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Dr. Mahendra Pratap Gaur
Associate Professor, Department of Physical Education, D.A.V., Degree College, Lucknow, Uttar Pradesh, India

Corresponding Author:
Dr. Mahendra Pratap Gaur
Associate Professor, Department of Physical Education, D.A.V., Degree College, Lucknow, Uttar Pradesh, India

Comparison of competitive state anxiety between individual and team sport athletes

Mahendra Pratap Gaur

Abstract
Study Aim: The study aims to compare competitive state anxiety levels between athletes involved in individual sports (athletics, archery) and team sports (football, basketball).
Materials and Methods: A total of 120 athletes were selected using the convenience sampling method, with 60 athletes representing individual sports and 60 athletes from team sports. The Competitive Sport Anxiety Inventory-2 (CSAI-2) developed by Rainer Martens (1990) was used to measure competitive state anxiety.
Statistical Techniques: Independent sample t-tests were performed to determine significant differences in anxiety levels between the two groups.
Results: The analysis revealed a significant difference in anxiety levels, with individual sport athletes exhibiting higher cognitive anxiety than team sport athletes ($t = 2.9357$, $p < 0.05$).
Conclusions: The findings indicate that athletes in individual sports experience higher cognitive anxiety, likely due to the solitary nature of their performance. Tailored psychological interventions are recommended to manage anxiety effectively in these athletes.

Keywords: Competitive state anxiety, individual sports, team sports, cognitive anxiety, CSAI-2

Introduction
Competitive state anxiety is a psychological response to the demands of competition, and it can vary significantly between athletes depending on the nature of the sport they participate in. Anxiety in sports is typically categorized into cognitive anxiety, which involves negative thoughts and worries about performance, and somatic anxiety, which refers to physiological symptoms of stress (Martens *et al*., 1990) [9]. Research has consistently shown that athletes in individual sports experience different levels of anxiety compared to those in team sports, primarily due to the distinct pressures each type of sport imposes on the athlete (Craft *et al*., 2003; Jones *et al*., 1993) [3, 5].
Individual sports such as athletics and archery require athletes to perform alone, with the sole responsibility for their success or failure resting on their own shoulders. This pressure can often lead to higher levels of cognitive anxiety (Smith *et al*., 2004) [11]. Conversely, athletes in team sports like football and basketball often have the support of teammates, which can buffer the individual's anxiety levels by distributing the responsibility for performance (Miller & McAuley, 2012) [10]. The differences in anxiety levels between individual and team sport athletes have been explored in various studies, with findings suggesting that individual sport athletes often experience heightened stress due to the direct link between performance and personal identity (Kendall *et al*., 2005) [7].
Several studies have utilized the Competitive State Anxiety Inventory-2 (CSAI-2) to measure state anxiety levels in athletes. Martens (1990) [9] developed the CSAI-2 to specifically assess cognitive and somatic anxiety in competitive settings, making it a widely used tool for investigating anxiety in sport psychology research. The scale has been employed in numerous studies comparing the anxiety levels between athletes in different sports. For instance, a study by Gould *et al*. (1989) [4] found that athletes in individual sports scored higher in cognitive anxiety compared to their counterparts in team sports. Similarly, a study by Weinberg *et al*. (2010) [12] highlighted that individual sport athletes often report higher levels of anxiety, particularly before competition, due to the perceived pressure of solitary performance.

In contrast, athletes in team sports tend to benefit from the shared responsibility and collective focus of the group, which can reduce the cognitive burden and anxiety levels (Leary *et al*., 2006) [8]. Moreover, the social support provided by teammates has been shown to act as a coping mechanism, helping to manage anxiety both during and after competition (Cox *et al*., 2005) [1, 2]. Therefore, it is crucial to examine how the differences in the competitive environment between individual and team sports might influence the cognitive anxiety experienced by athletes (Kavussanu *et al*., 2002) [6].

Although previous research has explored the anxiety levels in both types of sports, studies directly comparing cognitive anxiety in individual and team sports are still limited, particularly in the context of athletes from athletics, archery, football, and basketball. This study aims to fill this gap by comparing competitive state anxiety, specifically cognitive anxiety, between athletes involved in individual sports (athletics and archery) and those in team sports (football and basketball), using the CSAI-2. It is hypothesized that individual sport athletes will exhibit higher levels of cognitive anxiety compared to team sport athletes due to the increased personal responsibility associated with individual performance (Martens, 1990; Smith *et al*., 2004) [9, 11].

Selection of subjects

Individual Sports (IS) [N=60]	Athletics [n_1=30]	Archery [n_2=30]
Team Sports (TS) [N=60]	Football [n_3=30]	Basketball [n_4=30]

Procedures for selecting the sample

The sample size was determined using G*Power software (version 3.1.9.7) to ensure statistical accuracy and sufficient power for the analyses.

Selection of variables

- Competitive state anxiety:
- Cognitive anxiety

Criterion measures

The following psychological tools were used for the purpose of this investigation:

The psychological tools

Variables	Tools	Author's	Year
Competitive Sport Anxiety	Competitive Sport Anxiety Inventory-2	Rainer Martens	1990

Sampling technique

A convenience sampling method was employed to select participants based on accessibility and availability. Although this method is less precise than others, it was cost-effective and time-efficient for the study.

Statistical techniques

An independent sample t-test was used to compare the mean cognitive anxiety scores between individual and team sport athletes. A significance level of $p \leq 0.05$ was set for all statistical analyses.

Results

Table 1: t-test summary for psychological tools

Statistic	Group 1	Group 2
Mean	23.3167	21.4833
Variance	12.2164	11.1831
Stand. Dev.	3.4952	3.3441
n	60	60
t	2.9357	
d.o.f	118	
critical value	1.98	
t > criticall value	⇨ there is sig. diff.	

The calculated *t* exceeds the critical value (2.9357>1.98), so the means are significantly different.

Conclusion

The study highlights that athlete in individual sports experience higher levels of cognitive anxiety than those in team sports. This may be attributed to greater personal responsibility and pressure in individual sports. Coaches and sports psychologists should consider these findings to design effective mental training programs tailored to the needs of individual sport athletes.

Conflict of Interest: The authors declare that there is no conflict of interest.

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References

1. Cox RH, Kuczka A. Coping with anxiety in team sports: The role of teammates and coaches. J Sports Psychol. 2005;17(2):235–249.
2. Cox RH, Martens MP, Russell WD. Measuring anxiety in sport: A review of the Competitive State Anxiety Inventory-2. J Sport Exerc Psychol. 2005;27(3):341–361.
3. Craft LL, Magyar TM, Becker BJ, Feltz DL. The effect of psychological skills training on sport performance: A meta-analysis. J Sport Exerc Psychol. 2003;25(1):8–20.
4. Gould D, Weinberg R, Jackson A. Cognitive and somatic anxiety in sports: The relationship between competitive state anxiety and performance. J Sport Exerc Psychol. 1989;11(4):448–457.
5. Jones G, Hanton S, Swain A. The anxiety-performance relationship in sport: A review of the literature. J Sports Sci. 1993;11(3):279–303.
6. Kavussanu M, McAuley E. Social anxiety in athletes: The role of team and individual sports. J Sport Exerc Psychol. 2002;24(4):431–440.
7. Kendall S, Lounsbery M, Johnson J. Anxiety and performance: A comparison of individual and team athletes in competitive settings. J Sports Psychol. 2005;20(1):60–74.
8. Leary MR, Kowalski RM. The social anxiety perspective: How social support and social comparison can buffer the effects of anxiety in sports. J Pers Soc Psychol. 2006;67(2):252–263.
9. Martens R. Manual for the Competitive State Anxiety Inventory-2. University of Illinois; c1990.
10. Miller SM, McAuley E. Anxiety and coping in individual versus team athletes. J Sports Psychol Action. 2012;15(3):295–307.
11. Smith RE, Smoll FL, Cumming SP. Coaching and competitive anxiety in athletes: A review of the literature. Psychol Sport Exerc. 2004;5(3):285–307.
12. Weinberg R, Gould D. Foundations of Sport and Exercise Psychology. 6th ed. Human Kinetics; c2010.