To Study Gender Differences In Relation To Anxiety And Achievement Motivation Among Hockey Players

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Abstract

This study investigates anxiety and achievement motivation among hockey players, specifically exploring gender differences. The present study is conducted on a dense sample of 200 hockey players (100 males and 100 females) from University campus at the time of inter university competitions. The Achievement Motivation Scale (AMS by Prof. Pratibha Deo and Dr. Asha Mohan) and State-Trait Anxiety Inventory (STAT by Sanjay Vohra) are used to measure achievement motivation and anxiety of the hockey players. The t-value of anxiety (4.259) and achievement motivation (.399) reveals significant gender differences in which female athletes have shown higher achievement motivation ($\bar{X}$=143.75) and higher anxiety ($\bar{X}$=6.24) as compared to male athletes for achievement motivation ($\bar{X}$ =142.80) and anxiety ($\bar{X}$=5.19). The correlation analysis have highlighted the negative relationship between achievement motivation and state-trait anxiety in Indian hockey players, emphasizing the need for tailored plans and training methods to enhance performance and stress management. This research has suggested the careful consideration of these factors for providing appropriate support and training to Indian hockey players by keeping in view their gender.

Keywords- *State Anxiety, Trait Anxiety, Stress Management*

Introduction

In sports, both mental and physical factors are crucial. Strack (2017) found that people who understand their emotions use anxiety as motivation, leading to improved academic and job satisfaction. This emphasizes the impact of emotional awareness on performance and well-being.While acknowledging the importance of anxiety as a motivator, Curtis (2009) warns that its relationship with motivation is complex because factors such as task difficulty and working memory can complicate this connection, indicating that the interplay between anxiety and motivation is multifaceted and influenced by various elements. Abrahamsen (2008) explored the role of perceived ability and social support as mediators of achievement motivation and performance anxiety, particularly in the context of competitive sports.

Anxiety- Anxiety is a complex emotional state characterized by feelings of apprehension, tension, and worry, often accompanied by physiological arousal (Vanin, 2008). An unpleasant psychological state resulting from perceived stress related to performing a task under pressure is referred to as anxiety in sports (Cheng, Hardy, & Markland, 2009). State anxiety is characterized by subjective, consciously perceived feelings of apprehension and tension, accompanied by or associated with activation or arousal of the autonomic nervous system, trait anxiety predisposes an individual to perceive as threatening a wide range of circumstances that objectively may not actually be physically or psychologically dangerous (Spielberger, 1966). Zhang's (2018) study highlights the complex nature of anxiety in sports, involving both mental and physical aspects. Ford's (2017) study emphasizes the significance of early recognition and management of anxiety for optimal performance among students in sports. The research underscores the importance of proactive approaches to address anxiety, recognizing its impact on athletic achievements.

Achievement motivation

Achievement motivation attributes to a person’s efforts to master a task, achieve excellence, overcome obstacles, perform better than others, and take joy in exercising talent (Murray, 1938). It is a person’s orientation to strive for task success, persist in the face of failure, and have pride in accomplishments (Gill, 2000) Achievement motivation is a desire to complete a task according to perfection criteria (Erdoğan, Kesici, &Sahin, 2011). Research consistently shows a strong relationship between achievement motivation and sport participation (Gröpel, 2016). Spray, 2006 studies revealed the impact of achievement motivation on performance is further influenced by the communication style and goal involvement, with autonomy and task involvement enhancing positive affect and adaptive behaviours.

Numerous research studies have explored the relationship between achievement motivation and anxiety in the context of sports. Gardner et al. (2016) examined that the social-cognitive model of achievement motivation reveals that increasing beliefs contribute to greater enjoyment and intention to continue in youth sports, while system beliefs are associated with less enjoyment and reduced intention to continue, suggesting implications for preventing dropout. Halder et al. (2019) studied that no significant relationship between sports achievement motivation and sports competition anxiety existed among male interuniversity swimmers, but the study discovered a significant negative relation connecting sports achievement motivation and sports competition anxiety among female interuniversity in swimming. Nirmaljit (2011) found that achievement motivation distinguishes high-level

performers; with no significant gender differences, international players show better emotional and social adjustment than national-level players, highlighting the importance of emotional stability and social adaptability for performance. Ommundsen et al. (2007) found that perceived competence did not moderate the relationships between achievement goal orientations and somatic and cognitive indices of trait sport competition anxiety. Dureha et al. (2010) examined that national and international hockey players show insignificant differences in incentive motivation, achievement motivation, state anxiety, and trait anxiety; however, a significant difference is found in sports competition anxiety, emphasising its importance in distinguishing between the two groups.In the field of hockey, very few studies have been done on the aspects of achievement motivation and state trait anxiety among Indian youth hockey players. Thus, the aim of the present study is to explore the Dynamics of Achievement Motivation, and Anxiety: Examining Gender Difference Among Indian Hockey Players.

Method and Material

This study explores achievement motivation and state-trait anxiety in 200 field hockey players, evenly distributed between 100 males and 100 females, participating across various competition levels. The participants, aged between 14 and 25 randomly selected .

Procedure

Consent forms were obtained from athletes, and data collection occurred in familiar classroom settings. Participants were provided with questionnaires and pens, and test directions were explained. No time limit was set, but participants were instructed to answer all questions honestly. Confidentiality was assured, and data would not be used for another research. After completion, test booklets were collected.

Results

Table I presents sample of 200 individuals, the mean achievement motivation was found to be 143.27, standard deviation of 143.275 and a t-score of 0.399 . Anxiety level was 5.71, with a standard deviation of 1.8166 and t-score of 4.259. Further breakdown of anxiety into trait and state components revealed that the mean trait anxiety was 4.94, standard deviation of 1.678 and t-score of 6.422 with the mean state anxiety being 4.545, standard deviation of 1.431 and t-score of 3.721.

Table I Mean and Standard Deviation table of Hockey players.

	N	Minimum	Maximum	Mean	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic
Anxiety total Component Score	200	1.00	10.00	5.7150	1.81667
Trait	200	1.00	10.00	4.9450	1.67811
State	200	1.00	7.00	4.5450	1.43116
Achievement motivation	200	93.00	184.00	143.2750	16.80749

Table-II presents the study examined achievement motivation and anxiety across gender groups of athletes, each consisting of 100 males and 100 females. Male athletes displayed an average achievement motivation of 142.80 (SD = 19.842, SEM =1.984), while female athletes exhibited a higher mean of 143.75 (SD = 13.177, SEM = 1.317). This indicates that, on average, female athletes showed high achievement motivation.

In terms of anxiety, male athletes reported a mean level of 5.19 (SD = 1.812, SEM = 0..181), suggesting lower levels of anxiety on average, whereas female athletes had a higher mean of 6.24 (SD = 1.670, SEM = .167). This highlights a gender-based difference, with female athletes experiencing higher levels of anxiety on average. Breaking down anxiety into trait and state components, male athletes had a mean trait anxiety of 4.25 (SD = 1.641, SEM = .164), and female athletes exhibited a slightly higher mean of 5.64 (SD = 1.410, SEM = .14108). For state anxiety, male athletes showed a mean of 4.18 (SD = 1.351, SEM = .135), while female athletes demonstrated a higher mean of 4.91 (SD = 1.422, SEM = .142).

Table II Group Statistics of male and female hockey players

Group Statistics						
	Gender	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**	**t-test**
Anxiety total Component Score	Female	100	6.2400	1.67042	.16704	4.259
	Male	100	5.1900	1.81294	.18129	
trait	Female	100	5.6400	1.41078	.14108	6.422
	Male	100	4.2500	1.64148	.16415	
State	Female	100	4.9100	1.42201	.14220	3.721
	Male	100	4.1800	1.35124	.13512	
Achievement motivation	Female	100	143.7500	13.17740	1.31774	.399
	Male	100	142.8000	19.84282	1.98428	

Table III presents correlations among variables for male athletes. In terms of achievement motivation, a significant negative correlation with anxiety is noted (r = -0.457, p = 0.00). However, significant negative correlations were found between achievement motivation and trait anxiety (r = -0.229, p = 0.22) and state anxiety (r = -0.343, p = 0.00) among male athletes. Anxiety, a strong positive correlation is observed between trait anxiety (r = 0.571, p = 0.000) and state anxiety (r = 0.720, p = 0.000) among male athletes, indicating that higher the trait anxiety leads to higher state anxiety. For trait anxiety, a positive correlation is found with overall anxiety (r = 0.571, p = 0.002).

Table-III Results of Pearson Correlation of Male

		Anxiety total Component Score	trait	State	Achievement motivation
Anxiety total Component Score	Pearson Correlation	1	.571**	.720**	-.457**
	Sig. (2-tailed)		.000	.000	.000
	N	100	100	100	100
Trait	Pearson Correlation	.571**	1	.262**	-.229*
	Sig. (2-tailed)	.000		.008	.022
	N	100	100	100	100
State	Pearson Correlation	.720**	.262**	1	-.343**
	Sig. (2-tailed)	.000	.008		.000
	N	100	100	100	100
Achievement motivation	Pearson Correlation	-.457**	-.229*	-.343**	1
	Sig. (2-tailed)	.000	.022	.000	
	N	100	100	100	100

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table IV presents correlations among variables for female athletes. Achievement motivation exhibits significant negative correlations with anxiety (r = -0.224, p = 0.025), trait anxiety (r = -0.171, p = 0.090), and state anxiety (r = -0.018, p = 0.855).

Among female athletes, a strong positive correlation exists between overall anxiety and both trait anxiety (r = 0.534, p = 0.000) and state anxiety (r = 0.647, p = 0.000). Additionally, there is a moderately positive correlation between trait anxiety and overall anxiety (r = 0.534, p = 0.000).

Table-IV Results of Pearson Correlation of Female

		Anxiety total Component Score	trait	State	Achievement motivation
Anxiety total Component Score	Pearson Correlation	1	.534**	.647**	-.224*
	Sig. (2-tailed)		.000	.000	.025
	N	100	100	100	100
trait	Pearson Correlation	.534**	1	.311**	-.171
	Sig. (2-tailed)	.000		.002	.090
	N	100	100	100	100
State	Pearson Correlation	.647**	.311**	1	-.018

	Sig. (2-tailed)	.000	.002		.855
	N	100	100	100	100
Achievement motivation	Pearson Correlation	-.224*	-.171	-.018	1
	Sig. (2-tailed)	.025	.090	.855	
	N	100	100	100	100

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table-V provides a brief indication of correlations across variables. In terms of achievement motivation, significant negative correlations are observed with anxiety (r = -0.340, p = 0.000), trait anxiety (r = -0.176, p = 0.013), and state anxiety (r = -0.190, p = 0.007) considering the entire sample of 200 individuals.

Regarding anxiety, there is positive correlations between overall anxiety and both trait anxiety (r = 0.603, p = 0.000) and state anxiety (r = 0.706, p = 0.000) within the sample.

Table-V: - Results of Overall Correlations among Male and Female Indian Hockey Players

		Anxiety total Component Score	**trait**	**State**	**Achievement motivation**
Anxiety total Component Score	Pearson Correlation	1	.603**	.706**	-.340**
	Sig. (2-tailed)		.000	.000	.000
	N	200	200	200	200
trait	Pearson Correlation	.603**	1	.356**	-.176*
	Sig. (2-tailed)	.000		.000	.013
	N	200	200	200	200
State	Pearson Correlation	.706**	.356**	1	-.190**
	Sig. (2-tailed)	.000	.000		.007
	N	200	200	200	200
Achievement motivation	Pearson Correlation	-.340**	-.176*	-.190**	1
	Sig. (2-tailed)	.000	.013	.007	
	N	200	200	200	200

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Discussion

This study investigates anxiety and achievement motivation among hockey players, specifically exploring gender differences. A total of 200 athletes participated 100 males and 100 females. A significant gender differences in revealed which female athletes have shown higher achievement motivation ($\bar{X}$=143.75) and higher anxiety ($\bar{X}$=6.24) as compared to male athletes for achievement motivation ($\bar{X}$ =142.80) and anxiety ($\bar{X}$=5.19) with the t-value of anxiety (4.259) and achievement motivation (.399). The correlation analysis have highlighted the negative relationship of achievement motivation (-.340) with state and trait anxiety (.706 and .603) in hockey players.

This study makes a significant contribution to the existing literature on achievement motivation and anxiety. In the past, studies were conducted on achievement motivation and its effect on performance which indicated that achievement motivation is most significant predictor of performance and essential to participate in a competition (Huschle, et. al. 2008; Carey, et. al. 2000) Several motivation theories have been aided in the quest for greater understanding of achievement motivation in sport (Ames, 1984, 1992; Dweck, 1986; Nicholls, 1989). It is also found that athletes cannot perform at their best like they usually do because of anxiety. Therefore, their performance is affected during the competition and they hardly achieve victory (Papanikolaou, et al. 2008). Another research suggested that there is a need to give a positive thinking and better mental skills to solve the problems that may arise because of anxiety among players. It is found that athletes who are not able to handle high levels of anxiety they lose their control which further declines there performance. Thus it can be interpreted that there is a strong negative relationship between achievement motivation and anxiety (state and trait) which supports the present result.

Conclusion

In summary, the research conducted on a sample of 200 individuals revealed distinct gender differences in achievement motivation and anxiety among athletes. Female athletes exhibited higher achievement motivation and higher anxiety compared to the male athletes . The t-test results show significant differences, with females surpassing males in achievement motivation and anxiety levels. Correlation analyses within gender groups showed that, among male athletes, a negative correlation was found between achievement motivation and anxiety, while positive correlations was found between overall anxiety and both trait and state anxiety. For female athletes, negative correlations were observed between achievement motivation and anxiety measures, with positive correlations between overall anxiety and both trait and state anxiety.

Application to Practice

- The research findings suggests that male athletes can raise their achievement motivation by reducing the anxiety.
- The research findings suggests that all the athletes regardless of gender should be provided training for stress management.

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