



Comparative study of health related physical fitness among the Athletes and Non-Athletes

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Abstract

The main purpose of the study was to find out the comparison of health related physical fitness among the athletes and non-athletes. The data collected quantitatively on five variables muscular strength, muscular endurance. The subjects were selected Forty (40), twenty (20) from athletes and twenty (20) from non-athletes from college of Sant Gadge Baba Amravati University, Amravati by applying random sampling method. The data were collected on health related physical fitness variables, after that collected data was put in Microsoft excel to develop master chart and then 't' test was used for this statistical treatment. The subjects were selected by using purposive sampling method. To test the hypothesis, the level of significant was set at 0.05 level of confidence which was considered adequate and reliable for the purpose of this study. It was hypothesized that there was significant difference in health-related physical fitness between athletes and non-athletes.

Keywords: physical fitness, hypothesis

Introduction

It is concerned with the development and maintenance of the fitness components that can enhance health through prevention and remediation of disease and illness. Health related fitness enhances one's ability to function efficiently and maintain a healthy lifestyle. Thus health related fitness is important for all individuals throughout life. Health related physical fitness is based on the assumption that an adequate level of body development is required for health. There are five components of health related fitness namely muscular strength, muscular endurance, cardio respiratory endurance, flexibility and body composition.

Muscular Strength

Muscular strength is defined as the ability of a muscle group to develop maximal contractile force against a resistance in a single contraction.

Muscular Endurance

Muscular endurance is the ability of a muscle group to execute repeated contractions over a period of time sufficient to cause muscular fatigue or to maintain a specific percentage of the main voluntary contraction for prolonged period of time.

Methodology

Sources of data

The present researcher was taken the male subjects for the study. The sources from inter-collegiate athletes and non-athletes of Sant Gadge Baba Amravati University, Amravati district was taken as sources of data.

Selection of Subjects

Forty (40) subjects were selected for the collection of data which include twenty (20) as athletes and twenty (20) as non-

athletes from college of Sant Gadge Baba Amravati University, Amravati.

Sampling Method

The subjects were selected by using purposive sampling method.

Selection of Variables

On the basis of the available literature, personal experience, discussion done with research supervisor and consulting with sports experts, the following health related physical fitness variables were selected.

Selection of Tests

The test items were selected for this study after thorough review of literature as well as consultation with experts, physical education professionals, research supervisor and sports experts which were appropriate and ideal for the variables. The criterion variables are presented in the table.

Table 1: Tests Selection

Criterion Variables	Test Items	Unit of Measurements
Muscular Strength	Grip dynamometer	Kilograms
Muscular Endurance	Sit ups (Bent knees)	Counts

Analysis and Interpretation of Data

The purpose of this study was to comparison of muscular strength, muscular endurance, between athletes and non-athletes. The data were collected on health related physical fitness variables, after that collected data was put in Microsoft excel to develop master chart and then 't' test was used for this statistical treatment.

Table 1: Comparison of Mean Score of Muscular Strength Between athletes and non-athletes of

Group	Mean	S.D.	M.D.	O.T.	T.T.
Athletes	33.667	9.083	4.800	2.501	2.00
Non-Athletes	28.867	5.290			

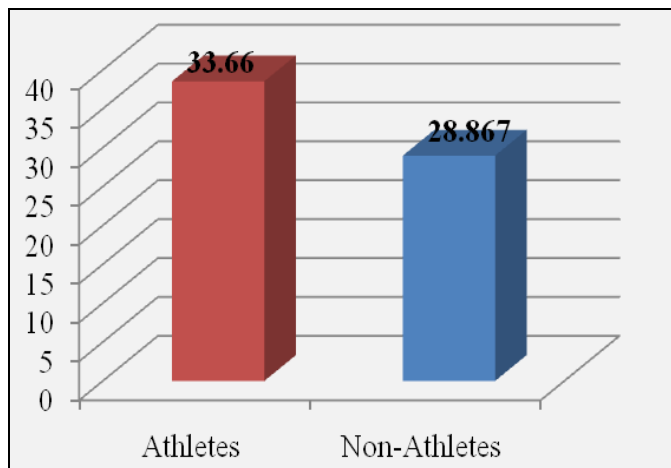


Fig 1: Graphically Representation the Mean value of Muscular Strength between Athletes and non-Athletes

Table 2: Comparison of Mean Score of Muscular Endurance between Athletes and Non-Athletes

Group	Mean	SD	M.D.	O.T.	T.T.
Athletes	38.533	7.496	9.567	6.490	2.00
Non-Athletes	28.967	3.000			

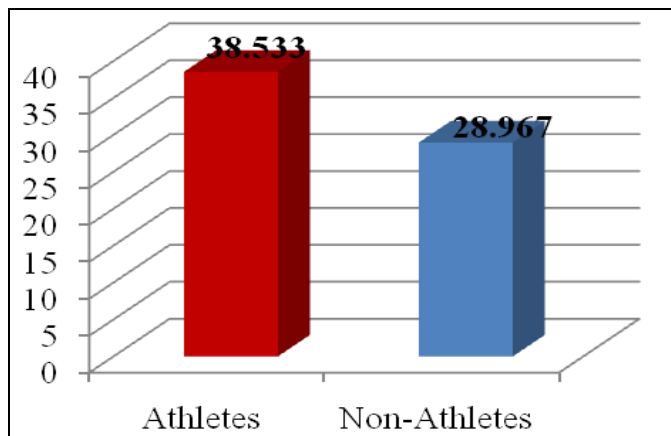


Fig 2: Graphically Representation the Mean value of Muscular Endurance between Athletes and non-Athletes

Justification of Hypothesis

In the beginning of this study it was hypothesized that there will be significant difference in health-related physical fitness between athletes and non-athletes.

Conclusion

Within the limitations of the study and from statistical analysis the following conclusion was drawn. In overall numerical and statistical analysis the comparison of muscular strength, muscular endurance between the athletes and non-athletes, It is found that there is significance difference and comparison

of muscular strength, muscular endurance between the athletes and non-athletes. Therefore the hypothesis which researcher has given is accepted.

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