

A Study on the Aerobic Fitness among Hockey and Football Players of Gulbarga University India.

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Abstract—aerobic endurance can be defined as the amount of oxygen intake during exercise. Aerobic endurance measures the time in which you can exercise without producing lactic acid in your muscles. Endurance in basketball is essential for players to maintain stamina throughout an entire game, as well as the entire season. Aerobic exercises also have a place in football, where it contributes to making athletes stronger and better at what they do. A super lap or a long distance run aren't the only way to incorporate aerobic exercises into practices, i.e. there are other ways. Hockey players also require more aerobic fitness to perform well in their match. The best way to improve on aerobic fitness is through activities that put the body's large muscle groups to work dynamically; these activities include walking, jogging, running, swimming, skating, cycling, stair-climbing, and cross-country skiing. **Purpose:** The essence of this study is to determine the aerobic fitness among male hockey players and male football players of Gulbarga University, India. **Methodology:** Thirty (30) male hockey players and thirty (30) male football players from various Colleges of Gulbarga University, India were used as samples in this study. Data was collected separately from the football players and from the hockey players. The Subjects were made to run 12 minutes Run Cooper test for endurance under the supervision of Technical officials of Athletics. **Results:** From the results of this study, it was shown that football players have good aerobic fitness compare to hockey players. **Conclusions:** In this study, it was concluded that male football players have good aerobic fitness compare to male hockey players because the duration of match for the football players is 90 minutes while that of hockey players is 70 minutes

Keywords—aerobic endurance, football, hockey

I. INTRODUCTION

Aerobic endurance is the amount of oxygen intake during exercise i.e. the amount of time which you can exercise without producing lactic acid in your muscles. During aerobic (with oxygen) work, the body works at a level that demands for oxygen and fuel that can be met by the body intake. The only waste products formed during aerobic work are carbon-dioxide and water which are removed by sweating and breathing from the body. Aerobic exercise is a physical exercise of relatively low and long duration, which depends primarily on the body's aerobic energy system. Aerobic means "with oxygen", and it refers to oxygen usage in the body metabolism in energy generating process. There are many types of aerobic exercise, and they are performed generally at moderate levels of intensity over a relatively long period of time. For example, running a long distance at a

moderate pace is an aerobic exercise, but sprinting is not. Playing singles tennis with near continuous motion is generally considered an aerobic activity, while golf or two person team tennis with brief bursts of activity punctuated by more frequent breaks, may not be predominantly an aerobic activity. Some sports are thus inherently anaerobic, while others are aerobic. Activity such as fartlek training or aerobic dance classes, are designed specifically to improve aerobic capacity and fitness.

Football refers to sports that involve varying degrees, kicking a ball with foot to score a goal; while hockey is a family of sports in which two teams play against each other by trying to maneuver a ball or a puck into the opponent's goal using a hockey stick.

The purpose of this study is to determine the aerobic endurance among male football players, and male hockey players of Gulbarga University in India. Aerobic fitness is the measure of the body's ability to take oxygen from the atmosphere and use it to produce energy for muscle cells. Many factors influence aerobic fitness, these include lung efficiency, cardiac function, gender, age, and genetic makeup. Understanding the various components of aerobic fitness will help athletes train smarter to achieve optimal performance.

Charan Singh, (2015) in this study compares the aerobic and anaerobic capacity between male hockey and football players of Haryana and the concluded that; there was no significant difference between the male football and hockey players in aerobic and anaerobic capacity.

Dr. Hari Singh Gaurav, (2016) also analyze the differences in physical fitness variables between goal keepers of football and hockey. He conducted the study using 20 goal keepers of football and hockey with the aim to determine the differences in physical fitness variables between the goal keepers of football (n=10) and the goal keepers of hockey (n=10). In the study, Cooper test designed by Kenneth H. Cooper in 1968 for US military, used in the original form was used as a test of physical fitness. The point of the test is to run as far as possible within 12 minutes. To undertake this test, the following are required: 400 meters track

1. Stop watch
2. Whistle
3. Tracking official

II. METHOD

Thirty (30) male football players and thirty (30) male hockey players from various Colleges of Gulbarga in India were used for this study. The data were collected separately from football players and hockey players. The Subjects were made to run 12 minutes Run Cooper Test for endurance.

The following methods were followed in this study:

1. The subjects were given 10 minutes to warm up
2. The assistance gives the command “GO”, starts the stopwatch and athletes commences the test
3. The technical official keeps the athlete informed of the remaining time at the end of each lap. The technical official blows the whistle when the 12 minutes elapsed and records the distance the athlete covered to the nearest 10 meters.

TABLE I. SHOWING THE MEAN, STANDARD DEVIATION (S.D), STANDARD ERROR, t-RATIO OF FOOT BALL PLAYERS AND HOCKEY BALL PLAYERS IN COOPER TEST.

Results of 12 min Cooper Test	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Foot Ball Players	30	3050.00	219.71	49.13	1.69	58.00	0.10
Hockey Ball Players	30	2950.00	137.71	30.79			

The football players mean performance is 3050 meters while the hockey players mean performance is 2950 meters. There is a mean difference of 100 meters between football and hockey players. The results of this study shows that football players have good endurance compare to hockey players. Football player performed well and strong due to their aerobic fitness. There are three (3) reasons why aerobic fitness is important to football players, these are the fact that: (1) Aerobic fitness helps improve recovery time after workout, (2) Aerobic fitness increases oxygen window, and (3) Aerobic fitness increases power output.

III. RESULTS AND DISCUSSION

From the findings of this study, it has been discovered that goal keepers of hockey possess greater arm and shoulder strength endurance, agility, leg explosive strength, speed, and cardiovascular endurance while football players are more superior in abdominal strength endurance. Keep your text and graphic files separate until after the text has been formatted and styled. Do not use hard tabs, and limit use of hard returns to only one return at the end of a paragraph. Do not add any kind of pagination anywhere in the paper. Do not number text heads—the template will do that for you.

IV. CONCLUSION

From the finding in this study, it was discovered that football players have good endurance compare to hockey players. Therefore, it is concluded that male football players have good endurance compare to male hockey players.

It is recommended that similar studies should be conducted on female players, other team game players, and individual game players.

ACKNOWLEDGMENT

My profound gratitude goes to the coaches and players of football and hockey of Gulbarga University, for their participation in accomplishment of this study.

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