Basketball and Weightlifting. To achieve this goal, a sample of sixty participants, comprising thirty each from Basketball and Weightlifting, was randomly selected for the study. The age of the participants ranged between 18 to 25 years. The instrument employed for measuring sports competition anxiety was the Sports Competition Anxiety Test (SCAT), developed by Martin Rainer in 1990. The SCAT questionnaire was administered to the subjects 30 minutes prior to the commencement of the competition.

The hypothesis posited for this study asserted that there would be no substantial difference in sports competition anxiety levels between Basketball and Weightlifting players. To scrutinize the data, an independent "t" test was employed, with the predetermined level of significance set at 0.05. The mean score obtained by Basketball players was 22.50, whereas Weightlifting players scored an average of 19.50. The computed "t" value of 3.95 indicated a noteworthy disparity between the anxiety levels of Basketball and Weightlifting players. It is noteworthy that the calculated "t" value of 3.95 exceeded the tabulated "t" value of 1.675, affirming the statistical significance of the observed difference.

Keywords: Basketball, weightlifting, sports competition anxiety test (SCAT), anxiety

Introduction

Engagement in sports serves as a crucible that refines and extracts the finest qualities inherent in every individual. The crucible of competition stretches every facet of the human form, be it physical or mental, to its utmost limits. In the contemporary landscape, the caliber of sports has witnessed a substantial elevation, and elite athletes find themselves grappling with the escalating challenge of maintaining their supremacy in their respective disciplines. Within this competitive arena, the mental state of a sports participant emerges as a pivotal determinant of their performance.

The onset of anxiety occurs when doubt infiltrates an individual's belief in their capacity to navigate a given situation, thereby giving rise to stress. Sports psychology, now a realm of profound study and research, delves into the intricate interplay between the mental and physical realms in the realm of sports. The heightened stakes of national and international competitions have precipitated a surge in anxiety-related challenges faced by athletes, positioning the game not only on the physical playing field but also on the intricate mental terrain.

In the dynamic landscape of sports, self-confidence, unwavering resolve, the humility to gracefully accept defeat, and the accumulation of experiential wisdom emerge as indispensable tools for mitigating the impact of anxiety. It is imperative to acknowledge that anxiety, far from being an ailment to be eradicated definitively, can function as a catalyst for performance enhancement, a driving force propelling athletes toward sporting glory.

Understanding the nuanced circumstances surrounding sports anxiety and actively working to mitigate its prevalence are paramount. The potential hazards of sports anxiety are multifaceted, as elucidated by Norton, Hope, and Weeks (2004)^[9]: "Given the myriad physical and psychological health consequences of a non-active lifestyle, valid assessment of social anxiety and avoidance in this domain is warranted." Identifying individuals grappling with sports anxiety is crucial, as their well-being may be compromised if left unaddressed.

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The domain of sports psychology, with its profound exploration and investigation, acknowledges that, particularly at intercollegiate, interuniversity, national, and international levels, the competitive landscape instigates a considerable array of anxiety-related issues. The game, in essence, unfolds on two realms—the tangible playing field and the intricate mental field. It is an established belief, backed by empirical evidence, that talent and innate ability can only propel an athlete to a certain threshold of achievement. Beyond this point, talent becomes a somewhat 'useless' attribute, potentially fostering pride, complacency, and ignorance. In contrast, it is those with a modest spark of talent coupled with unwavering diligence and stable mental fortitude who ascend to prominence in the realm of sports.

The contemporary sporting milieu places a premium on performance excellence, amplified by extensive media exposure. Sports, a global phenomenon, transcends the conventional boundaries of wealth or poverty, nationality, race, or religion. To meet the soaring expectations of fans and secure a commendable standing in intercollegiate, interuniversity, national, and international arenas, consistent and exceptional performance is imperative.

In navigating the complex web of sports-related challenges, the key to resilience lies in self-confidence, resolute determination, the humility to embrace defeat graciously, and the accumulation of experiential wisdom. Anxiety, rather than being a malady to be expunged definitively, should be harnessed as a propellant for performance enhancement and a conduit to attain the pinnacle of sporting achievement.

Anxiety

Anxiety is a psychological and physiological state characterized by somatic, emotional, cognitive, and behavioral components. It is the displeasing feeling of fear and concern. The root meaning of the word anxiety is 'to vex or trouble'; in either presence or absence of psychological stress, anxiety can create feelings of fear, worry, uneasiness, and dread. Anxiety is considered to be a normal reaction to a stressor. It may help an individual to deal with a demanding situation by prompting them to cope with it. When anxiety becomes excessive, it may fall under the classification of an anxiety disorder.

Definitions

1. Anxiety define as a emotional reaction evoked by stimulus that is perceived as threatening.
2. A negative emotional state with feelings of nervousness, worry and apprehension associated with activation or arousal of the body. (Weinberg & Gould)
3. According to one dictionary definition, anxiety can be defined as a strong and unpleasant feeling of nervousness or distress in response to a feared situation, often accompanied by physiological effects such as nausea, trembling, breathlessness, sweating, and rapid heartbeat.

Effect of Anxiety

The physiological manifestations of anxiety encompass a spectrum of effects on the body, spanning heart palpitations, muscle weakness and tension, fatigue, nausea, chest pain, shortness of breath, stomach aches, to headaches. As the body mobilizes to confront a perceived threat, there is an escalation in blood pressure, heart rate, perspiration, and blood flow to major muscle groups. Concurrently, immune and digestive functions undergo inhibition, marking the activation of the fight or flight response. Observable external indicators of

anxiety may manifest as sweating, trembling, and pupillary dilation. On a subjective level, individuals grappling with anxiety may experience an overwhelming sense of dread or panic.

Emotionally, anxiety contributes to a complex array of effects, including feelings of apprehension or dread, difficulty concentrating, heightened tension or restlessness, anticipation of negative outcomes, irritability, and a vigilant, watchful demeanor for signs of danger. Emotional symptoms extend to nightmares, obsessions, and a sense of mental blankness.

Cognitively, anxiety is characterized by intrusive thoughts revolving around perceived threats, such as an intense fear of mortality where innocuous sensations may be misconstrued as life-threatening.

Behaviorally, anxiety may prompt withdrawal from situations that have previously elicited anxiety, indicating a proclivity for avoidance. It can manifest in altered sleep patterns, the adoption of nervous habits, and heightened motor tension like foot tapping.

Defined as a state of mental unease or concern, anxiety induces both physical and psychological discomfort. Its extreme form disrupts behavior, diminishing concentration and impairing muscular control. In the context of sports, any game or competition holds the potential to evoke anxiety, particularly when one perceives a misalignment between their abilities and the demands of the task at hand.

Trait Anxiety

Trait anxiety refers to a general level of stress that is characteristic of an individual, that is, a trait related to personality. Trait anxiety varies according to how individuals have conditioned themselves to respond to and manage the stress. What may cause anxiety and stress in one person may not generate any emotion in another. People with high levels of trait anxiety are often quite easily stressed and anxious.

State anxiety

State anxiety is characterised by a state of heightened emotions that develop in response to a fear or danger of a particular situation. State anxiety can contribute to a degree of physical and mental paralysis, preventing performance of a task or where performance is severely affected, such as forgetting movements during a dance or gymnastic routine, to breaking in sprint or swim starts or missing relatively easy shots at goal i.e. pressure situations.

For some athletes sports anxiety can be a valuable motivator, e.g., contact sports such as rugby, whereas other sports require a very low level of anxiety for successful performances, e.g. archery, pistol shooting.

Athletes can learn to manage anxiety using techniques such as relaxation, hypnotherapy, cognitive behaviour therapy and positive thinking. For state anxiety, therapies focus on the specific situations causing stress to the athlete whereas Trait anxiety requires a broader approach.

Sports and performance anxiety often go hand-in-hand. Have you ever "choked" during an important sporting event or felt your nerves get in the way of your athletic performance? While many athletes become "pumped up" during competition, when the rush of adrenaline is interpreted as anxiety, and negative thoughts begin to swirl, it can have devastating effects on your ability to perform. Before you learn how to manage the symptoms of anxiety during competitions, it is important to understand the relationship between anxiety and athletic performance.

Exploring the Dynamics of the Relationship between Anxiety and Athletic Performance

The interplay between anxiety and athletic performance is a nuanced and intricate aspect of the sporting realm. Anxiety, whether experienced before or during competitions, can exert a profound influence on an athlete's ability to perform optimally. The intricate coordination required in athletic endeavors becomes notably challenging when the body is ensconced in a state of tension. While a certain degree of physical arousal is deemed beneficial, gearing individuals up for the competitive arena, an excess of anxiety-induced physical symptoms may significantly impede their capacity to compete effectively.

Furthermore, an optimal level of concern about one's performance can serve as a constructive factor in competition. However, when cognitive symptoms of anxiety manifest as pervasive negative thought patterns and an expectation of failure, a self-fulfilling prophecy may ensue. A discernible contrast between performance levels in practice and competition may be indicative of the deleterious impact of anxiety on athletic prowess.

Various factors contribute to the nuanced effect of anxiety on athletic performance. Notably, novice athletes are more susceptible to anxiety-related performance hindrances compared to seasoned professionals, given their relative lack of experience in both competitive settings and managing arousal. Athletes engaged in individual sports tend to grapple with heightened anxiety in contrast to their team-sport counterparts, with the communal aspect of team involvement seemingly alleviating some of the pressure inherent in solitary competition. Additionally, evidence suggests that anxiety levels tend to soar during "away" games in team sports, emphasizing the impact of fan support and venue familiarity on the athlete's psychological state.

Delving into the realm of those who thrive under pressure versus those who falter, research underscores the pivotal role of self-confidence. Elite athletes exhibit a proclivity for interpreting arousal not as anxiety but as excitement, channeling it into a positive force that enhances their performance. Confidence, reaching its zenith when rooted in belief in one's abilities and thorough preparation, tends to supplant worry in the athlete's mindset.

To manage anxiety related to athletic performance, a repertoire of strategies can be employed, including visualization, progressive muscle relaxation, and cognitive restructuring. However, if anxiety symptoms persist and resist amelioration through self-help approaches, seeking professional guidance from a healthcare provider becomes imperative, as it might signify a more complex condition, such as Social Anxiety Disorder (SAD), requiring specialized treatment.

Measurement of anxiety in sports

Sport Competition Anxiety Test

Conducting an assessment of an athlete's anxiety level in a competitive setting involves analyzing their responses to a set of statements about their emotional state. The Sport Competition Anxiety Test (SCAT), as developed by Martens *et al.* in 1990, serves as a comprehensive tool for this purpose.

Essential Resources

Questionnaire

Utilize the Sport Competition Anxiety Test (SCAT) questionnaire, which comprises a series of statements probing the athlete's emotional and psychological responses in

competitive scenarios. The questionnaire, designed by Martens and colleagues, offers a structured format to gauge the individual's anxiety levels during sports competitions.

Sample SCAT Questionnaire

Please rate how you feel in the given situations on a scale of 1 to 5, where 1 is 'Not at all' and 5 is 'Extremely.'

- I worry about my performance.
- I feel jittery before the competition.
- I am concerned about making mistakes.
- I am confident in my ability to perform well.
- I experience physical tension during competitions.

(Continue with additional statements)

Assistant

Enlist the support of an assistant who will facilitate the administration of the questionnaire and record the athlete's responses. The assistant should ensure a conducive environment for the athlete to candidly express their feelings, maintaining confidentiality and minimizing external distractions.

Testing Procedure

Introduction

Begin by explaining the purpose of the test to the athlete, emphasizing the importance of honest and reflective responses. Assure them of the confidentiality of their answers.

Questionnaire Administration

Present the SCAT questionnaire to the athlete, guiding them through each statement. Encourage thoughtful consideration and ask them to rate their feelings on the provided scale.

Recording Responses

The assistant should systematically record the athlete's responses, ensuring accuracy in capturing the perceived anxiety levels for each statement.

Data Analysis

Collate and analyze the responses to gain insights into the athlete's anxiety profile. Focus on key indicators such as worries about performance, physical tension, and confidence levels.

Interpretation

Utilize the established scoring system of the SCAT to interpret the athlete's anxiety level. Higher scores may indicate heightened anxiety, necessitating further consideration in training and psychological support.

Conclusion

The Sport Competition Anxiety Test (SCAT), coupled with an attentive assistant, facilitates a thorough analysis of an athlete's anxiety responses. This information is integral for devising tailored strategies to enhance performance and well-being in competitive sports.

How to conduct the test

The assistant explains the test protocol to the athlete:

1. Read each statement below, decide if you "Rarely", "Sometimes" or "Often" feel this way when competing in your sport, and tick the appropriate box to indicate your response.
2. The athlete responds to the 15 questions on the questionnaire below - no time limit

3. The assistant determines and records the athlete's SCAT score

Analysis

Analysis of the result is by comparing it with the results of previous tests. It is expected that, with appropriate training between each test, the analysis would indicate an improvement.

Reliability

Test reliability refers to the degree to which a test is consistent and stable in measuring what it is intended to measure. Reliability will depend upon how strict the test is conducted and the individual's level of motivation to perform the test.

Validity

Test validity refers to the degree to which the test actually measures what it claims to measure and the extent to which inferences, conclusions, and decisions made on the basis of test scores are appropriate and meaningful. This test provides a means to monitor the effect of training on the athlete's physical development.

Methodology

Statement of Problem

In-depth Comparative Analysis of Anxiety Levels Among Male Players Engaged in Intercollegiate Basketball and Weightlifting at Chhatrapati Shahu Ji Maharaj University.

Selection of Subjects

In the pursuit of this research endeavor, a meticulously chosen cohort comprising thirty individuals from the realm of basketball and an equivalent number from the domain of weightlifting were subjected to a random selection process, thereby constituting a total sample size of sixty male players. The age demographic of the participants was confined within the bracket of 18 to 25 years, ensuring a homogeneous representation within the selected age range.

Selection of the Test

The paramount metric employed as the benchmark in this investigation will be the scores derived from the Sports Competition Anxiety Test (S.C.A.T.), an evaluative instrument meticulously crafted by Rainer Martin for the explicit purpose of gauging anxiety levels in the context of sports competitions.

Data Collection

In the comprehensive exploration of anxiety dynamics during sports competition, the esteemed Sports Competition Anxiety Test (S.C.A.T.) by Rainer Martin was deliberately chosen as the investigative instrument. This questionnaire, renowned for its reliability and widespread acceptance, serves as a discerning tool to ascertain the nuanced dimensions of anxiety in the realm of sports. The meticulous application of the S.C.A.T. test by the researcher was conducted with precision and diligence.

To ensure a thorough understanding of the questionnaire among the participants, the researcher conscientiously elucidated the requisite instructions, providing a comprehensive overview of the questionnaire's intricacies to the basketball and weightlifting players. A practical demonstration, utilizing a slate, elucidated the method of responding, offering a tangible guide for the athletes.

The participants were afforded the flexibility of no rigid time constraints; however, a suggestive target of answering 15 questions within a 5-minute timeframe was proffered to maintain a semblance of uniformity. The questionnaire comprised a total of 15 inquiries, with a deliberate segregation of five questions aimed at elucidating the questionnaire's overarching purpose; these five questions were not subjected to evaluation. The participants were guided by the expectation that their responses would be informed by the experiential nuances encountered during actual competitive scenarios, fostering a more genuine and reflective engagement with the questionnaire.

Statistical Technique

To undertake the meticulous scrutiny of data, a comprehensive analysis approach was adopted, incorporating both descriptive statistics and the independent "t" test. This methodological choice facilitated a nuanced comparison of sports competition anxiety levels between the cohorts of Basketball and Weightlifting players. The predetermined threshold for statistical significance was established at 0.05, ensuring a rigorous and discerning evaluation of the obtained results.

Results

The evaluation of scores in this study adhered to the key provided by Rainer Martens, meticulously utilizing the criteria set forth by this esteemed authority. Each participant's individual score in the Sports Competition Anxiety Test (S.C.A.T.) served as a pivotal metric in determining and assessing the nuanced levels of anxiety within the context of sports competition.

Table 1: Significance Difference of Mean, Standard Deviation and "t" Value on Sports Competition Anxiety Test between Basketball Players and Weightlifting Players

Players	Subjects	Mean	S. D.	"t" Value
Basketball	30	22.50	3.75	3.59
Weightlifting	30	19.50	2.62	

Significant at 0.05 level tabulated "t" (.05) (58) = 1.675. Table 1 indicates that there was a significant difference between the means of Basketball players and Weightlifting players on scores of sports competition anxiety test score since the obtained value of "t" 3.59 was higher than the tabulated value of "t" 1.675 which was required to be significant at 58 degree of freedom with 0.05 level of significance.

Finding

The statistical insights derived from the current investigation unveiled a noteworthy disparity, indicating that the mean score for Sports Competition Anxiety among Basketball players stood at 22.50, surpassing that of Weightlifting players, who recorded a mean score of 19.50. This discernible distinction implies a heightened susceptibility to sports competition anxiety among Basketball players when juxtaposed with their Weightlifting counterparts.

Discussion of finding

The observed outcomes can be attributed to the inherent dissimilarities in the nature of these sporting endeavors. Notably, Basketball embodies a collective team sport, whereas Weightlifting unfolds as an individualized athletic pursuit. An additional contributing factor lies in the

distinctive dynamics of spectatorship between the two activities. Weightlifting competitions typically draw a smaller audience compared to the robust attendance witnessed in Basketball competitions, signifying a variance in the magnitude of public scrutiny. Consequently, it is posited that, from a spectator's perspective, Basketball competitions hold a more impactful and resonant appeal than Weightlifting events. These nuanced distinctions may serve as contributing factors elucidating why Basketball players exhibit a heightened proclivity towards sports competition anxiety when contrasted with their Weightlifting counterparts.

Conclusions

Within the constraints of the current study, a decisive conclusion emerges - a marked disparity exists in sports competition anxiety between Weightlifting players and Basketball players. Specifically, the discerned pattern indicates a higher susceptibility to sports competition anxiety among Basketball players in contrast to their counterparts engaged in Weightlifting.

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