

COMPARATIVE STUDY ON SELECTED PSYCHOLOGY VARIABLES AMONG MALE AND FEMALE DELHI NATIONAL AND UNIVERSITY HOCKEY PLAYERS AT VARIOUS LEVELS OF COMPETITION

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ABSTRACT

The purpose of this study is to explore the comparative study on selected psychology variables among male and female Delhi national and university hockey players at various levels of competition. For this study, we selected 50 variables among male and female Delhi national and university players aged 18 to 25 years. The target group consisted of members from different stadiums and Delhi university campus. Anxiety Inventory test was applied to measure anxiety, Motivation inventory test was applied to measure motivation and aggression inventory test was applied to measure aggression. Data analysis included both descriptive statistical methods and paired sample t-test. This study, thus, recommended people to play hockey in order to effectively reduce stresses in their lives.

Keywords: Hockey, psychology, anxiety, motivation and aggression.

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INTRODUCTION

Field hockey is played on gravel, natural grass, sand-based or water-based artificial turf, with a small, hard ball approximately 73 mm (2.9 in) in diameter. The game is popular among both males and females in many parts of the world, particularly in Europe, Asia, Australia, New Zealand, South Africa, and Argentina. In most countries, the game is played between single-sex sides, although they can be mixed-sex as well.

The governing body is the 126-member International Hockey Federation (FIH). Men's field hockey has been played at each summer Olympic Games since 1908 (except 1912 and 1924), while women's field hockey has been played at the Summer Olympic Games since 1980.

Modern field hockey sticks are J-shaped and constructed of a composite of wood, glass fibre or carbon fibre (sometimes both) and have a curved hook at the playing end, a flat surface on the playing side and curved surface on the rear side. All sticks are right-handed – left-handed sticks are not permitted.

While current field hockey appeared in mid-18th century England, primarily in schools, it was not until the first half of the 19th century that it became firmly established. The first club was created in 1849 at Blackheath in south-east London. Field hockey is the national sport of Pakistan. It was the national sport of India until the Ministry of Youth Affairs and Sports declared that India has no national sport in August 2012.

Sport psychology has a relatively short past, and in recent years it is becoming far more accepted and utilised as a valuable competitive edge among athletes and coaches. In 1897, an Indiana University psychologist, Dr. Norman Triplett, wrote what was considered the first scientific paper on sport psychology, on the social facilitation behaviour of bicyclists. In the early 1920s, the first sport psychology laboratory was created in Berlin, Germany, by Dr. Carl Diem. Soon after, sport psychology arrived in America when Dr. Coleman R. Griffith created the first sport psychology laboratory in the U.S., in the state of Illinois. Dr. Griffith also created and taught the first university level courses in sport psychology at the University of Illinois, in 1923. In addition, Dr. Griffith was the first sport psychologist ever hired by a professional sports team, the Chicago Cubs baseball team. For his pioneering efforts, he is considered the father of the science of sport psychology in the United States.

We can define psychology as the study of the human mind, emotions and behaviour. Psychology is an academic and applied field. The American Psychological Association (APA) states that sport psychology is the “scientific study of the psychological factors that are associated with participation and performance in sport, exercise, and other types of physical activity.” The most important certifying body in sport psychology, the Association for Applied Sport Psychology (AASP), states that they “promote the ethical practice, science, and advocacy of sport and exercise psychology”.

Virtually every college, national, professional and Olympic sports team has a sports psychologist on staff, and countless individual college, Olympic and professional athletes work closely with sports psychology consultants. Look at a few of the big names in pro golf who have used sports psychology consultants. It's estimated that well over 300 of the pro game's players regularly use sports psychologists.

Anxiety in sport is most common in competitive sports environments and could also be termed competitive stress. A lack of consensus makes it difficult to clearly define anxiety and stress in sport, but one definition, proposed by sport psychology consultant Dr. Graham Jones in the book "Sport Psychology: A Self-Help Guide," is that it's "the result of an interaction between the individual and the environment, an emotional response to the demands placed upon the individual by the environment." Anxiety has two main types: State anxiety is transient and specific only to the particular situation an athlete finds herself/ himself in. Trait anxiety is more general and enduring, suggesting a predisposition to anxiety in all areas of life, not just in sport.

Symptoms of anxiety are varied and individual to each athlete, but they can generally be recognised on three levels: Cognitive symptoms relate to thought processes, including fear, indecision, poor concentration, loss of confidence and defeatist self-talk. Somatic (physical) symptoms include muscular tension, clammy hands and feet, increased heart rate, sweating and butterflies in the stomach. Behavioural symptoms relate to patterns of

behaviour, including inhibited posture, fingernail biting, avoidance of eye contact and uncharacteristic displays of introverted or extroverted behaviour.

Competitive stress becomes negative, potentially leading to symptoms of anxiety, when an athlete perceives what is being asked of him to be beyond his capabilities. Anxiety is often linked to a fear of failure, and an athlete's perception of his abilities may be based on a previous performance, his beliefs regarding the opposition or the perceived importance of the competition. His perception can also vary greatly from event to event, depending on his perceived state of physical and mental preparation in each case.

Aggression in sport can be caused by a number of factors. The most identifiable reasons are the rules of the game (level of physical contact), frustration, instinct, presence, arousal, environmental cues, self control and also the behaviour of those around.

Other factors in aggression include personality, media involvement, coaching, role models and the society we live in. The following is an insight into the term aggression in sport and using the social learning theory and environmental cues theory, I will explain examples of each theory and try and contrast them.

Psychologists have distinguished two types of aggression in sport, hostile and instrumental. Hostile aggression is a participant's purpose to solely harm someone physically. Using one's fist or elbow can fall into this category and a sporting example of this was shown in football by Ben Thatcher of Manchester City when he slammed his elbow into Pedro Mendes of Portsmouth. This can also be called reactive aggression (sympathetic arousal) and is associated with anger.

Instrumental aggression can be used to achieve a goal, which can be to tackle harder to gain possession of the ball i.e. rugby. It is also known as channelled aggression, the ability to turn it on and off and control the temperament and it is not associated with anger.

Increasing motivation towards physical activity through quality physical education has recently gained considerable attention. Several investigators have outlined specific models or theories to illustrate how motivation can be enhanced in physical education. Enhancing a youngster's perceived physical competence, promoting intrinsic motivation through the basic tenets of self-determination theory, and creating a motivationally adaptive climate based on a mastery of goal orientation have all been advanced as possible strategies to increase motivation for physical activity.

METHODOLOGY

The Statement

Comparative study on selected psychology variables among male and female Delhi national and university hockey players at various levels of competition

Significance of the study

Hockey in Delhi region is gearing up gradually and by and large, our country is not able to produce effective players in a continuum year. Many technical and scientific reasons may be attributed to this cause. Hence, an attempt is made through this study to find out the influence of a few important psychologies i.e. Anxiety, Aggression and Motivation variables which can play a vital role in achieving sound progress of Hockey players in Delhi. These selected variables have been focussed on by many reputed sports journalists, bureaucrats, coaches, Olympic and other sports federation officials as the main reasons affecting the players of the game of hockey in Delhi. Hence, a deeper study at doctoral level is necessary on effects of these selected psychology variables among the players of hockey in Delhi. The results of study would help to enhance better performance of participants playing hockey.

Objective of the study

The following objectives were focused in the present study.

1. To find out the influence of anxiety among elite players of hockey in Delhi.
2. To find out the influence of aggression among elite players of hockey in Delhi.
3. To find out the influence of motivation among elite players of hockey in Delhi.

Hypothesis

The following hypotheses were formulated for the present study:

1. There may not be any significant difference between male Delhi National and University Hockey players in relation to their **anxiety** at various levels of competition.
2. There may not be any significant difference between female Delhi National and University Hockey players in relation to their **anxiety** at various levels of competition.
3. There may not be any significant difference between male Delhi National and University Hockey players in relation to their **aggression** at various levels of competition.
4. There may not be any significant difference between female Delhi National and University Hockey players in relation to their **aggression** at various levels of competition.
5. There may not be any significant difference between male Delhi national and university Hockey players in relation to their **motivation** at various levels of competition.
6. There may not be any significant difference between female Delhi National and university Hockey players in relation to their **motivation** at various levels of competition.

Delimitation

1. The study was delimited to national hockey players in Delhi.
2. The study was delimited to hockey male and female players in Delhi.
3. The age of selected hockey players ranged between 18 to 25 years.
4. The study was conducted on selected psychological variables.

Limitation

The study was limited to the following aspects:

- Height, weight and nutrition of the subjects had not be taken into consideration for this study.
- Climatically conditions and health habits of the selected sample were not being considered for the study.

Sample of the study

For the present investigation the sample considered was psychological variables of male and female Delhi National Hockey Players and Delhi University Hockey Players at level of Competition. The scholar considered as sample of the study which is shown in the following table.

Showing the sample of the study

Sr. No.	Subjects	Male	Female	Total Number of subjects
1.	Delhi University Hockey Players	50	50	100
2.	Delhi National Hockey Players	50	50	100

Tools Used

The following experimental variables have been considered for the present study.

- (a) Anxiety Inventory Test
- (b) Motivation Inventory Test
- (c) Aggression Inventory Test

Data Selection Procedure

The researcher has conducted the five psychological variables mentioned in the tool for all the selected samples. The subjects were apprised about the test and even they were eager to know the results. The data was collected during the national and inter university tournaments conducted during the month of January 2011.

Statistical Technique Used

The investigation under report studied the differences between Delhi national and university male and female players on selected psychological variables. The data collected in this study was subjected to statistical analysis with appropriate tools. The descriptive statistics was used to find out the means and standard deviations and t-test was computed.

RESULT AND DISCUSSION**RESULTS AND DISCUSSION ON HYPOTHESIS - I**

The results are pertaining to the hypothesis-I which is 'there may not be any significant difference between Delhi National Hockey Players (Male) and Delhi University Hockey Players (Male) in relation to their Anxiety'. Data on this were presented in table - 1.

Table - 1
Showing the mean, standard deviation, "t" ratio and p values of Delhi National Hockey Players (Male) and Delhi University Hockey Players (Male) in relation to their Anxiety

Sl. No.	Subject	N	Mean	S.D	t ratio	P value
1	Delhi National Hockey Players (Male)	50	15.72	3.33	-2.39	0.02
2	Delhi University Hockey Players (Male)	50	17.68	4.52		

Graph - 1
Showing the mean and standard deviation of Delhi National Hockey Players (Male) and Delhi University Hockey Players (Male) in relation to their Anxiety

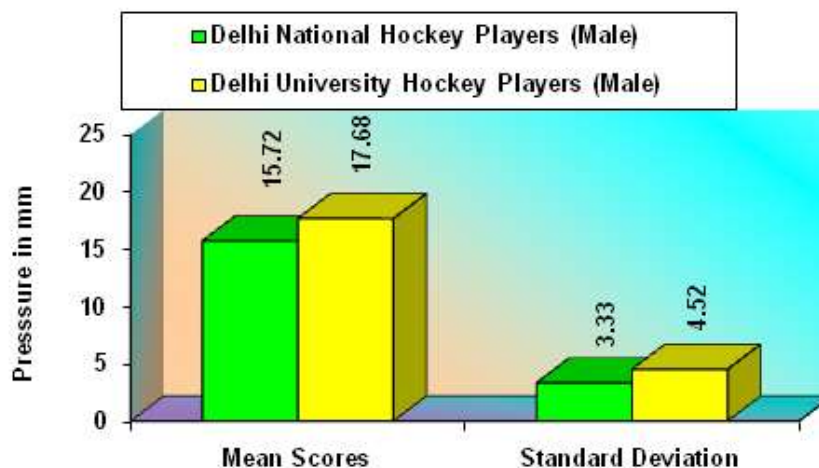
**DISCUSSION**

Table-1 and Graph-1 show the mean values, standard deviation, "t" ratio and significance between Delhi National Hockey Players (Male) and Delhi University Hockey Players (Male) in relation to their Anxiety. The mean value of Delhi National Hockey Players (Male) was 15.72, standard deviation was 3.33 and the mean value of Delhi University Hockey Players (Male) was 17.68, standard deviation was 4.52. The "t" ratio was -2.39 and p value was 0.02 which was found to be significant at 0.05 levels.

Hence, Hypothesis-I was rejected.

RESULTS AND DISCUSSION ON HYPOTHESIS - II

The results are pertaining to the hypothesis-II which is 'there may not be any significant difference between Delhi National Hockey Players (Female) and Delhi University Hockey Players (Female) in relation to their Anxiety'. Data on this were presented in the table-2.

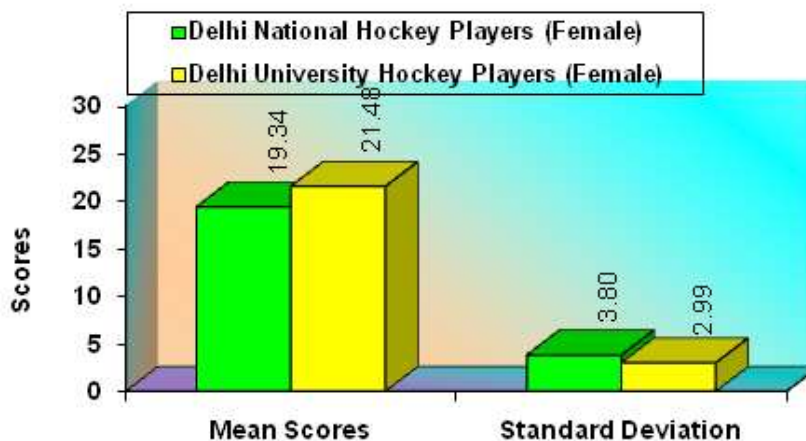
Table - 2

Showing the mean, standard deviation, "t" values and p values of Delhi National Hockey Players (Female) and Delhi University Hockey Players (Female) in relation to their Anxiety

Sl. No.	Subject	N	Mean	S.D	t ratio	P value
1	Delhi National Hockey Players (Female)	50	19.34	3.80	-2.95	0.00
2	Delhi University Hockey Players (Female)	50	21.48	2.99		

Graph - 2

Showing the mean and standard deviation of Delhi National Hockey Players (Female) and Delhi University Hockey Players (Female) in relation to their Anxiety



DISCUSSION

Table-2 and Graph-2 show the mean values, standard deviation, "t" ratio and significance between Delhi National Hockey Players (Female) and Delhi University Hockey Players (Female) in relation to their Anxiety. The mean value of Delhi National Hockey Players (Female) was 19.34, standard deviation was 3.80 and the mean value of Delhi University Hockey Players (Female) was 21.48, standard deviation was 2.99. The "t" ratio was -2.95 and p value was 0.00 which was found to be significant at 0.05 levels.

Hence, Hypothesis-II was rejected.

RESULTS AND DISCUSSION ON HYPOTHESIS - III

The results are pertaining to the hypothesis-III which is 'there may not be any significant difference between Delhi National Hockey Players (Male) and Delhi University Hockey Players (Male) in relation to their Aggression'. Data on this were presented in the table-3.

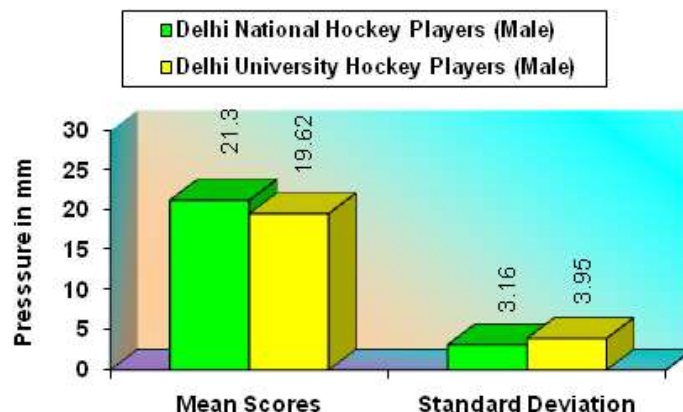
Table - 3

Showing the mean, standard deviation, "t" ratio and p values of Delhi National Hockey Players (Male) and Delhi University Hockey Players (Male) in relation to their Aggression

Sl. No.	Subject	N	Mean	S.D	t ratio	P value
1	Delhi National Hockey Players (Male)	50	21.30	3.16	2.16	0.03
2	Delhi University Hockey Players (Male)	50	19.62	3.95		

Graph - 3

Showing the mean and standard deviation of Delhi National Hockey Players (Male) and Delhi University Hockey Players (Male) in relation to their Aggression



DISCUSSION

Table-3 and Graph-3 show the mean values, standard deviation, "t" ratio and significance between Delhi National Hockey Players (Male) and Delhi University Hockey Players (Male) in relation to their Aggression. The mean value of Delhi National Hockey Players (Male) was 21.30, standard deviation was 3.16 and the mean value of Delhi University Hockey Players (Male) was 19.62, standard deviation was 3.95. The "t" ratio was 2.16 and p value was 0.03 which was found to be significant at 0.05 levels. Hence, Hypothesis-III was rejected.

RESULTS AND DISCUSSION ON HYPOTHESIS - IV

The results are pertaining of the hypothesis-IV which is 'there may not be any significant difference between Delhi National Hockey Players (Female) and Delhi University Hockey Players (Female) in relation to their Aggression'. Data on this were presented in the table-4

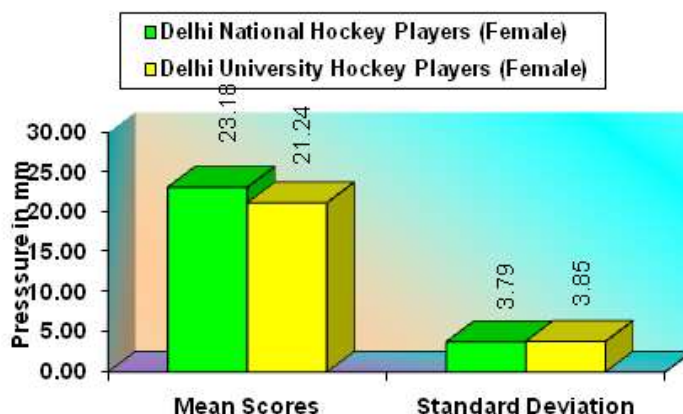
Table - 4

Showing the mean, standard deviation, "t" values and p values of Delhi National Hockey Players (Female) and Delhi University Hockey Players (Female) in relation to their Aggression

Sl. No.	Subject	N	Mean	S.D	t ratio	P value
1	Delhi National Hockey Players (Female)	50	23.18	3.79	2.54	0.02
2	Delhi University Hockey Players (Female)	50	21.24	3.85		

Graph - 4

Showing the mean and standard deviation of Delhi National Hockey Players (Female) and Delhi University Hockey Players (Female) in relation to their Aggression



DISCUSSION

Table-4 and Graph-4 show the mean values, standard deviation, “t” ratio and significance between Delhi National Hockey Players (Female) and Delhi University Hockey Players (Female) in relation to their Aggression. The mean value of Delhi National Hockey Players (Female) was 23.18, standard deviation was 3.79 and the mean value of Delhi University Hockey Players (Female) was 21.24, standard deviation was 3.85. The “t” ratio was 2.54 and p value was 0.02 which was found to be significant at 0.05 levels. Hence, Hypothesis-IV was rejected.

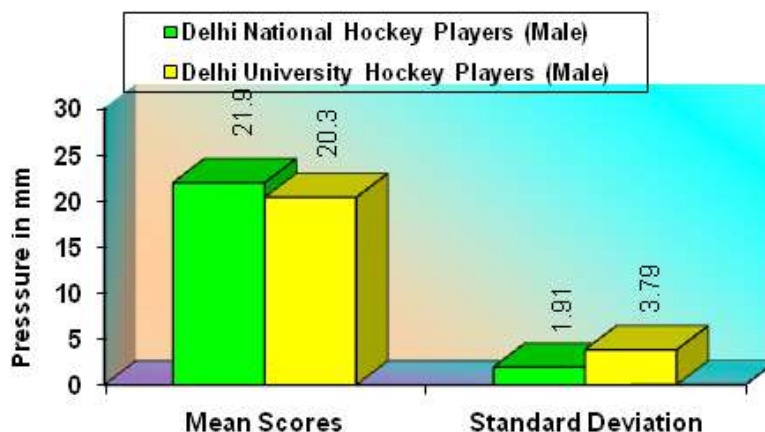
RESULTS AND DISCUSSION ON HYPOTHESIS - V

The results are pertaining of the hypothesis-V which is ‘there may not be any significant difference between Delhi National Hockey Players (Male) and Delhi University Hockey Players (Male) in relation to their Motivation’. Data on this were presented in the table 5.

Table - 5
Showing the mean, standard deviation, “t” ratio and p values of Delhi National Hockey Players (Male) and Delhi University Hockey Players (Male) in relation to their Motivation

Sl. No.	Subject	N	Mean	S.D	t ratio	P value
1	Delhi National Hockey Players (Male)	50	21.90	1.91	2.83	0.00
2	Delhi University Hockey Players (Male)	50	20.30	3.79		

Graph - 5
Showing the mean and standard deviation of Delhi National Hockey Players (Male) and Delhi University Hockey Players (Male) in relation to their Motivation



DISCUSSION

Table-5 and Graph-5 show the mean values, standard deviation, “t” ratio and significance between Delhi National Hockey Players (Male) and Delhi University Hockey Players (Male) in relation to their Motivation. The mean value of Delhi National Hockey Players (Male) was 21.9, standard deviation was 1.91 and the mean value of Delhi University Hockey Players (Male) was 20.30. The “t” ratio was 2.83 and p value was 0.00 which was found to be significant at 0.05 levels. Hence, Hypothesis-V was rejected.

RESULTS AND DISCUSSION ON HYPOTHESIS – VI

The results are pertaining of the hypothesis-VI which is ‘there may not be any significant difference between Delhi National Hockey Players (Female) and Delhi University Hockey Players (Female) in relation to their Motivation’. Data on this were presented in the table-6.

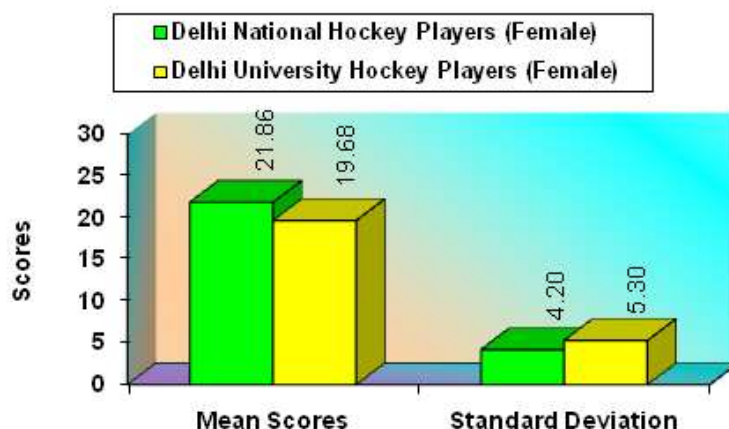
Table - 6

Showing the mean, standard deviation, "t" values and p values of Delhi National Hockey Players (Female) and Delhi University Hockey Players (Female) in relation to their Motivation

Sl. No.	Subject	N	Mean	S.D	t ratio	P value
1	Delhi National Hockey Players (Female)	50	21.86	4.20	2.66	0.01
2	Delhi University Hockey Players (Female)	50	19.68	5.30		

Graph - 6

Showing the mean and standard deviation of Delhi National Hockey Players (Female) and Delhi University Hockey Players (Female) in relation to their Motivation



DISCUSSION

Table-6 and Graph-6 show the mean values, standard deviation, "t" ratio and significance between Delhi National Hockey Players (Female) and Delhi University Hockey Players (Female) in relation to their Motivation. The mean value of Delhi National Hockey Players (Female) was 21.86, standard deviation was 4.20 and the mean value of Delhi University Hockey Players (Female) was 19.68. The "t" ratio was 2.66 and p value was 0.01 which was found to be significant at 0.05 levels.

Hence, Hypothesis-IV was rejected.

CONCLUSION

A perusal of the entire presentation with a special reference to the chapter covering the results and the discussions would help in arriving at the results in brief which enables in drawing general conclusion which are stated briefly in the following paragraphs.

The following conclusions were drawn from the attempted study:

1. It is concluded that significant difference was found between male Delhi National and University Hockey players in relation to their **anxiety** at various levels of competition.
2. It is concluded that significant difference was found between female Delhi National and University Hockey players in relation to their **anxiety** at various levels of competition.
3. It is concluded that. Significant difference was found between male Delhi National and University Hockey players in relation to their **aggression** at various levels of competition.
4. It is concluded that significant difference was found between female Delhi National and University Hockey players in relation to their **aggression** at various levels of competition.
5. It is concluded that significant difference was found between male Delhi National and University Hockey players in relation to their **motivation** at various levels of competition.
6. It is concluded that significant difference was found between female Delhi National and university Hockey players in relation to their **motivation** at various levels of competition.

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