# A Comparison of Physiological Parameters of Basketball And Kabaddi Female Players.

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## INTRODUCTION

Physiology is a branch of biology concern with a function of the body. Physiology is the science that treats the function of the living organization and its parts. The term "Physiology" is the combination of two Greek words Physis, "Nature" on lugos. "Science or Study" simply it is the Study of Physiology that helps to understand how the body works.

Davis et al (2002) suggested the physiological characteristics and role of requirements for sports performance.

Sportsmen are a group of people who are subjected to the selection process through the various competitive test it effecting their capacity as those best Physically fit so it is needed a suitable group or individual for the investigation of their morphological variables. Physiological and anthropometrical characteristics in the process of adaptation the making of an athlete is a very complex phenomenon for successful performance of an event. Attempt have been made to understand the specific body constitution or certain body types which would help them to attain better performance.

## STATEMENT OF THE PROBLEM

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

## DELIMITATION

1. The study was delimited to randomly selected forty female players age ranging from 17 to 25 years of Maharani Kishori Jat Kanya Mahavidyalaya, Rohtak.
2. The study was further delimited to two selective team games i.e. Basketball, Kabaddi.
3. The study was 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 – Illiac Skin Fold
      - Sub – Scapular Skin Fold

## HYPOTHESIS

It is hypothesized that there was significant difference in selected physiological parameters between Basketball and Kabaddi Players.

## DEFINITION AND EXPLAINATION OF TERMS

**PULSE RATE** – Frequency per minute of pressure waves propagated along the superficial, peripheral arteries, such caroted and radial arteries. In normal, healthy individuals, the pulse rate and the heart rate are identical, but this is not so in patients suffering from some cardio-vascular disease such as arrhythmias.

**RESPIRATORY RATES** – Number of breathes (expiration – inspiration) in one minute.

**VITAL CAPACITY** - Maximum value of air forcefully expired after maximal inspiration.

**BLOOD PRESSURE** – Blood Pressure may be defined as the force or pressure which the blood exerts on the walls of the arteries in which it is contained.

**SKIN FOLDS** – A folds include double layer of skin and adipose tinue but no muscle.

## SELECTION OF SUBJECTS

Study conducted on Forty female players studing in Maharani Kishori Jat Kanya Mahavidyalaya, Rohtak age ranging from 17 to 25 years.

## TOOLS REQUIRED

Physiological equipments like Sphygnomanometer, Stethoscope, Dry Spirometer, Skinfold Caliper was used.

## ANALYSIS OF DATA

The descriptive statistics such as mean, standard deviation of each variables for selected games (Basketball, Kabaddi) were presented on Table no. 1, Table no. 2.

### TABLE NO. 1

### MEAN, STANDARD DEVIATION ON SELECTED PHYSIOLOGICAL, VARIABLES AMONG BASKETBALL PLAYERS

| Variables | Mean | Standard Deviation |
|---|---|---|
| Pulse Rate(b/min) | 75.3 | 6.73 |
| Respiratory Rate(breath/ min) | 19.96 | 4.12 |
| Vital Capacity(cc) | 2090 | 910.4 |
| Blood Pressure | | |
| Systolic(mmhg) | 106.8 | 8.55 |
| Diastolic(mmhg) | 78.8 | 20.63 |
| Skin Folds(MM) | | |
| Bicep | 8.22 | 3.67 |
| Triceps | 10.9 | 11.58 |
| Supra Iliac | 8 | 3.89 |

| | | |
|---|---|---|
| Sub-scapular | 10.08 | 10.64 |

It is evident from Table No. 1 that mean pulse rate of Basketball Players is 75.3 where the Standard Deviation is 6.73. Similarly Respiratory Rate mean and Standard Deviation were found to be 19.96, 4.12 respectively. Similarly vital capacity mean and Standard Deviation were found to be 2090, 910.4 respectively. Similarly Systolic blood pressure mean and standard deviation was 106.8, 8.55 respectively and diastolic blood pressure mean and standard deviation 78.8, 20.63 respectively and Bicep Skin Fold measurement Mean and Standard deviation were found to be 8.22, 3.67 respectively. Similarly Triceps Skin Fold measurement Mean and Standard Deviation were found to be 10.9, 11.58 respectively. Similarly Supra Iliac Skin Fold measurement mean and Standard Deviation were found to be 8, 3.84 and Sub-scapular Skin Fold measurement were found to be 10.08, 10.64 respectively.

TABLE NO. 2

MEAN, STANDARD DEVIATION ON SELECTED PHYSIOLOGICAL, VARIABLES AMONG KABBADI PLAYERS

| Variables | Mean | Standard Deviation |
|---|---|---|
| Pulse Rate(b/min) | 71.8 | 8.40 |
| Respiratory Rate(breath/ min) | 17.27 | 3.60 |
| Vital Capacity(cc) | 1765 | 329.2 |
| Blood Pressure | | |
| Systolic(mmhg) | 119.8 | 5.55 |
| Diastolic(mmhg) | 78.4 | 10.99 |
| Skin Folds(MM) | | |
| Bicep | 7.89 | 1.94 |
| Triceps | 10.4 | 10.62 |
| Supra Iliac | 7.34 | 3.65 |
| Subscapular | 10.6 | 4.55 |

It is evident from Table No. 2 that mean pulse rate of Kabaddi Players is 71.8 where the Standard Deviation is 8.40. Similarly Respiratory Rate mean and Standard Deviation were found to be 17.27, 3.60 respectively. Similarly vital capacity mean and Standard Deviation were found to be 1765, 329.2 respectively. Similarly Systolic blood pressure mean and standard deviation was 119.8, 5.55 respectively and diastolic blood pressure mean and standard deviation 78.4, 10.99 respectively and Bicep Skin Fold measurement Mean and Standard deviation were found to be 7.89, 1.94 respectively. Similarly Triceps Skin Fold measurement Mean and Standard Deviation were found to be 10.4, 10.62 respectively. Similarly Supra Iliac Skin Fold measurement mean and Standard Deviation were found to be 7.34, 3.65 and Subscapular Skin Fold measurement were found to be 106, 4.55 respectively.

## DISCUSSION

Study was found that the hypothesis 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, 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 Basketball and Kabaddi players.
2) It was also concluded that there 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 fold measurement.

## RECCOMENDATION

1) The result of present study may be use by the various authorities, coaches, physical education personnel 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 parameters 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.

## REFFERENCES

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