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**Dr. Monika Verma**  
Associate Professor  
Department of physical  
education, C.D.L.U., Sirsa,  
Haryana, India

**Darshan Kaur**  
Research Scholar  
Department of physical  
education, C.D.L.U., Sirsa,  
Haryana, India

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## Analysis of selected physiological variables between Haryana and Punjab hockey players

**Dr. Monika Verma, Darshan Kaur**

### Abstract

The purpose of the study was to analysis the selected physiological variables between Haryana and Punjab male hockey players. Only forty male players (Haryana 20 and Punjab 20) of 18-27 years age were randomly selected from different colleges of Haryana and Punjab state. Only selected physiological variables i.e. the pulse rate, Blood Pressure (systolic and diastolic) of the subjects were measured by using respective techniques and equipments. The between-group differences were assessed by using 't' test. The level of  $p \leq 0.05$  was considered significant.

**Keywords:** Physiological, Haryana, Punjab, Male.

### 1. Introduction

The developing tendencies in international sports, especially in team games are identified as the increase in game tempo, tougher body game and greater variability in technique and tactics. An increased performance level can only be achieved by working and training of all major components i.e. technique, coordination, tactics, physical fitness, physiological qualities and psychological qualities. Physiological exercise testing is important in hockey to help identify potential talent but also to provide the players, trainers and coaching staff with some profiles for the players and a measure for evaluating training programs.

Testing physiological requirements for hockey has become more specific over the past decade with further advances in both sports science technology and general understanding of the physiological requirements for testing hockey. However despite this progress in testing procedures and knowledge there still appears limited research regarding the analysis and critical appraisal of tests used specifically for hockey. Many laboratory and field tests for physiological assessment do exist, however to be thorough in reviewing physiological status it is important to assess all components of the sport, specifically measuring each energy system. The other main component of the game not covered within this review is skill. These tasks can be assessed with testing procedures that exist but the coaching staff normally specializes in this area and thus generally will devise their own skill assessment. It is important also to note the musculoskeletal screening assessments involving information regarding the players muscle balance, core stability and general flexibility. This testing is normally done separate to the fitness based testing and is performed by physical educationists, trainers, physiotherapists, coaches and researchers. Together all of this information provides a perfect combination to ensure analysis of every physical component of the game.

### Objective of the study

- ✓ To study the physiological variables between Haryana and Punjab male hockey players.
- ✓ To find out the significant difference of physiological variables between Haryana and Punjab male hockey players on.

### Methodology

#### Subjects

The present study were conducted on 40 male hockey players (Haryana: 20 and Punjab: 20) of 18-30 years age. The subjects were randomly selected from different colleges of Haryana and Delhi state and they volunteered to participate in the study.

**Correspondence:**  
**Dr. Monika Verma**  
Associate Professor  
Department of physical  
education, C.D.L.U., Sirsa,  
Haryana, India

**Selection of Variables**

**Physiological Variables**

- ❖ Pulse Rate
- ❖ Systolic Blood Pressure
- ❖ Diastolic Blood Pressure

**Tools used for data collection**

The criterion measure was used to collect the data in a deal and systematic way to record in a correct unit and style for each test item.

- ❖ Pulse rate of the subjects was measured with the help of

stopwatch and measurement was in number of pulse / minute. The basal pulse rate was measured for the study.

- ❖ Systolic blood pressure was also be measured by using digital blood pressure apparatus and the unit was measured in MM of Hg.
- ❖ Diastolic blood pressure was also be measured by using digital blood pressure apparatus and the unit was measured in MM of Hg.

**Data Analysis**

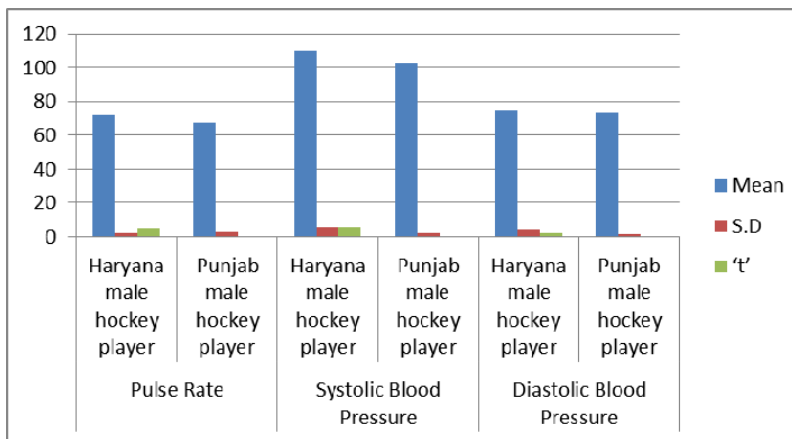
**Table 1:** Comparison of Physiological Variable of male Hockey players of Haryana and Punjab

Variable	Area	Mean	S.D	't'
Pulse Rate	Haryana male hockey player	72.10	2.19	5.01*
	Punjab male hockey player	67.65	2.60	
Systolic Blood Pressure	Haryana male hockey player	110.03	5.68	5.21*
	Punjab male hockey player	103.02	2.40	
Diastolic Blood Pressure	Haryana male hockey player	75.30	4.00	2.06*
	Punjab male hockey player	73.20	1.64	

Significant at 0.05 levels  
't' 0.05 = 1.66

Table-1: shown the comparison of Physiological variables of the players of the Haryana and Punjab male hockey players. The mean values of pulse rate of the hockey male players of the Haryana and Punjab state were 72.10 beats/min and 67.65 beats/min respectively. The mean values of systolic blood pressure of the players of Haryana and Punjab state were 110.03 and 110.02 respectively. The mean values of diastolic blood pressure of the Haryana and Punjab male hockey players

75.30 and 73.20 were respectively. The 't' value of the pulse rate, blood pressure (Systolic and Diastolic) of the Haryana and Punjab male hockey players were 5.01\*,5.21\* and 2.06\* respectively which was tested at the level of significant at .05 level and the tabulated value of 't'=1.66, which showed that significant difference in mean value of Pulse rate, (Systolic and Diastolic) blood pressure was found and our hypothesis was rejected.



**Graph 1:** Graphical representation of Physiological Variable of male hockey players of Haryana and Punjab

**Discussion of the study**

The data revealed that physiological variables like pulse rate, blood pressure (systolic and diastolic) was observed and there was significant difference between Haryana and Punjab male hockey players.

**Conclusion**

- The data showed that the mean scores of Punjab male hockey players for physiological variables (Pulse rate, Systolic and Diastolic (bold pressure) were better than Haryana male hockey players.

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