

A COMPARISON OF PSYCHOLOGICAL STRESS OF MALE AND FEMALE HOCKEY PLAYERS

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ABSTRACT

The purpose of the study was to investigate and compare the psychological stress among male and female Hockey players of Chhattisgarh. The subjects of the study were One Hundred Fifty Hockey players (Ninety males and Sixty females) of Chhattisgarh participated in State and National school games competitions during the year 2008-2010. Scale of Physical Stress (SPS) of Bisht Battery of Stress Scale, 1995 (BBSS) prepared and standardized by Bisht was used to measure the four components of stress e.g. anxiety, frustration, pressure, and conflict. To assess the stress of male and female Hockey players on four psychological dimensions of stress, means and standard deviations, t-ratio, and one way analysis of variance were computed. The analysis of data revealed that male and female hockey players had variation in their frequency and quantity on four dimensions of stress i. e. frustration, conflicts, pressure, and anxiety. Male hockey players were found more frustrated, anxious, conflicted, and under pressure than their female counter parts.

Key words: Stress, Hockey Players, Frequency & Quantity

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INTRODUCTION

Sports is a Psycho-physical activity full of tensions, anxiety, conflict, strain, and stress. In this modern era of competitive sports, teams and individual athletes play to win. And this spirit of winning the matches and individual events causes many psychological stress teams may win or lose under psychological stress so one has to prepare to train such a way that the members of the team or athletes are to bear all types of stress and strains effectively which may deteriorate the sports performance (Singh, 1982).

The Concept of Stress has physiological, psychological and social aspects. The term stress was first used and popularized by Endocrinologist Dr. Hans Selye to describe the results of same kind of traumatic impingement on the organism. In fact he used the term to designate the event or trauma affecting the organism or individual later on, the term began to replace such words like anxiety, emotional distress conflict ego-threat, frustration, tension, lack of security and arousal etc. Which denotes some psychological and physiological conditions. But the word Stress remained popular because it tended to unify mind body relationship (Cratney, 1981).

Stress has been defined as a stimulus intervening or response variable and a behavior a mediator as an intervening variable and a behavior at a response variable according to Frost (1971), the stress is a state in which the natural homeostasis (equilibrium) of the body is disrupted. "May be threat to the organism, disease, trauma, heat Cold, Thirst, Fatigue may cause stress. Emotional arousal can also bring about stress" stress is the process that involves the perception of a substantial imbalance between environmental demand is perceived as having important consequences and is responded to with increased levels of anxiety. Hence Mac-Grath (1970) defines stress as occurring when there is an imbalance between the perceived demand and the perceived response capability of the organism. but the consequences must be perceived as important and it must be anticipated that failure to meet the demands will result in adverse consequence.

Anxiety, tension, stress, and other emotional disturbances are the symptoms of psychological stress, which are caused by frustration. The term frustration refers to the circumstances that result in the failure of a need to motivate to be satisfied when the satisfaction of the motive is thwarted, because we do not always reach the goal to which we aspire the thwarting or interference with goal directed behavior is often known as frustration. Whittaker (1970) says, interference with the satisfaction of motives is in the conflict of motives. If the individual wants two goals at the same time, he is likely to experience a great deal of discomfort and stress before making a choice.

Anxiety, stress, pressure, tension, and emotional excitement are all descriptive of the state of the organism of a sportsman, as it prepare him for some type of action. As it increases in quantity and intensity, the physiological mechanisms begins to operate and the organism is prepared to flee, to retreat, to fight or attack. It is a state of emotional excitement. In sports, it may be termed as "psyching-up" mental and physical preparation for a game or contest might involve all of these states i.e., anxiety, tension and emotional excitement.

Some times stress may also occur when the environment does not demand enough, when there is an under load rather than an overload of course stress like effects may occur from sensory deprivation social isolation or stimulus improvement. According to Spielberger

(1972), Stress is limited to the magnitude of objective danger that is associated with the stimulus properties of a given situation.

Stress in sport is both physical and psychological. It is easier, However, to Chart the physical injuries that cause young athletes to leave the arena than it is to chart psychological injuries which may also be disabling. Psychological stress often accompanies physical injury or precedes it. One example is provided in the lawsuit (New York Times December 6, 1981) of Vorhies versus the Virginia polytechnic Institute over the death of Bob Vorhies after he had completed punishment drills following a football practice (Butt, 1987).

The purpose of the study was to investigate and compare the psychological stress among male and female Hockey players of Chhattisgarh. It was hypothesized that there may be significant difference among male and female hockey players in all the dimensions of stress.

METHODOLOGY

Selection of Subjects:

The subjects of the study were One Hundred Fifty Hockey players (Ninty males and Sixty females) belong to different schools of Chhattisgarh and who participated in State and National school games competitions during the year 2008-2010 age ranging from 14 to 19 yrs.

Instrumentation:

Scale of Physical Stress (SPS) of Bisht Battery of Stress Scale, 1995 (BBSS) prepared and standardized by Bisht was used to measure the four components of stress e.g. anxiety, frustration, pressure, and conflict. The questionnaire consists of 60 items in which there are positive and negative statements which indicate the frequency of stress score provides the adding these frequency and quantity stress score provides the total stress scores. Physical frustration components have 22 items in which seven items show the negative response and fifteen items have positive response physical conflict pressure have sixteen items out of which two are negative response and in physical anxiety there are seventeen items. Where two negative response were recorded. The test is highly reliable which is dependability efficient 0.91 Stability coefficient 0.83 and internal consistence 0.78.

The subjects were contacted at the site of practice field of hockey personally and necessary instructions were provided to the subject before the administration of test. Once the instructions are clearly understood by them, the SPS questionnaires were distributed to the respondents. As soon as a group of players completed the Questionnaire, the completed questionnaires were collected from the hockey players and it was verified that no questionnaire was left without being answered.

RESULTS AND DISCUSSION

To assess the stress of male and female Hockey players on four psychological dimensions of stress, means and standard deviations, t-ratio, and one way analysis of variance with all the subjects were computed and data pertaining to this have been presented in Table 1 to 6.

TABLE 1
DESCRIPTIVE STATISTICS OF FOUR DIMENSIONS OF PSYCHOLOGICAL STRESS
OF MALE AND FEMALE HOCKEY PLAYERS

S.NO.	Dimensions of Stress	Males (N=115)		Females (N=72)	
		M	SD	M	SD
1.	Frustration	60.57	23.96	41.07	14.33
2.	Conflict	13.02	06.45	09.07	04.06
3.	Pressure	37.00	18.41	23.33	09.33
4.	Anxiety	46.12	19.59	25.88	15.17

The mean scores of total sum of four dimensions of physical stress of as indicated male and female hockey players have been depicted in figures 1.

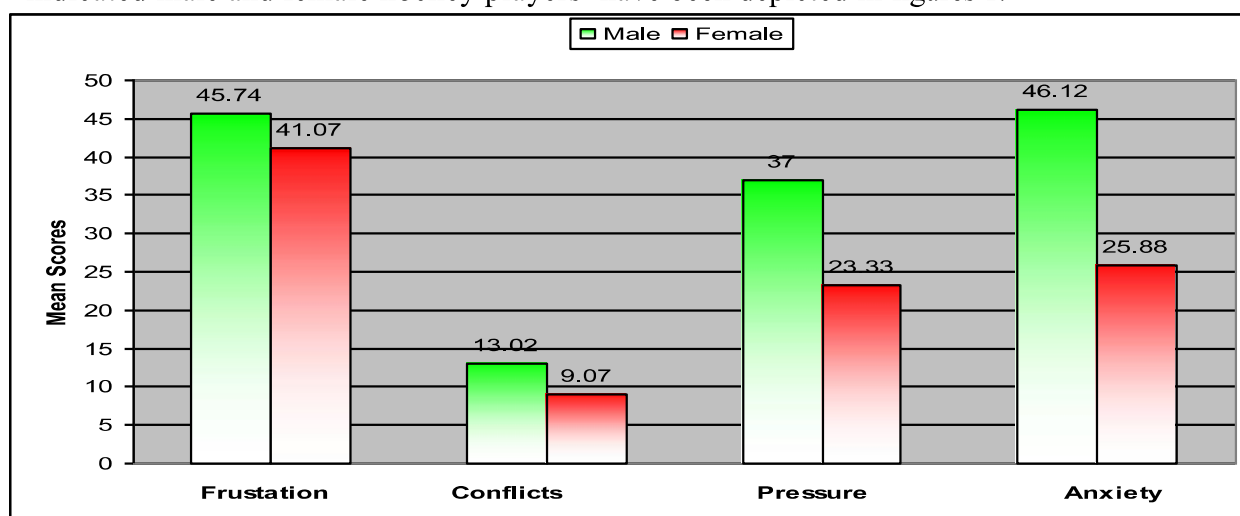


Fig. 1: Mean Scores of Total Sum of Frequency and Quantity on Four Dimensions of Physical Stress for Male and Female Hockey Players.

TABELE 2
ANALYSIS OF VARIANCE ON FOUR DIMENSIONS OF PSYCHOLOGICAL STRESS
AMONG MALE AND FEMALE HOCKEY PLAYERS

Dimensions	Source of Variance	df	Sum of Squares	Mean Square	F-ratio
Frustration	Between Groups	1	16844.46	16844.46	38.58*
	Within Groups	185	80826.78	436.90	
Conflict	Between Groups	1	690.13	690.13	21.37*
	Within Groups	185	5974.62	32.29	
Pressure	Between Groups	1	8270.16	8270.16	33.81*
	Within Groups	185	45248.00	214.58	
Anxiety	Between Groups	1	18150.93	18150.93	55.29*
	Within Groups	185	60736.17	328.30	

*Significant at .05 level, $F_{0.05}(1, 185) = 3.89$

From Table 2, It is evident that the statistically significant differences existed among male and female hockey players on four dimensions of physical stress i. e. .

frustration, conflicts, pressure, and anxiety, as the obtained F-value of 38.58, 21.37, 33.81, and 55.29 was much higher than the required $F_{.05}(1, 185) = 3.89$.

TABELE 3

ANALYSIS OF VARIANCE FOR PSYCHOLOGICAL STRESS OF MALE HOCKEY PLAYERS

Source of Variance	df	Sum of Squares	Mean Square	F-ratio
Between Groups	3	137439.00	137439.00	
Within Groups	456	153962.38	337.69	135.69*
Total	459	291401.38		

*Significant at .05 level, $F_{.05}(3, 456) = 2.62$

From Table 3, It is evident that the statistically significant difference existed among male hockey players on physical stress was very high, as the obtained F-value of 135.69 was much higher than the required $F_{.05}(3, 456) = 2.62$.

As the F-ratio was found to be significant, Scheffe's Test of Post-hoc comparison was applied to study the significance of differences among male hockey players on four dimensions physical stress and the data pertaining to this have been presented in Table 4

TABLE 4

SIGNIFICANCE OF DIFFERENCES AMONG MALE HOCKEY PLAYERS BETWEEN ORDERED PAIRED MEANS ON FOUR DIMENSIONS OF PSYCHOLOGICAL STRESS

Frustration	Conflicts	Pressure	Anxiety	Paired mean difference	Confidence Interval (C. I.)
60.57	13.02	-	-	47.55*	4.05
60.57	-	37.00	-	23.57*	
60.57	-	-	46.12	14.45*	
-	13.02	37.00	-	23.98*	
-	13.02	-	46.12	33.10*	
-	-	37.00	46.12	9.12*	

*Significant at .05 level

It is quite obvious from the table 4, that highly significant differences were found on physical stress male hockey players of between Frustration - Conflicts followed by Pressure and Anxiety; Conflicts - Pressure; followed by Anxiety, and Pressure- Anxiety as the paired mean differences of 47.55, 23.57, 14.45, 23.98, 33.10 and 9.12 respectively were higher than the confidence interval (C.I.) of 4.05.

TABELE 5

ANALYSIS OF VARIANCE FOR PSYCHOLOGICAL STRESS OF FEMALE HOCKEY PLAYERS

Source of Variance	df	Sum of Squares	Mean Square	F-ratio
Between Groups	3	37112.15	12370.72	
Within Groups	284	38823.18	136.70	90.49*
Total	287	65935.33		

*Significant at .05 level, $F_{.05}(3, 284) = 2.64$

From Table 5, It is evident that the statistically significant difference existed among female hockey players on physical stress was very high, as the obtained F-

value of 90.49 was much higher than the required $F_{.05}(3, 284) = 2.64$.

As the F-ratio was found to be significant, Scheffe's Test of Post-hoc comparison was applied to study the significance of differences among female hockey players on four dimensions physical stress and the data pertaining to this have been presented in Table 6.

TABELE 6
SIGNIFICANCE OF DIFFERENCES AMONG FEMALE HOCKEY PLAYERS
BETWEEN ORDERED PAIRED MEANS ON FOUR DIMENSIONS OF
PSYCHOLOGICAL STRESS

Frustration	Conflicts	Pressure	Anxiety	Paired mean difference	Confidence Interval (C. I.)
40.07	9.07	-	-	31.00*	5.48
40.07	-	23.33	-	16.74*	
40.07	-	-	25.88	14.19*	
-	9.07	23.33	-	14.26*	
-	9.07	-	25.88	16.81*	
-	-	23.33	25.88	2.55	

*Significant at .05 level

It is quite obvious from the table 6, that there were significant differences on physical stress among female hockey players of between Frustration - Conflicts followed by Pressure and Anxiety; Conflicts - Pressure; followed by Anxiety, as the paired mean differences of 31.00, 16.74, 14.19, 14.26 and 16.81 respectively were higher than the confidence interval (CI) of 5.48. But the mean differences between Pressure - Anxiety was not significant at 0.05 level, as the confidence interval of 5.48 was higher than the mean difference of 2.55.

DISCUSSION

The male and female hockey players had significant differences in their frequency and quantity for the set of four dimensions of physical stress. Males hockey players were found more frustrated, anxious, conflicted, and under pressure than their female counter parts.

The analysis of variance with male and female hockey players as a whole and four dimensions of physical stress indicated that significant differences existed among male and female hockey players in their frequency and quantity for the set of four dimensions of physical stress.

Significant differences were found among male and female hockey players in four dimensions of physical stress. It was also found that both sex gymnasts were more under frustration followed by anxiety, pressure and conflicts.

It was hypothesized that there may be significant difference among male and female hockey players on four dimensions of physical stress is partially accepted. But, it was also found that both sex hockey players were more under frustration followed by anxiety, pressure and conflicts. pressure than their female counter parts.

CONCLUSIONS

Within the limitations of the present study, the following conclusions are enumerated :

1. The male and female hockey players had variation in their frequency and quantity on four dimensions of stress i. e. frustration, conflicts, pressure, and anxiety.
2. Male hockey players were found more frustrated, anxious, conflicted, and under pressure than their female counter parts.
3. Male and female hockey players as a whole had variation on the set of four dimensions of stress.
4. Male and female hockey players were found more under frustration followed by anxiety, pressure and conflicts. dimensions of stress.

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