

A Comparative Study of Physiological Parameters of Selective Games

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INTRODUCTION

Physiological may be distinguished from the other basis Bio-medical sciences by its emphasis on the processors that control and regulates important properties of living system. In the healthy human body, many variables are maintained. Within relatively narrow physiological limit. The list of controlled variables is long its includes body temperature, blood pressure, pulse rate, body composition, respiratory rate, ionic composition of blood plasma, blood glucose levels that oxygen and carbon dioxide contents of blood and a lots of other properties. The tendency to maintain the relative consistency of certain variables is known as homeostatic. A Central goal of physiology research is the elucidation of the mechanism response for homeostasis.

Many sport scientist and Physiologist were trying to find out and identify the need of the physiological factors for better performance. Spanial (1999) had worked on relationship of structure and function. Course (2000) reported on physiology demands to identify the difference in physiology and bio-mechanical requirements.

Davies (1992) suggested the physiology characteristics and the role of requirements for sports performance.

PHYSIOLOGICAL VARIABLES AND ITS IMPORTANCE

High level of performance of cricket player and hockey player might be dependant upon her physiological make up and it was recognize that physiology proficiency was needed for high level performance. Hence resting pulse rate, Respiratory rate, blood pressure, vital capacity and skin fold measurement was selected as Physiological components for this investigation.

STATEMENT OF THE PEOBLEM

The purpose of this study was to compare the selected physiological parameters of selected sports.

DECLAMATION

1. The Study was delimited to randomly selected forty Female players 20 cricket and 20 hockey from 18 to 27 years of M D U Rohtak and concern colleges.
2. The Study was further delimited to two Selective team games i.e. Cricket, Hockey.
3. The Study was the further delimited to the following physiological parameters.

- (a) Pulse rate
- (b) Respiratory Rate
- (c) Vital Capacity
- (d) Blood Pressure
 - Systolic
 - Diastolic
- (e) Skin Folds
 - Biceps
 - Triceps
 - Supra –Illian Skin Fold
 - Sub-Scapular Skin Fold

HYPOTHESIS

It is hypothesized that there was significant difference in selected Physiological parameters between cricket and hockey player.

SIGNIFANCE OF THE STUDY

The present researcher was experiencing to find out the best and easiest means in respect of physiological variables of the player suitable to the team games. However, Physiological variables are not the exclusive factor for the selection of a National Team of a country Many other factor are also to be considered for determining the performance of a player.

Ray (2002) conduct a study to compare National level Sprint swimmers & long distance swimmer in selected physical and physiological variables. Thirty male sprint swimmers and thirty male long distance swimmers were randomly selected from the different state of India. The result of the study shows that there was significant difference in arm and shoulder strength between long sprint and long distance swimmers. There were no significant difference in height, weight body % of fat, grip strength, between sprint and distance swimmer however there were significant difference in maximum oxygen consumption an aerobic power, peak flow rate and virtual capacity between sprint and long distance swimmers.

TOOLS REQUIRED

Physiological equipments like Sphygmomanometer, Stethoscope, Dry Spiro meter Skin folds Caliper was used.

**Table-2: Mean, Standard Deviation on Selected Physiological Variables Among
Players.****Cricket**

Variables	Mean	Standard Deviation
Pulse rate(b/min)	1.8	8.40
Respiratory rate(breathe/min)	20.1	8.98
Vital capacity(cc)	1750.00	328.9
Blood pressure		
Systolic(mmHg)	119.8	5.55
Diastolic(mmHg)	78.4	10.99
Skin folds(MM)	12.4	12.55
Biceps	7.2	9.90
Triceps	10.4	10.62
Supra iliac	12.4	12.55
Sub scapular	10.6	4.55

It is evident from table no. 1 that mean pulse rate of cricket players is 71.8 where as standard deviation is 8.40 similarly respiratory rate mean and standard deviation were found to be 20.1, 8.98 respectively. Similarly Vital Capacity mean and standard deviation was 1750, 328.9 respectively. Similarly blood pressure systolic mean and standard deviation was 119.8, 5.55 respectively and diastolic blood pressure mean and standard deviation 7.2, 9.9 respectively. Similarly Triceps skin fold mean and standard deviation 10.4, 10.64 and supra iliac Skin fold measurement mean and standard deviation was 12.4, 12.55 respectively. Sub Scapular skin fold measurement mean and standard deviation was 10.6, 4.55 respectively.

**Table-2: Mean, Standard Deviation on Selected Physiological Variables among Hockey
Players**

Variables	Mean	Standard Deviation
Pulse rate(b/min)	75.3	6.73
Respiratory rate(breathe/min)	22.1	8.16
Vital capacity(cc)	2080	910.2
Blood pressure		
Systolic(mmHg)	106.8	8.55

Diastolic(mmHg)	78.8	20.63
Skin folds(MM)		
Biceps	8.2	3.99
Triceps	10.9	11.58
Supra iliac	9.7	25.06
Sub scapular	12.6	8.14

It is evident from table no. 1 that mean pulse rate of Hockey Players is 75.3 where as standard deviation is 6.73 similarly respiratory rate mean and standard deviation were found to be 2.21, 8.16

Respectively. Similarly Vital Capacity means and standard deviation was 2080, 910.2 respectively. Similarly blood pressure systolic mean and standard deviation was 106.8, 8.555 respectively and diastolic blood pressure mean and standard mean and standard deviation were found to be 78.8, 20.63 and biceps skin fold measurement mean and standard deviation 8.2, 3.99 respectively. Similarly Triceps skin fold mean and standard deviation were found to be 10.9, 11.58 and Supra iliac Skin fold measurement mean and standard deviation was 9.7, 25.06 respectively. Sub Scapular skin fold measurement mean and standard deviation was 12.06, 8.14 respectively.

DISCUSSION OF HYPOTHESIS

With in the limitation of the study it was found that the hypothesis early set up by researcher was partially accepted as the significant difference was found in systolic blood pressure. Hence the hypothesis was partially accepted or partially rejected.

CONCLUSION

On the basis of the analysis of data as well as in the view of observation, along with the objectives with in the limitation of the present study in the following conclusion were drawn:

1. It was concluded from the study that there is significance difference in systolic blood pressure between Cricket and Hockey players.
2. It was also concluded that were no significance difference among the players of selected games in relation to other physiological parameters like, pulse rate, respiratory rate, Diastolic blood pressure, biceps, triceps, subscapular and supra iliac skin measurement.

RECOMMENDATION

1. The result of present study may be used be the various authorities coaches, physical education personal for selection of players for different games.
2. Similarly studies may be conducted on different age, sex, and at different level of competition.

3. Various other parameter which were not selected in present study may be selected or included for further study.
4. The present study may be carried out on the male subjects same age group and other than that employed in this study.
5. Physical education teachers and coaches may utilize those variables which have been found to be significantly related to performance in woman kho-kho and kabaddi players while selecting the potential players.

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