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ORIGINAL ARTICLE

COMPARATIVE STUDY ON CARDIOVASCULAR ENDURANCE BETWEEN FOOTBALL AND HOCKEY PLAYERS

DEVRAJ ATTRI

Associate Professor, Akal College of Physical Education, Maustana Sahib, Sangrur (Punjab) India.

Abstract:

The purpose of the present study was to find the comparison on cardiovascular endurance among Football and Hockey Players. For this 40 players in which 20 players were selected as a sample from Hockey team and 20 players from Football team of Alpine Public School, Bhawanigarh (Punjab). The age group of the sample ranged from 13-18 years and all the samples selected from random basis. Cardiovascular Endurance of the subjects was assessed by Hardward Step Test and this test was prepared by Brouha in 1943. To find the comparison on Cardiovascular Endurance of selected subjects, 't' test was adopted. Results indicated that football player had slightly more cardiac efficiency as compare to hockey players.

KEYWORD:

Cardiovascular Endurance, Hockey & Football Player.

INTRODUCTION

A fit person is one who has well adjusted to his environment, whose mind and body are in harmony, and who can meet the normal demands made on him both mentally and physically without undue fatigue.

Sport is an activity that is governed by a set of rules and often engaged in competitively. Sports commonly refer to activities where the physical capabilities of the competitor are the sole or primary determiner of the out winnings or losing. In the modern era with the advancement of scientific knowledge, techniques and methods even in the field of physical, health, recreation and sports, it is realized and observed on objective basis that the performance of an individual depends on various physiological, physical, sociological and psychological factors.

Now physical education and sports depends on various factors and it is... not the outcome of a single quality. It means performance is a multidimensional process. Factors which effects the tenure are efficiency of participants, in an event are participants attitude towards activity, aptitudes, intense physical fitness, physiological setup including capacities of various systems in a body, and then functioning knowledge of fundamentals of the events, level of growth and developed and also influenced by environmental situation, nature of training, oxygen uptake during practice or body Cardiovascular fitness.

Cardiovascular endurance refers to the ability of the circulatory system to provide oxygen to body cells to support the oxidative energy schemes of the body and to remove the waste products of metabolism. In human body when many muscles are worked for long periods of time, these factors limit the amount of work which can be accomplished. Therefore, the primary objective of cardiovascular endurance training is to improve the circulation to the working muscles.

The cardiovascular system of the body consists of the heart and its blood vessels. With optimal cardiovascular fitness, the heart and its blood vessels are in the best condition possible to pump blood well

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throughout the body' this is because the circulation of the heart is improved as a result of exercise. The heart that is well conditioned through exercise can pump more blood with fewer beats than a weak heart can. Cardiovascular fitness is possible only through exercise, where the heart grows more resistant to stress, heart attacks and other health problems.

METHODOLOGY

40 male players in which 20 players from football & 20 players from hockey team selected from Alpine Public School, Bhawanigarh (Punjab). The selected male players at least represented State Level Tournaments. The average age of selected sample was 14.56 years.

To measure cardiovascular endurance, Harvard Step Test developed by Brouha (1942) was used. This test is highly reliable & valid. To find the comparison on cardiovascular among football & hockey players't' Test was adopted.

Table No. 1
Descriptive Analysis of Cardio vascular Endurance of Football and Hockey players

Sr. No	Group	Mean	S.D
1.	Football Players	SDI:SD2	7.96
	81.91:78.00	7.96:6.33	6.33

Table 1 reveals the mean and standard deviation scores of cardiovascular endurance in groups of Football and Hockey players. The mean and standard deviation scores of Cardio-vascular Endurance in Football players group were recorded 81.91 and 7.96 respectively.

The table also presents the mean and stranded deviation scores of Cardio vascular Endurance in group of Hockey players. Thus the mean and stranded deviation score recorded during the Harvard Step test were 78.00 and 6.33 respectively. The mean scores of Cardio-vascular endurance in group of football and hockey players have been depicted in figure 4.1

Table No. 2
Mean Difference and S.D. Values of Cardio-vascular Endurance in groups of football and hockey players

Sr. No	Mean	Mean Difference	S.D
1.	M1:M2	SDI:SD2	S.D1:SD2
	81.91:78.00	3.913	7.96:6.33

Table no. 2 indicates Mean, Mean Difference and Values of Cardio-vascular Endurance in groups of Football and Hockey players. The table shows the means scores of Cardio-vascular Endurance in groups of Football and Hockey players were recorded 81.91 and 78.00 respectively. Mean differences between both the test of Cardio-vascular Endurance in groups of Football and Hockey players was obtained 3.913. The table also shows the stranded deviation scores of Cardio vascular Endurance in groups of Football and Hockey players were recorded 7.96 and 6.33 respectively.

Table No. 3
Means'sd and 't' test Values of Cardio-vascular Endurance in groups of Football and Hockey Players

Sr. No	Mean	S.D	't' value
1.	M1:M2	SDI:SD2	
	81.91:78.00	7.96:6.33	1.719

Significant at 0.05*=2.02, df = 38

From the result present in table no. 4.3 it has been observed the Mean, Stranded Deviation and't' test value of Cardio-vascular Endurance in groups of Football and Hockey players. The mean and standard deviation scores of cardiovascular endurance in group of hockey players was 78.00 and 6.33 respectively. When statistical technique't' test was applied to compare the score statistically it was found that the't' value of 1.71 was insignificant at 0.05 level of confidence. The obtained't' value was less than the table value of 2.37 required to be significant. Therefore Endurance between the groups of Football and Hockey players.

The table also shows the stranded deviation scores to Cardio-vascular Endurance in groups of Football and Hockey Players were recorded 7.96 and 6.33 respectively.

It was also observed from the results in table 4.3 that obtained't' values of Cardio-vascular Endurance in groups of football and Hockey players was found insignificant at 0.05 level of confidence the obtained't' value of 1.71 was less than the table value of 2.02 and result also showed in table 4.3 that there was no difference of cardiac efficiency Endurance in groups of football and Hockey players.

The findings of study reveals that 't' test value of cardiac efficiency of Endurance among the groups of Football and Hockey players shows insignificant at 0.05 level of confidence but the mean values of cardiac efficiency among the groups of Football and Hockey players shows that football player had slightly more cardiac efficiency as compare to hockey players.

CONCLUSION

The findings of study reveals that 't' test value of cardiac efficiency of Endurance among the groups of Football and Hockey players shows insignificant at 0.05 level of confidence but the mean values of cardiac efficiency among the groups of football and Hockey players shows that football player had slightly more cardiac efficiency as compare to hockey players.

REFERENCES

i.Adhikiri and Brea (2004) effect of aerobic exercise, yoga practice and combination of both in cardio respiratory endurance, vol. 36
ii.Cureton (1971) physiological study of swimmers and track and fieldsman with different cardiovascular endurance. Applied physiology vol 23, page 32-37.
iii.Henry (1972) enfluence of athletic training on cardiovascular endurance European gournal of applied physiology volume 78, page 170-176.
iv.Kumar Parveen et. Al 2005 Effects of eight week selected yogic practice on cardio vascular ability of the school boys (Penalty corner 2005).
v.Mishra, S.R., Tripathi, P.K., and bera, T.K (2003) Cardiac efficiency of long distance runners and yoga practitioners, yoga mimamasa, Vol 35, No 1& 2: 1-14.
vi.Sallis (2004) effect of interval training in improvement of cardiovascular endurance volume 68, 167-173.
vii.Zacharogiannins, E., Tziortzis, S., & paradisis, G. (2003). Effects of continuous, interval and speed training on anaerobic capacity medicine and science in sports and exercise, 35 (5) supplement abstract 2006.