



Comparative Study Of Physiological Variables Of Handball And Football Players Of School

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ABSTRACT

To understand the physiological variables of handball and football players, researchers have asked whether they differ in personality from non-athletes and whether athletes vary among different sports. We conducted this study to find out the differences in blood pressure, pulse rate and vital capacity among handball and football players. To achieve the aim of the study, Forty eight (N=48) handball players and Forty eight (N=48) football players total 96 were selected randomly as subjects. The age of subjects ranged between 13 to 17 years. To determine the physiological variables between handball and football players, unpaired t-test was employed with the help of SPSS software. The level of significance was set at 0.05. Blood pressure of Football players condition good than Handball players but in pulse rate Handball players performance were better than football players. In Vital capacity Football players were better than Handball players

Keywords: vital capacity, pulse rate, blood pressure, handball and football players.

Introduction

Today the sports persons are trained scientifically with the latest training methods and sophisticated instruments for higher performance improvement in different sphere of sports. The level of physical fitness indicates the amount of physical work that a person capable of doing besides the energy for desirable characteristics of muscle function for skillful movement as required in specific sports. Excellence in any field does not come easily. The desire to do one's best, to excel, to attain the highest standard of performance, to be supreme in his chosen field is a worthy human ambition which leads to better standards and person growth. The will to perform always argues forward and induces progress. The limits reached today shall be moved further tomorrow. The trial is hard and steep. There are numerous obstacles to overcome and barriers to push for achievement in any field demands commitment and sacrifice. A branch of physiology concerned with how the body adapts physiologically to the short-term stress of exercise or physical activity, and the long-term stress of physical

training. Exercise physiologists, for example, study how our bodies obtain energy from the food we eat and use the energy to initiate and sustain muscle activity. Physiology is the academic study of the various processes, systems, and functions of the human body as influenced by the performance of physical activity. The physiology of exercise is a broad concept that addresses the central issue as to how the body adapts itself to the demands of physical activity. A sound knowledge of exercise physiology enables coaches and athletes to optimize the amount and type of training. Exercise physiology is the study of the acute responses and chronic adaptations to a wide-range of physical exercise conditions. Exercise is a term that has a variety of possible meanings, each dictated by circumstances. The physiology of exercise tends to center upon the most important physical systems to athletic performance: the cardiovascular system, the cardio respiratory system, the thermoregulatory system, body composition and the musculoskeletal system. The ability of athletes to increase their maximum oxygen capacity is universal. Exercise improves the ability of the cardio respiratory system to take oxygen from air inhaled into the lungs, and then load and transport it more efficiently.

METHOD AND PROCEDURE

For this study Handball and Football players was selected from the 'The Tribune School, students of Chandigarh. The age group was between 13-17 years. The further study was delimited to only boys. For this study Handball players 48 and Football players 48 (Total - 96) was selected. The purposive sampling technique was used to attain the objectives of the study. For this study, the selection of physiological aspects the steps like observation of the scientific literature by the literature by the researchers, the source from the different libraries and the advice of the experts of the field was taken. While selecting the variables, the literature and the opinions of the experts, test conduction facilities, availabilities of the equipment's, etc. were taken into consideration. The physiological variables Blood Pressure, Vital Capacity and Pulse rate were taken into consideration.

SELECTION OF TOOLS

For obtaining data with regard to the physiological variables, keeping in view the suitability, validity and reliability, the following tests were selected.

- Blood Pressure (High and Low) was obtained during the rest period by digital bloodpressure and the pulse rate monitor.
- Pulse rate will be obtained during the rest period. The pulse rate for 1 minute by a stethoscope.
- Peak flow meter instrument was be used for the vital capacity.

STATISTICAL TECHNIQUES

The level of significance chosen to study the significance of difference between means obtained by using mean difference method and analysis of variance was set at 0.05 level of confidence, and “t” ratio was considered adequate for the purpose of the study.

Results

Table-1 The Difference of the Significance of the Mean of Hand ball and Football Players in the Performance of Blood pressure Systolic

Players	MEAN	DIFFERENCE	“t” RATIO
Handball	115.70	8.52	3.68
Football	107.18		

Table-1 From table it is seen that Handball players mean is 115.70 and Football players mean is 107.18 Mean difference between this two groups is 8.52 and, “t” ratio is 3.68 which is significant at 0.05 level. Graphically it is represented in fig -1

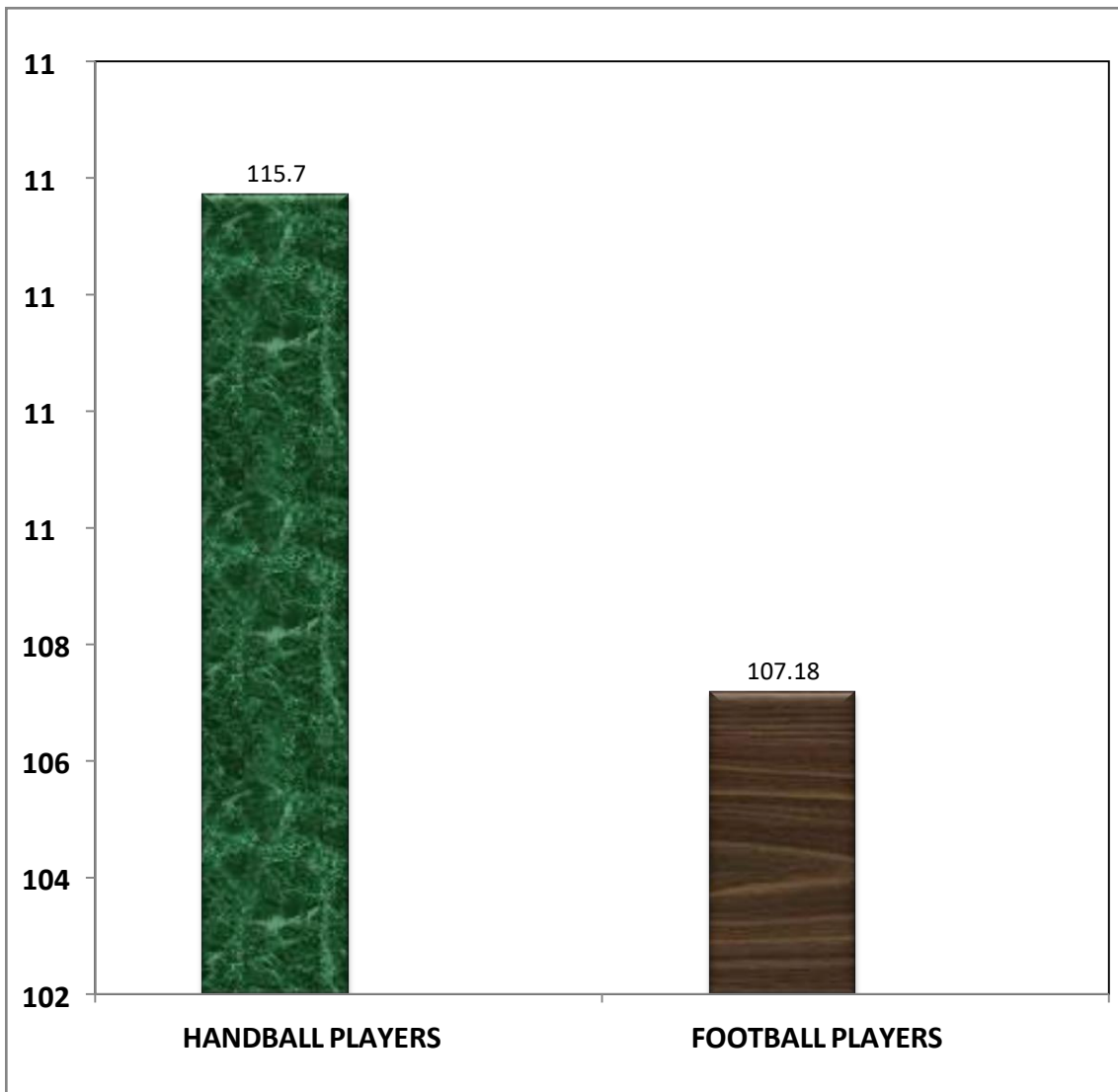


Figure- 1 The Difference of the Significance of the Mean of Handball and Football Players in the Performance of blood Pressure Systolic

Table-2 The Difference of the Significance of the Mean of Hand ball and Football Players in the Performance of Blood pressure Diastolic

Players	MEAN	DIFFERENCE	t' RATIO
Handball	69.39	7.58	4.38
Football	61.81		

Table-2 From table it is seen that Handball players mean is 69.39 and Football players mean is 61.38 Mean difference between this two groups is 7.58 and, t'

ratio is 4.38 which is significant at 0.05 level. Graphically it is represented in Fig 2.

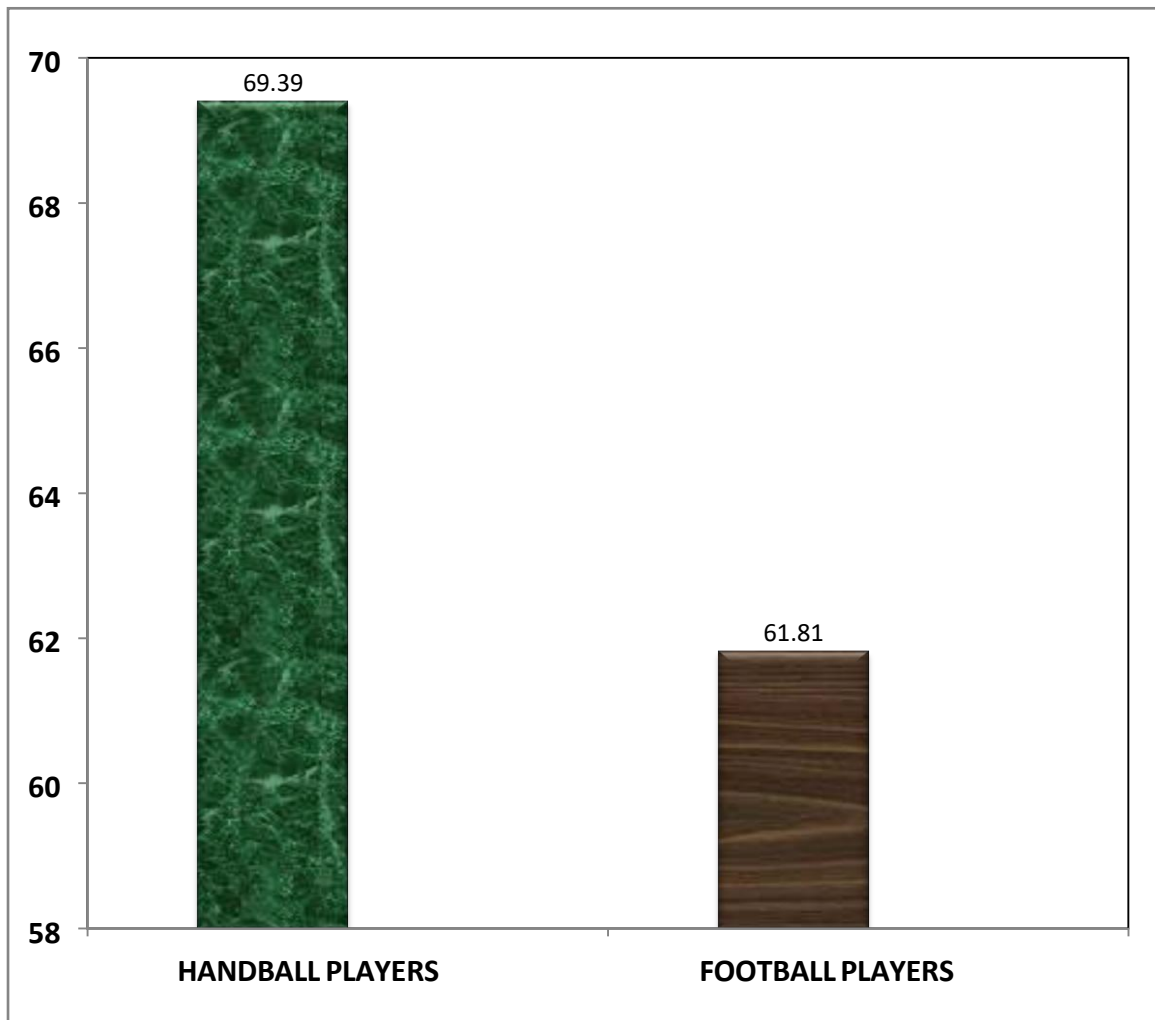


Figure- 2 The Difference of the Significance of the Mean of Handball and Football Players in thePerformance of blood Pressure Diastolic

Table-3 The Difference of the Significance of the Mean of Hand ball and Football Players in thePerformance of pulse rate

Players	MEAN	DIFFERENCE	“t” RATIO
Handball	84.39	7.79	4.24
Football	92.18		

Table-3 from table it is seen that Handball players mean is 84.39 and Football players mean is 92.18 Mean difference between this two groups is 7.79 and „t“ ratio is 4.24 which is significant at 0.05 level. Graphically it is represented in Fig- 3

Figure- 3 The Difference of the Significance of the Mean of Handball and Football Players in the Performance of pulse rate

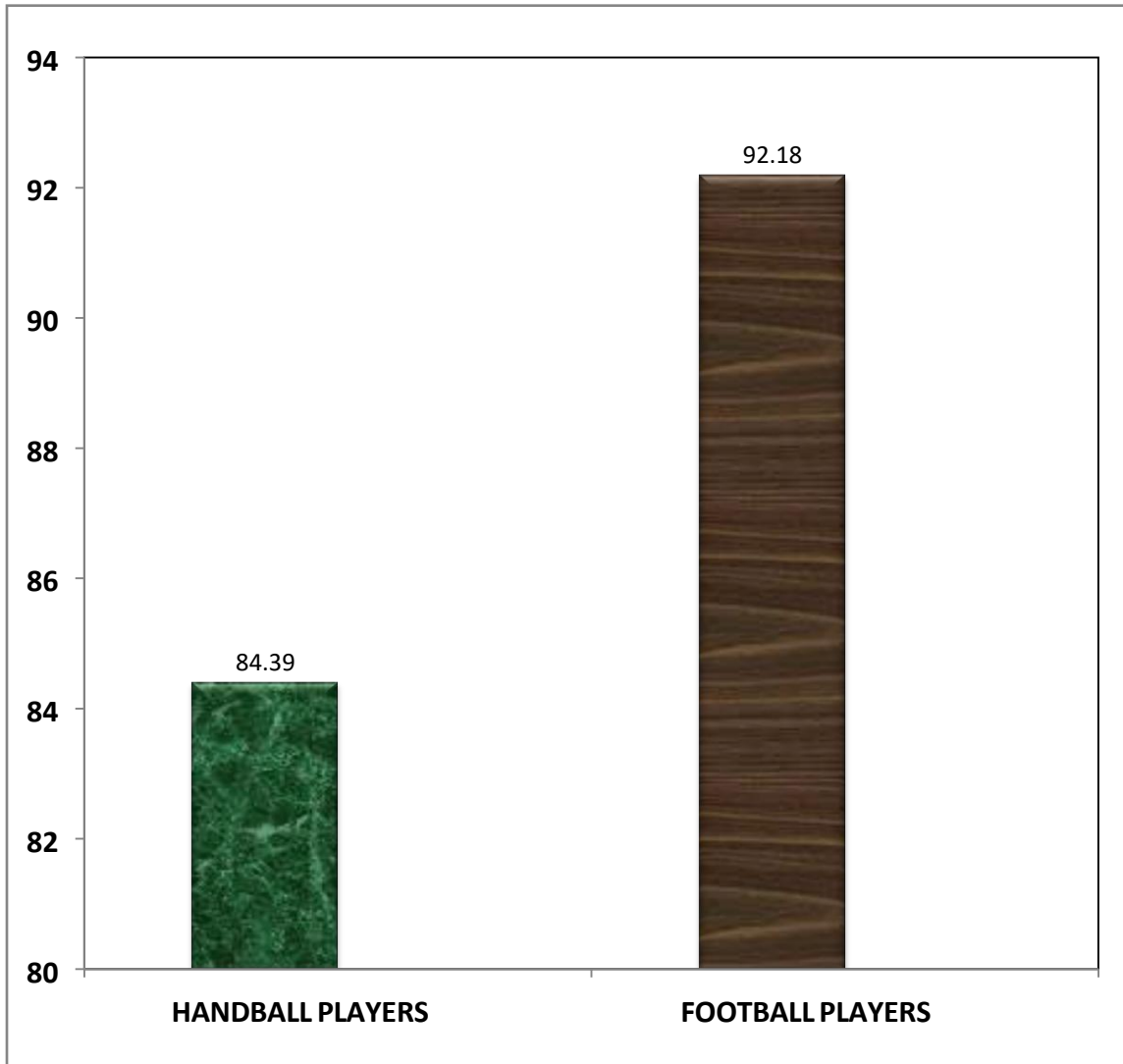


Table-4 The Difference of the Significance of the Mean of Hand ball and Football Players in the Performance of Vital Capacity

Players	MEAN	DIFFERENCE	“t” RATIO
Handball	301.66	63.33	5.03

Football	365		
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Table-4 From table it is seen that Handball players mean is 301.66 and Football players mean is 365 Mean difference between this two groups is 63.33 and „t“ ratio is 5.003 which is significant at 0.05 level. Graphically it is represented in fig-4

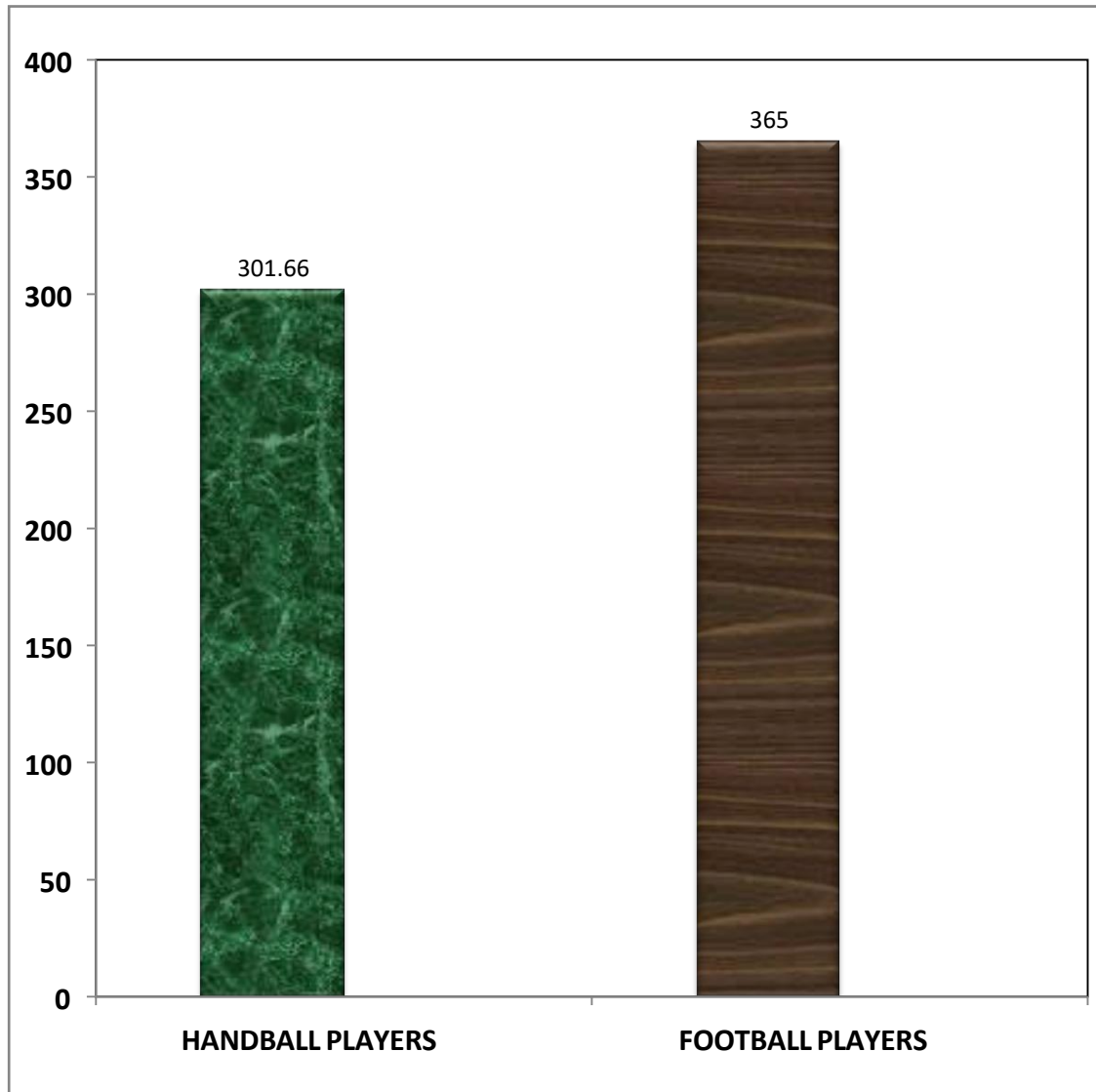


Figure- 4 The Difference of the Significance of the Mean of Handball and Foot ball Players in thePerformance of Vital Capacity

DISCUSSION

Every Human being has a fundamental right of access of physical education and sport, which are essential for the full development of his personality. The freedom to develop physical, intellectual and moral powers through physical education

and sport must be guaranteed both within the educational system and in other aspects of social life. Exercise is a term that has a variety of possible meanings, each dictated by circumstances. In a sports context, exercise is the performance, conditioning or training undertaken in respect to a particular athletic or sporting purpose. Exercise may also be directed to improvement of a person's general health, physical fitness, or as physical therapy, to augment an existing treatment to remedy or to ameliorate the effects of a disease or illness upon the body. The term exercise physiology is used to identify the corresponding course of academic study offered at universities around the world. Some related researches has been done like T Gabbett (2016) The purpose of this study was to investigate the physiological and anthropometric characteristics of junior Private school state players, players competing at the elite, semi-elite, and novice levels and to establish performance standards for these athletes. One hundred and fifty-three junior national (N = 14 males; N = 20 females), state (N = 16 males; N = 42 females), and novice (N = 27 males; N = 34 females) Private school state players, players participated in this study. Significant differences ($p < 0.05$) were detected among junior national, state, and novice Private school state players for height, standing reach height, skinfold thickness, lower- body muscular power, agility, and estimated maximal aerobic power, with the physiological and anthropometric characteristics of players typically improving with increases in playing level.

The purpose of this study was to see comparison of physiological variables of Handball and Football school players. The age group was between 13-17 years. The further study was delimited to only boys. For this study Handball players 48 and Football players 48 (Total - 96) was selected. Blood Pressure (High and Low) was obtained during the rest period by digital blood pressure and the pulse rate monitor. In Physiological variables blood pressure systolic performance Handball players mean is 115.70 and Football players mean is 107.18 Mean difference between this two groups is 8.52 and „t“ ratio is 3.68 which is significant at 0.05 level. In Physiological variables blood pressure Diastolic performance Handball players mean is 69.39 and Football players mean is 61.81 Mean differences between this two groups is 7.58 and t“ ratio is 4.38 which is significant at 0.05 level. In Physiological variables Pulse rate performance Handball players mean is 84.39 and Football players mean is 92.18 Mean difference between this two groups is 7.79 and „t“ ratio is 4.24 which is significant at 0.05 level. In Physiological variables Vital capacity performance Handball players mean is 301.66 and Football players mean is 365 Mean difference between this two groups is 63.33 and „t“ ratio is 5.03 which is significant at 0.05 level. In Physiological aspects Blood pressure of Football players condition good than Handball players but in pulse rate Handball players performance were best than football players. In Vital capacity Football players were better than Handball players.

CONCLUSION

- In Physiological aspects Blood pressure of Football players condition

good than Handball players but in pulse rate Handball players performance were better than football players.

- In Vital capacity Football players were better than Handball players.

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