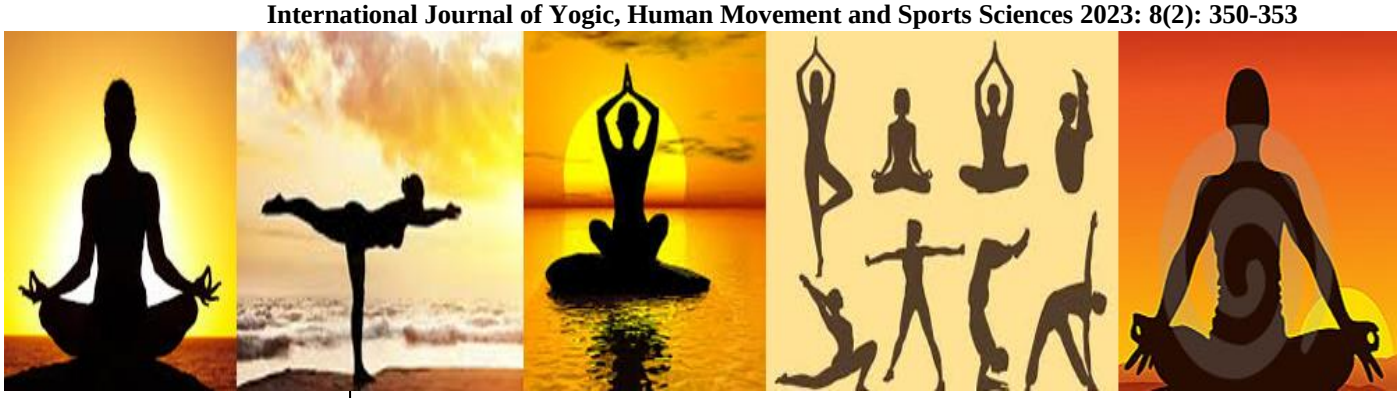
International Journal of Yogic, Human Movement and Sports Sciences 2023: 8(2): 350-353



ISSN: 2456-4419
Impact Factor: (RJIF): 5.18
Yoga 2023; 8(2): 350-353

www.theyogicjournal.com
Received: 18-09-2023
Accepted: 28-10-2023

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Comparing state anxiety levels among players in team sports and individual sports at V.S.S.D. PG College, Kanpur

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Abstract
Managing competitive state anxiety stands out as a pivotal responsibility for coaches, given that optimal player and team performance becomes elusive in the throes of heightened stress. In the current research endeavor, the primary objective was to conduct a comparative analysis of cognitive anxiety, somatic anxiety, and self-confidence levels among male participants engaged in team-based and individual sports. The expansive statistical population encompassed team sports such as Baseball, Softball, and Cricket, as well as individual sports like Swimming, Athletics, and Boxing. The study specifically focused on male athletes from V.S.S.D. PG College, Kanpur within Chhatrapati Shahu Ji Maharaj University, Kanpur, Uttar Pradesh, who had actively participated in intercollegiate competitions.

A meticulous sampling process was employed, with a total of 120 male players constituting the subjects, evenly distributed between Team Sports and Individual Sports, each comprising 50 participants. The age bracket of the subjects ranged from 17 to 21 years. To assess the participants' cognitive and somatic anxiety levels, the Competitive State Anxiety Inventory (CSAI-2) was administered within a timeframe of 20 minutes preceding the commencement of the competition. Each participant was required to complete the questionnaire, a process that consumed approximately 5 minutes.

Upon data collection, a rigorous analysis ensued, involving the computation of descriptive statistics followed by a one-way analysis of variance. Notably, a statistically significant difference was observed for cognitive and somatic anxiety, with respective values of 5.872 and 4.982, deemed significant at the 0.05 level. In contrast, no significant difference surfaced concerning self-confidence levels among the male players engaged in either team or individual sports. This nuanced exploration sheds light on the intricate interplay of psychological factors in sports performance, thereby contributing valuable insights to the realm of sports coaching and player management.

Keywords: Competitive state anxiety, Somatic anxiety, cognitive anxiety, self-confidence, team and individual sports

Introduction
Competitive anxiety has emerged as a meticulously scrutinized subject within the expansive realm of sport psychology literature, garnering extensive attention owing to its perceived deleterious impact on performance. Anxiety, characterized by feelings of nervousness and tension induced by environmental factors and external expectations, is intricately linked to the concept of 'arousal.' These demands, often stress-inducing, convey to athletes a sense of imbalance between the imposed expectations and their perceived capacity to meet them (Gould, 2002) [3].

Effectively managing competitive state anxiety stands as a paramount responsibility for coaches, given the undeniable correlation between elevated stress levels and compromised athletic performance. The incapacitating nature of anxiety impedes players from delivering their optimal performance, disrupting their usual prowess. Consequently, their competitive outcomes are adversely affected, with triumph becoming a rare achievement (Patsiaouras, A. 2008) [9].

State anxiety, a poignant emotional reaction to stressful situations, involves an inherent arousal component (Woodman, 2001) [13]. A crucial distinction lies in the interpretation of situations as threatening, constituting anxiety, as opposed to arousal, which lacks such interpretative

elements (Hammermeister, 2001) [7]. Furthermore, in scenarios of heightened cognitive load and increased task complexity, anxiety has been posited as a more accurate predictor of performance outcomes compared to arousal (Arent, 2002) [15].

The multidimensional theory, pioneered by Martens and colleagues (1990a) [6], introduces a comprehensive framework comprising three subscales: cognitive anxiety, somatic anxiety, and selfconfidence. Cognitive anxiety encompasses the mental facet, arising from negative expectations and self-evaluation. Somatic anxiety pertains to the physiological and affective dimensions stemming directly from autonomic arousal, with its impact on performance being curvilinear, peaking at the onset of competition and diminishing thereafter. Self-confidence, though not initially proposed as an anxiety subcomponent, has been integrated into the study by Martens *et al*., highlighting a positive linear relationship between self-confidence and performance.

Despite the wealth of research on competitive state anxiety, conflicting results abound. Skill level emerges as a significant factor influencing anxiety control, as demonstrated by Pigozzi (2004) [14]. Soltani *et al*. (2012) [11] affirm that elite athletes exhibit lower levels of competitive state anxiety compared to their non-elite counterparts. Additionally, the nature of the sport (individual or team), the specific sport involved, and the gender of athletes are identified as influential factors impacting performance, as elucidated by Joel *et al*. (2009) [16] and Cristina (2004) [4].

Further insights into the interplay of anxiety in sports arise from comparative studies. Howard ZhenhaoZeng (2002) [12] reveals that, among varsity athletes, team sports induce significantly higher Competitive State Anxiety scores than individual sports. Mohsenpour's (2002) exploration of state anxiety among male athletes in both individual and team sports concludes that while there's no significant difference in the somatic factor, athletes in team sports exhibit lower cognitive grades than their individual counterparts. These nuanced findings contribute to the ongoing discourse surrounding competitive state anxiety and its multifaceted implications in the realm of sports psychology.

Hanton, Abriyon, and Malaliyo contend that the understanding of anxiety levels before and during competition remains enigmatic, given the disparate and contradictory findings reported by various athletes. Athletes' self-reports present a spectrum of anxiety levels ranging from substantial to negligible. Behzadi (2012) [2] and Adem Civan (2010) [17] contribute to the discourse by highlighting a significant difference in levels of competitive state anxiety between athletes engaged in team sports and those in individual sports. Conversely, along with Perry and Williams (1998) [8], counter this perspective by failing to observe any notable distinctions in anxiety levels across high, moderate, or low categories. This discrepancy in findings suggests that the comprehension of competitive state anxiety among team and individual sport athletes remains elusive.

Acknowledging the inherent distinctiveness of each sports domain and the apparent lack of consensus among research outcomes, the absence of a comprehensive theory in this field propels the author to undertake a comparative analysis. The objective is to discern and unravel the intricate dynamics of competitive state anxiety, specifically scrutinizing its nuances among athletes engaged in team sports versus individual sports. This research initiative seeks to bridge the existing gaps, providing a more cohesive understanding of competitive state anxiety by delving into the unique nature of each sporting discipline and synthesizing disparate research findings in this multifaceted domain.

Objectives and Hypothesis

In alignment with the overarching aim of this study, a set of discerning objectives has been meticulously delineated, each crafted with precision to unravel distinct facets of the research landscape. These objectives are articulated as follows:

- To methodically evaluate the levels of competitive anxiety exhibited by male participants engaged in team sports and individual sports.
- To conduct a nuanced comparison of cognitive anxiety between male participants immersed in team sports and their counterparts in individual sports.
- To intricately scrutinize and draw comparisons regarding somatic anxiety levels between male team sports participants and those partaking in individual sports.
- To meticulously assess and draw comparisons in self-confidence levels among male participants in team sports vis-à-vis those engaged in individual sports.
- To guide the investigative journey and lend a structured framework to the inquiry, a series of hypotheses have been postulated in line with the aforementioned objectives:
- It is hypothesized that there will be no statistically significant difference in cognitive anxiety levels between male participants involved in team sports and those engaged in individual sports.
- A second hypothesis posits that there will be no discernible variance in somatic anxiety levels between male participants immersed in team sports and their counterparts participating in individual sports.
- The third hypothesis asserts that there will be no statistically significant distinction in self-confidence levels between male participants partaking in team sports and those involved in individual sports.

These hypotheses, meticulously formulated, serve as guiding propositions that will be rigorously tested and analyzed throughout the course of the study, contributing to a nuanced understanding of the intricate interplay between competitive anxiety and varying sporting contexts.

Procedure and Methodology

The research meticulously selected its statistical population from the esteemed V.S.S.D. PG College situated within the academic precincts of Chhatrapati Shahu Ji Maharaj University, Kanpur, Uttar Pradesh. This discerning population encompassed both team sports, notably Baseball, Softball, and Cricket, and individual sports such as Swimming, Athletics, and Boxing. The stratification aimed at capturing the inherent diversity and distinct characteristics inherent in each sporting discipline.

The subjects under scrutiny were exclusively male athletes who had actively participated in the highly competitive intercollegiate tournaments, ensuring a sample imbued with a rich tapestry of skill and experience. The study meticulously curated a cohort of 120 male players, thoughtfully divided into 50 participants engaged in Team Sports and an equivalent number immersed in Individual Sports. The age range of the subjects spanned from 17 to 21 years, encapsulating a critical phase in the developmental spectrum where competitive pressures and psychological nuances might significantly impact athletic performance.

The methodological precision extended to the administration

of the State Competitive Anxiety Inventory (CSAI-2), a sophisticated tool designed to gauge the intricate dimensions of anxiety in both individual and team game players. Administered within a time frame of 20 minutes preceding the commencement of the competition, each participant diligently responded to the questionnaire, investing approximately 5 minutes in the thoughtful completion of this psychological assessment.

The ensuing phase of the research involved a rigorous analysis of the amassed data, wherein the intricate nuances of the participants' competitive anxiety were unveiled. This analysis, characterized by the computation of descriptive statistics, was followed by a meticulous application of the oneway analysis of variance, a statistical tool adept at discerning significant variations and trends within the dataset. This methodological rigor ensures that the findings of the study are not merely descriptive but are underpinned by robust statistical analysis, contributing to the scholarly discourse on the multifaceted realm of competitive state anxiety among male athletes.

Results and Discussions

Table 1: Levene's Homogeneity Test

Variables	Groups	Levene Statistic	Sig.
Cognitive Anxiety	Team game and Individual Game Players	0.491	0.420
Somatic Anxiety	Team game and Individual Game Players	0.275	0.759
State Self Confidence	Team game and Individual game Players	0.455	0.242

Table No. 1 serves as an illuminating repository of information, expressly illustrating the Levene Statistic values for cognitive anxiety, somatic anxiety, and self-confidence-each meticulously calculated at 0.491, 0.275, and 0.455, respectively. The accompanying p-values, scrutinized with utmost precision, reveal the insignificance of these statistics, registering at 0.420, 0.759, and 0.242, respectively, all surpassing the conventional significance threshold of 0.05.

This robust statistical analysis discerns a compelling pattern, indicative of homogeneity among male players engaged in both team sports and individual sports concerning the selected variables. The elevated p-values underscore the absence of statistically significant differences, fortifying the conclusion that, within the parameters measured, team sports and individual sports male players exhibit a notable similarity. This empirical insight not only elucidates the homogeneity but also contributes substantively to the nuanced understanding of the psychological dynamics at play within the diverse sporting contexts under consideration.

Table 2: Descriptive Analysis of the Selected Variables for Male Team and Individual Game Players

Variable	Group	N	Mean	Standard Deviation
Cognitive Anxiety	Individual game players	50	15.98	4.01
	Team game players	50	15.08	2.88
Somatic Anxiety	Individual game players	50	15.74	4.02
	Team game players	50	14.22	2.21
Self Confidence	Individual game players	50	25.12	2.98
	Team game players	50	25.89	2.22

Table No. 2 clearly depicts the values for descriptive analysis of the selected variables, which shows that the mean and standard deviation values for cognitive anxiety, somatic anxiety and self-confidence for individual game players is found to 15.98±4.01, 15.74±4.02 and 25.12±2.98 respectively, whereas that for team game players is found to be 15.08±2.88, 14.22±2.21 and 25.89±2.22 respectively.

Table 3: One way Analysis of Variance of Cognitive Anxiety, Somatic Anxiety and Self-confidence between Team and Individual Game Players

Variables	Groups	F	Sig.
Cognitive Anxiety	Individual game players		
	Team game players	5.872*	0.012
Somatic Anxiety	Individual game players		
	Team game players	4.982*	0.022
Self Confidence	Individual game players		
	Team game players	1.98	0.221

Table No. 3 clearly depicts the values for one way analysis of variance for the selected variables between the team and individual game players, which shows that there is a significant difference for the cognitive and somatic anxiety as the values are found to be 5.872 and 4.982 respectively, which are significant at 0.05 level, whereas no significant difference is found for the self-confidence.

Discussions

An appreciable variance surfaces in cognitive anxiety between individual game players and their counterparts engaged in team sports. This discrepancy may be attributed to the compelling notion that the fear of failure emerges as a more potent predictor of cognitive anxiety for individual sport players. This heightened anxiety, specific to individual athletes, emanates from the substantial accountability placed on them for potential failure, contrasting with the shared responsibility within the team sport paradigm. As elucidated by Flowers (2002) [1], athletes immersed in individual sports tend to grapple with elevated anxiety levels in comparison to their counterparts engaged in team sports.

The nuanced dynamics of anxiety further unfold within the realm of high-contact sports, where the looming prospect of injury emerges as an additional source of anxiety. In the context of individual sports, athletes tend to immerse themselves more profoundly in their personal skills and capabilities. In stark contrast, team sports introduce a complex interplay with team dynamics, where individual performance becomes intricately interlinked with the collective performance of the group. This symbiotic relationship raises the prospect that the role assigned to an athlete in team sports may not invariably align with their intrinsic role, fostering a distinctive psychological landscape.

Similarly, a marked disparity in somatic anxiety manifests between players engaged in team sports and those involved in

individual sports. Athletes partaking in individual sports encounter a heightened level of anxiety, as posited by Arlin and Guide (2010), reinforcing the intuitive understanding that team dynamics potentially alleviate the individual pressures experienced by solitary competitors. This aligns seamlessly with the theoretical framework predicting the simultaneous arousal of both cognitive and somatic anxiety in competitive scenarios.

Noteworthy insights also emerge from the research conducted by Martin and Hall, where skaters experienced heightened somatic and cognitive anxiety preceding individual competitive events compared to team competitions. This discrepancy is posited to stem from the diffusion of responsibility inherent in the team framework, a factor not evident in the individual competitive arena, as highlighted by Shamshad (2005) [5]. This complex interplay between anxiety dynamics and the team-versus-individual context further underscores the intricate psychosocial facets inherent in sports, contributing substantively to our understanding of the multifaceted nature of competitive anxiety.

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