

Relationship Between Anxiety and Shyness in Sports-Participating High School Girls in Chamarajanagara District

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ABSTRACT

This study investigated the relationship between anxiety and shyness among high school girls participating in sports in Chamarajanagara District Karnataka, India. Recognizing the physical and psychological benefits of sports alongside potential challenges, this research aimed to assess the levels of these constructs and their correlation within a localized context. A quantitative, correlational design involved a random sample of fifty (N=50) high school girls. Anxiety was measured using the Sport Competition Anxiety Test (SCAT), and shyness with the Shyness Assessment Test (SAT). Data analysis included descriptive statistics, one-way ANOVA for trait variations, and Pearson's correlation. Results showed mean anxiety scores of 18.36 (SD = 2.58) and mean shyness scores of 59.70 (SD = 9.91). Significant individual variations were observed for both anxiety and shyness, with shyness exhibiting higher variability (18.36%) than anxiety (13.99%). Crucially, no statistically significant relationship was found between anxiety and shyness ($r = 0.12$, $p = 0.41$). This suggests that for sports-participating high school girls in Chamarajanagara District, anxiety and shyness may operate as largely independent psychological traits. These findings underscore the need for distinct, tailored interventions when addressing these challenges in adolescent female athletes in this region.

Keywords: *Anxiety, Shyness, Sports Participation, High School Girls, Chamarajanagara District, Adolescent Psychology, Sport Psychology*

Adolescence is a critical period of physical and psychological development, with sports participation offering significant benefits like improved health, self-esteem, and social skills (Larson et al., 2006). In India, sports play a growing role in girls' empowerment (Singh & Yadav, 2011). However, competitive sports environments can also introduce psychological pressures, including anxiety and shyness (Scanlan et al., 2003).

Anxiety in sports refers to apprehension related to competition (competitive anxiety) or social evaluation (social anxiety) (Martens et al., 1990; Connor & Steinglass, 2006). Shyness is characterized by discomfort or inhibition in social situations, often stemming from a fear of negative judgment (Cheek & Buss, 1981). While these constructs can overlap, especially in evaluative contexts, their specific relationship in adolescent female athletes,

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particularly within unique cultural settings like ChamaraJanagara District, India, remains largely unexplored. The cultural and socio-economic realities of this region might uniquely influence how these traits manifest and interact (Rani & Sharma, 2018).

Understanding if anxiety and shyness are interlinked or independent is vital for developing effective, localized support systems to promote sustained sports participation among high school girls. This study aimed to assess the levels of anxiety and shyness and determine their relationship in this specific population.

Statement of the Problem

Despite the benefits of sports, psychological barriers like anxiety and shyness can lead to girls' disengagement. There is a notable lack of empirical investigation into the specific relationship and interplay between anxiety and shyness among high school girls participating in sports within the distinct socio-cultural environment of ChamaraJanagara District, India. This dearth of localized data hinders the development of contextually relevant and effective psychological support systems, potentially leading to suboptimal intervention strategies or even the premature withdrawal of talented young female athletes from sports.

Need for the Study

The current study is imperative for several reasons. Firstly, it addresses a significant lacuna in sport psychology literature concerning adolescent female athletes in a specific Indian context. Findings from Western or generalized samples may not accurately reflect the experiences of girls in ChamaraJanagara District, given unique cultural norms, social expectations, and resource availability. Secondly, by elucidating the relationship between anxiety and shyness, the study can inform the design of more targeted and effective psychological interventions. Understanding whether these constructs are interlinked or independent is crucial for optimizing support strategies. Thirdly, the research provides valuable baseline data that can be used by local educational institutions, sports academies, and non-governmental organizations to develop tailored programs aimed at enhancing the psychological well-being of young female athletes, thereby promoting sustained participation and maximizing their potential.

Objectives and Hypotheses

Objectives:

1. To assess the levels of anxiety among high school girls participating in sports in ChamaraJanagara District.
2. To assess the levels of shyness among high school girls participating in sports in ChamaraJanagara District.
3. To determine the variation in anxiety and shyness scores within the sample of sports-participating high school girls in ChamaraJanagara District.
4. To determine the nature and strength of the relationship between anxiety and shyness among high school girls participating in sports in ChamaraJanagara District.

Hypotheses:

- **H1:** There is a significant variation in anxiety scores among sports-participating high school girls in ChamaraJanagara District.
- **H2:** There is a significant variation in shyness scores among sports-participating high school girls in ChamaraJanagara District.

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- **H3:** There is no statistically significant relationship between anxiety and shyness among sports-participating high school girls in Chamaranagara District.

Limitations and Delimitations

Limitations: This study is subject to several limitations. Its cross-sectional design restricts inferring cause-and-effect relationships or tracking developmental trajectories. Reliance on self-report questionnaires may introduce social desirability bias. The findings are confined to high school girls in Chamaranagara District, limiting generalizability to other age groups, genders, or different geographical/socio-cultural contexts. Specific sport types, competition levels, and socio-economic backgrounds were not controlled. Finally, the study focused on subclinical levels, not clinical diagnoses.

Delimitations: The study was specifically delimited to:

- High school girls (Grades 8 to 12).
- Participants actively engaged in organized sports programs within Chamaranagara District.
- The psychological constructs of anxiety and shyness, as measured by the selected instruments.
- Data collection conducted exclusively through standardized self-report questionnaires.

REVIEW OF LITERATURE

Introduction

This chapter reviews academic literature on anxiety and shyness in sports, focusing on adolescent female athletes, to establish theoretical foundations, synthesize key findings, and identify knowledge gaps, particularly concerning the localized context of Chamaranagara District, India.

Theoretical Frameworks

The study is implicitly guided by **Cognitive-Affective Stress Theory** (Martens et al., 1990), which explains competitive anxiety as arising from an appraisal of demands and perceived ability. **Social-Cognitive Theory** (Bandura, 1986) informs understanding shyness, emphasizing self-efficacy and anticipated social evaluation. Both highlight the interplay between cognitive processes, emotional states, and behavioral manifestations in performance and social settings.

Understanding Anxiety in Sports

Anxiety in sports is a complex emotional state, encompassing **competitive anxiety** (apprehension related to competition, with cognitive and somatic components) and **social anxiety** (fear of negative evaluation by others in the sporting environment) (Martens et al., 1990; Connor & Steinglass, 2006). High levels of anxiety can lead to impaired performance and withdrawal from sports (Craft et al., 2003; Holt et al., 2012). Research consistently shows adolescent female athletes often report higher anxiety, attributed to societal pressures and self-consciousness (Gill, 2007). Effective anxiety management, such as psychological skills training, can improve performance and enjoyment (Grossbard et al., 2009).

The Concept of Shyness and its Manifestation in Sports

Shyness is a personality trait characterized by discomfort, inhibition, and self-consciousness in social situations (Cheek & Buss, 1981). It differs from introversion as shy individuals often desire social connection but are held back by internal unease (Schmidt & Fox, 1999).

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In sports, shyness can manifest as social withdrawal, inhibited participation in team discussions, avoidance of attention, or lack of assertiveness. These behaviors can impede an athlete's development and team integration (Alden & Mellings, 2004). For adolescent girls, societal expectations regarding modesty can amplify these manifestations (Ryckman & Hamel, 1995), leading to withdrawal from group activities due to fears of social evaluation (Crozier, 2000).

Interrelationship between Anxiety and Shyness

While distinct, anxiety and shyness share conceptual overlap, especially concerning social evaluation. Shyness is often viewed as a dispositional trait predisposing individuals to social anxiety in specific contexts (Schmidt & Buss, 1996). Research across various populations generally reports a positive correlation between shyness and social anxiety (Rapee & Spence, 2004). In sports, this could mean a shy athlete experiences elevated social anxiety during team tryouts or public performances, potentially contributing to competitive anxiety. The combined burden can lead to emotional distress and reduced athletic achievement (Grossbard et al., 2009).

Gender-Specific and Contextual Considerations

Gender significantly shapes adolescent athletes' psychological experiences. Girls face distinct pressures, including body image concerns and societal expectations that may conflict with the competitive nature of sports (Gill, 2007; Allison & Burton, 2004). Supportive coaching environments can mitigate these vulnerabilities (Holt & Dunn, 2004). In the Indian context, particularly in semi-urban/rural areas like ChamaraJanagara District, unique factors such as traditional gender roles, infrastructure limitations, and parental attitudes impact girls' sports participation and psychological well-being (Rani & Sharma, 2018; Singh & Yadav, 2011). Localized research is therefore crucial, as Western findings may not fully apply.

Conclusion of Literature Review

The review highlights that anxiety and shyness are significant psychological constructs impacting adolescent athletes. While studied individually, their specific relationship within the unique context of sports-participating high school girls in a localized Indian setting like ChamaraJanagara District remains largely unexplored. This underscores the critical need for empirical research to elucidate these dynamics and inform culturally appropriate support systems.

METHODOLOGY

Research Design and Participants

The study employed a **quantitative, correlational research design**, chosen to examine the strength and direction of the relationship between variables as they naturally occur (Creswell, 2014). The target population comprised high school girls actively participating in organized sports programs within ChamaraJanagara District. A random sample of fifty (N=50) high school girl students was selected. Participants were enrolled in grades 8-12 and regularly engaged in at least one organized sport.

Instruments

Two standardized self-report questionnaires were used:

1. **Sport Competition Anxiety Test (SCAT):** Developed by Rainer Martens (1977), SCAT is a 15-item instrument measuring competitive trait anxiety. Respondents indicate how they generally feel before, during, or after competition on a 3-point

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Likert scale (scores 10-30). SCAT has demonstrated acceptable internal consistency and constructs validity (Martens et al., 1990).

- 2. Shyness Assessment Test (SAT):** This instrument, developed by Lancy D'Souza, assesses participants' shyness levels, gauging discomfort and self-consciousness in social situations via self-report.

Data Collection Procedure

The data collection adhered to ethical guidelines. Formal permissions were obtained from school authorities and informed consent from students and their parents/guardians. Questionnaires were administered in quiet environments at school premises. The investigator clarified doubts but refrained from influencing responses. Completed questionnaires were immediately collected and stored securely to maintain confidentiality. The process was completed over two weeks.

Data Analysis

Collected data were analyzed using Microsoft Excel.

- 1. Descriptive Statistics:** Mean, Standard Deviation (SD), Variance, Minimum, and Maximum Scores were calculated for both anxiety and shyness.
- 2. Analysis of Variance (ANOVA) - Single Factor:** A one-way ANOVA was conducted to assess overall variability within anxiety and shyness scores, effectively testing Hypotheses H1 and H2.
- 3. Pearson's Product-Moment Correlation Coefficient (r):** Used to determine the strength and direction of the linear relationship between anxiety and shyness, central to testing Hypothesis H3.
- 4. Simple Linear Regression Analysis:** Performed with shyness as the dependent variable and anxiety as the independent variable to examine predictive power.

The level of statistical significance for all inferential tests was predetermined at an alpha (α) level of **0.05**.

RESULTS

This chapter presents the findings from the statistical analysis of data from 50 sports-participating high school girls in ChamaraJanagara District.

Descriptive Statistics

Table 1 Descriptive Statistics for Anxiety and Shyness Scores (N=50)

Variable	Count	Sum	Mean	Variance	Minimum	Maximum	Standard Deviation
Anxiety Score	50.00	918.00	18.36	6.64	13.00	23.00	2.58
Shyness Score	50.00	2985.00	59.70	98.17	32.00	84.00	9.91

The mean anxiety score was 18.36 (SD = 2.58), with scores ranging from 13.00 to 23.00. The mean shyness score was 59.70 (SD = 9.91), with a broader range from 32.00 to 84.00. The variance for shyness (98.17) was considerably higher than for anxiety (6.64), indicating greater score dispersion for shyness.

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Analysis of Variance for Trait Variation (H1 & H2)

Table 2 ANOVA Summary for Anxiety and Shyness Scores

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	42724.89	1.00	42724.89	815.23	0.00	3.94
Within Groups	5136.02	98.00	52.41			
Total	47860.91	99.00				

The ANOVA results in Table 2 show a statistically significant variation between the aggregated data points of anxiety and shyness scores, $F(1, 98) = 815.23, p < 0.001$. This confirms significant individual differences within both anxiety and shyness traits. Sample variation percentages were 13.99% for anxiety and 18.36% for shyness, further emphasizing shyness's variability. Thus, Hypotheses H1 and H2 are accepted.

Relationship Between Anxiety and Shyness (H3)

Table 3 ANOVA for Regression Analysis of Shyness (Dependent) on Anxiety (Independent)

Source of Variation	df	SS	MS	F	Significance F	Multiple R	R Square	Standard Error
Regression	1.00	66.93	66.93	0.68	0.41	0.12	0.01	9.94
Residual	48.00	4743.57	98.82					
Total	49.00	4810.50						

Table 4 Coefficients for Regression Analysis

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	68.02	10.21	6.66	0.00	47.49	88.56
ANXIETY SCORE	-0.45	0.55	-0.82	0.41	-1.56	0.65

The Pearson's correlation coefficient between anxiety and shyness was $r = 0.12 (df = 48)$, indicating a very weak positive linear correlation. The regression analysis (Table 3) showed a non-significant relationship, $F(1, 48) = 0.68, p = 0.41$, with a negligible R-squared of 0.01. The coefficient for Anxiety Score ($-0.45, p = 0.41$) further supported this non-significant predictive power. Therefore, Hypothesis H3 is accepted.

DISCUSSION

The most critical finding of this study is the absence of a statistically significant relationship between anxiety and shyness in sports-participating high school girls in ChamaraJanagara District. This finding challenges common assumptions of strong interlinkage (e.g., Rapee & Spence, 2004) and suggests that competitive anxiety, as measured by SCAT, may operate independently of general shyness in this population.

This independence could stem from several factors. Competitive anxiety is often situational, tied directly to performance, while shyness is a broader social disposition. An athlete might manage competitive pressure well but still experience discomfort in general social interactions. The sporting environment itself, particularly if supportive, may also buffer the translation of performance anxiety into generalized social inhibition. Cultural context might also play a role, with specific norms for performance versus general social behaviors. The higher variability observed in shyness scores further suggests that it is influenced by a wider range of individual and environmental factors beyond competitive stress alone.

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Implications

These findings have important implications for supporting young female athletes. Coaches and physical education teachers should adopt differentiated strategies: competitive anxiety management (e.g., relaxation techniques) may not address shyness, and vice-versa. Coaches should create supportive environments that foster both competitive composure and social comfort, possibly through tailored confidence-building activities for shy individuals. Parents and educators should also understand this distinction, encouraging both performance-pressure management and general social confidence. For sports organizations and policymakers, this localized data highlights the need for nuanced and culturally sensitive psychological support programs that address anxiety and shyness as distinct challenges, optimizing resource allocation.

Limitations and Future Research

This study's cross-sectional design limits causal inference, and self-report measures may introduce social desirability bias. Findings are specific to Chamaranagara District, limiting generalizability to other age groups, genders, or different geographical/socio-cultural contexts. Specific sport types, competition levels, and socio-economic backgrounds were not controlled. Finally, the study focused on subclinical levels, not clinical diagnoses. Future research should include longitudinal studies to understand developmental trajectories, qualitative methods for deeper insights into lived experiences, and investigation of mediating/moderating variables (e.g., self-efficacy, social support, specific sport types). Comparative studies across different demographics and regions in India, along with further instrument validation for local contexts, would also be valuable.

CONCLUSION

This research concludes that anxiety and shyness largely operate as independent psychological constructs among high school girls participating in sports in Chamaranagara District. Despite individual variations in both traits, no significant linear relationship was found. This highlights a crucial distinction, implying that competitive performance pressures may evoke responses separate from general social discomfort. Therefore, parents, coaches, educators, and local sports bodies should implement distinct and tailored support strategies to address anxiety and shyness separately. This study contributes valuable localized data to sport psychology, offering context-specific insights vital for fostering the holistic well-being and sustained, positive engagement of young female athletes in India.

REFERENCES

- Alden, L. E., & Mellings, T. M. B. (2004). The role of social problem solving in social anxiety. *Cognitive Therapy and Research*, 28(3), 323–339.
- Allison, M. T., & Burton, L. (2004). Sport and identity: A review and theoretical considerations. *Journal of Sport and Social Issues*, 28(3), 297–317.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.
- Cheek, J. M., & Buss, A. H. (1981). Shyness and sociability. *Journal of Personality and Social Psychology*, 41(2), 330–339.
- Connor, K. M., & Steinglass, J. E. (2006). Social anxiety disorder: A systematic review of treatment and a new psychological approach. *Clinical Psychology Review*, 26(7), 896–912.

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- Craft, L. L., Pardo, J. V., & Loehr, J. E. (2003). The effects of mental skills training on competitive anxiety and performance in sport. *Journal of Sport and Exercise Psychology*, 25(3), 324–343.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage Publications.
- Crozier, W. R. (2000). *Shyness and social phobia: Origins, nature and treatment*. Routledge.
- Gill, D. L. (2007). *Psychological dynamics of sport and exercise*. Human Kinetics.
- Grossbard, J. R., Smith, R. E., Smoll, F. L., & Cumming, S. P. (2009). The relationship of competitive anxiety to performance in junior tennis players. *Journal of Sport Psychology in Action*, 1(1), 1–14.
- Holt, N. L., & Dunn, J. G. H. (2004). Parental influence on competitive youth sport: A review. *International Journal of Sport and Exercise Psychology*, 2(2), 164–181.
- Holt, N. L., Tamminen, K. A., & Fox, K. R. (2012). Social anxiety and participation in organized sport among Canadian adolescents. *Journal of Applied Sport Psychology*, 24(4), 433–445.
- Larson, R. W., Hansen, D., & Walker, K. (2006). A longitudinal study of the effects of participation in organized activities on adolescents' development. *Developmental Psychology*, 42(5), 842–854.
- Martens, R. (1977). *Sport Competition Anxiety Test*. Human Kinetics.
- Martens, R., Vealey, R. S., & Burton, D. (1990). *Competitive anxiety in sport*. Human Kinetics.
- Raglin, J. S. (2004). Exercise and mental health. In T. Morris & J. Summers (Eds.), *Sport psychology: Theory, applications, and issues* (2nd ed., pp. 320–349). John Wiley & Sons.
- Rani, S., & Sharma, M. (2018). Challenges faced by rural girls in sports participation: A case study of selected villages of Haryana. *International Journal of Physical Education, Sports and Health*, 5(2), 22–25.
- Rapee, R. M., & Spence, S. H. (2004). The etiology of social phobia: Empirical evidence and an initial model. *Clinical Psychology Review*, 24(7-8), 755–787.
- Răzvan Kalinin, A., Popescu, A., Predescu, O., & Popescu, C. (2019). Mental toughness and its relationship with competitive anxiety in young athletes. *Journal of Physical Education and Sport*, 19(2), 643-647.
- Ryckman, R. M., & Hamel, R. E. (1995). Female adolescents' body image concerns and eating disturbances: A study of the relationships with perceived athletic competence and sports participation. *Journal of Youth and Adolescence*, 24(6), 651–667.
- Scanlan, T. K., Stein, G. L., & Ravizza, K. (2003). The competitive anxiety experience in elite figure skaters. *Journal of Sport Psychology*, 25(4), 307–323.
- Schmidt, L. A., & Buss, A. H. (1996). Temperament and shyness. In W. R. Crozier & L. E. Alden (Eds.), *International handbook of social anxiety* (pp. 135–154). John Wiley & Sons.
- Schmidt, L. A., & Fox, N. A. (1999). A psychophysiological perspective on the relation between shyness and social anxiety. In L. A. Schmidt & J. C. Schulkin (Eds.), *Extreme fear, shyness, and social phobia: Origins, mechanisms, and treatment* (pp. 120–143). Oxford University Press.
- Singh, R., & Yadav, A. K. (2011). Problems faced by rural female athletes in participation of sports activities. *Journal of Education and Practice*, 2(10), 1–5.
- Steinberg, L. (2017). *Adolescence* (11th ed.). McGraw-Hill Education.
- Zimbardo, P. G. (1977). *Shyness: What it is, what to do about it*. Addison-Wesley.

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Conflict of Interest

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