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A Comprehensive study of physical fitness among students of physical education colleges in the state of Maharashtra

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Abstract

A study have been conducted physical fitness and physiological abilities of Government aided Physical Education College's Students and Non-Aided Physical Education College's Students of Nagpur district of Maharashtra State. The main purpose of the present study was the comparison between the Government aided Physical Education College's Students and Non-Aided Physical Education College's Students with AAPHER physical fitness test battery. To achieve the objective of the study AAPHER physical fitness test battery consisting of six test items, pull-ups; sit-ups (Bent knee sit ups) standing broad jump; shuttle run; 50 yard dash; 600yard run/walk was used to measure fitness level of government school students and public school student. The investigator of the present study has taken a total of 180 samples. The subjects were divided into Government Aided Physical Education College's 90 students and Non-Aided Physical Education College's 90 students. The investigator has employed the t- test.

Keywords: Physical Fitness, AAPHER Physical Fitness Test, Physical Education Students, t-Test etc

Introduction

Physical fitness refers to maximum functional capacity of all system of the body. We are exercising when ever we move and keeping our body tuned and in a good running order. The body of human is framed in such a way that it can jump, climb, bend, stretch and do more tedious work. The human body becomes more stronger as it exerts more and muscles involvement matters a lot in shaping it. Exercise helps in improving our health and builds up our energy and stamina.

Physical fitness is a state of health and well- being and, more especially, the ability to carry out daily task with vigor and alertness, and to meet unforeseen emergencies without undue fatigue. Fitness can also be defined as any form of physical movement that utilizes multiple muscle groups in the body.

Physical fitness to the human body is what fine turning is to an engine it enables us to find potential. Fitness can be described as a condition that helps us to feel and do our best. More specifically, it is the ability to perform daily tasks vigorously and with alertness and also gives us time for enjoying leisure activities and meeting emergency demands. It is the ability to endure to bearup, to with stand stress, to carry on in circumstances where an unfit person could not continue, and is a major basic for good health and wellbeing. Fitness is not synonymous with health. It plays an essential role in all aspects of health because they are inextricably related. Good health provides a social foundation on which fitness rests and t the same time fitness provides one of the most important keys to health and to living one's life to the fullest.

Physical fitness refers to the organic capacity of the individuals to perform the normal task of daily living without tiredness or fatigue and having a reserve of strength, the energy available to meet satisfactorily the emergency demand suddenly placed upon hm. Sport activity demand different type and levels of physical abilities. When a particular sport possesses qualities, it contributes to the development of specific physical fitness. It is this specific fitness which makes it possible for a player to perform unusual and extraordinary movement with a very high standard of efficiency. It is also termed as performance fitness.

Fitness is the condition of being physically fit and healthy and involves attributes that include,

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but are not limited to mental acuity, cardiorespiratory endurance, muscular strength, muscular endurance, body composition, and flexibility. While there is a standard definition for fitness, each individual can have their own personal understanding of what fitness means. To some individuals, being fit means the ability to complete a marathon or lift a lot of weight. To another, it could mean walking around the block without becoming short of breath. Your definition of fitness will be influenced by your interests, physical abilities, and goals. No matter what the definition, it is important for every individual to keep their personal definition of fitness within a healthy framework. This means you should have realistic expectations and maintain balance and moderation in all aspects of life. Set small, attainable goals and avoid giving too much power to the numerical measurements of fitness. This can help your journey to fitness seem much less daunting and much more enjoyable.

Physical fitness is generally achieved through proper nutrition, sufficient rest and moderate-vigorous physical exercise. Physical fitness is one of the most important keys to a healthy body. It is the reason, a state of general well-being marked by physical health and mental stability. A person who is fit is capable of living life to its fullest extent. People who are physically fit are less prone to medical conditions and are more able to function at the peak of intellectual capacity.

There are different views regarding physical fitness. Modern definition of fitness says either a person or machine's ability to perform a specific function or a holistic definition of human adaptability to cope with various situations. To the ancient Greeks, being physically fit was of primary importance, equal to intellectual fitness.

The first measurement of fitness is the performance of heart, organic fitness is usually assessed through measurement of the cardiovascular system by means of blood pressure measurement, pulse rate, and blood counts. There is an evaluation of response to physical stress. Respiratory efficiency has been evaluated in the past by measurement of expiratory force, breath holding and lung or vital capacity. These tests are now seldom used because functional respiratory can be measured more effectively through cardiovascular test, due to the close relationship between the cardiovascular and respiratory system.

Physical fitness is the ability of the body to adopt and recover from strenuous exercise. Physical fitness is only a part of total fitness. Physical fitness is a measure of the ability of the body to function under the stress of physical effort. This ability reflects the condition of the body organs and system.

Motor fitness, which consists of strength, speed, power, agility, flexibility, endurance and balance is one of the aspects of physical fitness, most commonly measured in physical education classes. Strength is measured by means of a dynamometer, chin-ups, pull-ups, situps. Speed is measured by means of 50 yard dash run. Power is measured by the time taken to run around obstacles or by the number of times. A specified movement can be done in a unit of time. Flexibility refers to the range of motion possible in the body joint. Endurance is measured by the time taken to run a distance of 380 yards or more and is highly related to the organic fitness. Balance may be measured by having the students stand on one foot blind folded or by similar means, physical fitness is one of the aspects of total fitness. The others are emotional fitness, mental fitness and social fitness and all these are interrelated and influence one another. Fitness of the citizens is an index of prosperity of the country. The standard of health and fitness of the citizens of the country determine the

productivity of a nation.

Physically fit individual is mentally alert, emotionally balanced and well adjusted to the society. He faces the day to day problems of life with confidence. He adopts a positive and optimistic attitude towards life. Physical well being is of all forms of excellence. The object of any program of physical fitness is to maximize an individual's health, strength, endurance and skill relative to age, sex, body build, and physiology.

These ends can only be realized through conscientious regulation of exercise, rest, diet, and periodic medical and dental examinations. Exercise should be regular and vigorous, but begun slowly and should be only gradually increased in strenuousness. Popular exercise methods include jogging, cycling, and the use of body-building machines. It is more important of sleep be regular and restful than that they extend any fixed number of hours. A properly balanced diet in proteins, carbohydrates, vitamins, and minerals is essential. Conscientious dental hygiene and periodic checkups are also strongly advised. Complete and regular physical examinations should be the basis of any program of physical development. Tobacco smoking, as well as alcohol and drug consumption is counterproductive to any physical fitness program.

Although sports are related to physical fitness, care must be taken that injuries do not occur, and that the skin is adequately protected against the cancerous effects of solar radiation. Physical fitness refers to the capacity of an athlete to meet the varied physical demands of their sports without reducing the athlete to a fatigued state. The components of physical fitness are: Strength, Endurance, speed, Flexibility, Body Composition. Motor fitness refers to the ability of an athlete to perform successfully at their sport. The components of motor fitness are: agility, Balance, Co-ordination, Power, Reaction Time.

Hypothesis

For the present investigation the investigator has formulated the null hypothesis that there is no significant difference between the Government Aided Physical Education College's students and Non-Aided Physical Education College's students of Nagpur district of Maharashtra State.

Objective of the Study

The study focused at the following objective related to physical fitness variables of Government aided Physical Education College's Students and Non-aided Physical Education College's Students. To assess the physical fitness level of Government Aided Physical Education College's male student with Non-Aided Physical Education College's male students. Comparison was done between selected physical fitness variable of Government Aided Physical Education College's Students with Non-Aided Physical Education College's Students.

Methodology & Sampling

A total of 180 male students constituted the sample for the investigation. The sample was selected by the random sampling method in the Government Aided Physical Education College's Students and NonAided Physical Education College's Students of Nagpur district of Maharashtra State. The male students having the age range of 18 to 21 years were taken as subject study. The subject measured for the AAPHER physical fitness battery.

Tool Used

The researcher took six test item of AAPHER youth fitness test battery to measure shoulder strength, abdominal strength, agility, Power, Speed, and cardiovascular endurance. The investigator has used (i) questionnaire (ii) measuring tape (iii) top watch (iv) standing height stand as tools for the present study.

Method of Analysis

The 't' test has been applied to find out the significant difference level of confidence at 0.05 level.

Administration of Test and Collection of Data:

The subjects in the present study were the selected Government Aided and Non-Aided Physical Education College's Students of Nagpur district of Maharashtra State. Age of the subject was taken from their college record to the nearest of year completed. Height measure with the standing height stand in feet and inches weight was measured by the spring balance depending on the type of weighing machine the weight was recorded to the nearest of kilograms. Pull ups test was used to measure arms and shoulder strength of the subject. The bent knee sit-up were conducted to measure the abdominal strength of the subject. Standing broad jump was

administered to measure the explosive strength power of the subject. The aim of the shuttle runs was to measure the agility of the subjects. For administration of the shuttle run (two parallel line 30 feet (9.144) meters apart were marked on the grow). 50 yard dash test was conducted to measure the speed of the subjects. Two lines at 50 yard (45.72m) distance were marked in the respective college play ground. The score was the elapsed time recorded in seconds to the nearest tenth of the seconds 600 yard run/walk. The aim of the test item was to measure the endurance of the subject. The 600 yard run/walk distance was marked in the play ground of the respective college. The time taken by the subject was recorded in minutes and seconds.

Discussion and Findings

Table 1 gives information regarding to the selected physical fitness variables age, height, weight difference between Government Aided Physical Education College's Students and Non-Aided Physical Education College's Students. 't' test is applied for these variables. 't' value is 6.435 which is significant of 0.05 level. Height 't' value is 1.296 at 0.05 level weight difference between GAHSS and NAHSS students. The calculated 't' value is .734 at 0.05 significant level of confidence with df 178.

Table 1: Significant Mean Difference in Score of Physical Fitness of Government Aided and NonAided Physical Education College's Students

Sr. No.	Item	Mean G.A.P.E. College Students	SD G.A.P.E. College Students	Mean N.A.P.E. College Students	SD N.A.P.E. College Students	Std. Error Mean	df	-
1.	Age	17.356	.916	16.278	1.298	.167	178	6.435
2.	Height	5.428	.390	5.349	.419	6.036	178	1.296
3.	Weight	57.033	7.693	55.944	11.798	1.484	178	.734

* 0.05 significant of level.

Table 2 give information regarding to the selected physical fitness variables of sit-ups, standing broad jump, shuttle run, 50 yard dash, 600 yard run/walk, difference between Government Aided Physical Education College's Students and Non Aided Physical Education College's Students. 't'-test is applied for these variables. Pull-ups 't' value 3.200, standing Broad jump 't' value 6.557, shuttle run 't' value

0.562. 50 yard dash 't' value 1.213, 600 yard run/walk 't' value 4.674 calculated compared to the table of 't' at 0.05 level of confidence with df 178 and comparison mean value of physical fitness variable of Government Aided Physical Education College's Students and Non Aided Physical Education College's Students.

Table 2: Signification Mean Difference in Score of Physical Fitness of Government Aided and Non Aided from Physical Education College's Students

Sr. No.	Item	Mean G.A.P.E. Boys	SD G.A.P.E. Students	Mean N.A.P.E. Students	SD N.A.P.E. Students	Std. Error Mean	df	-
1.	Pull-up	8.911	2.237	6.756	2.319	.340	178	6.347
2.	Sit-ups	26.911	5.278	22.41	12.54	1.406	178	3.200
3.	S.B.J.	35.511	3.363	29.622	4.511	.593	178	6.557
4.	Shuttle Run	11.428	.991	11.552	1.847	.221	178	.557
5.	50 yard Dash	11.704	1.589	12.019	1.883	.260	178	1.213
6.	600 Yard Run/walk	8.480	1.302	9.473	1.538	.212	178	4.04

* 0.05 significant of level

Conclusion

The null hypothesis is rejected. The investigator has found result with significant difference in the physical fitness variables. On the basis of obtained result the significant difference in the physical fitness variables of Government Aided Physical Education College's Students was that they are older in their age, both group of subjects were approximately of the same height. The Government Aided Physical Education College's students are better in strength, speed, endurance than the Non-Aided Physical Education

College's Students. Both groups are having approximately equal level of agility.

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