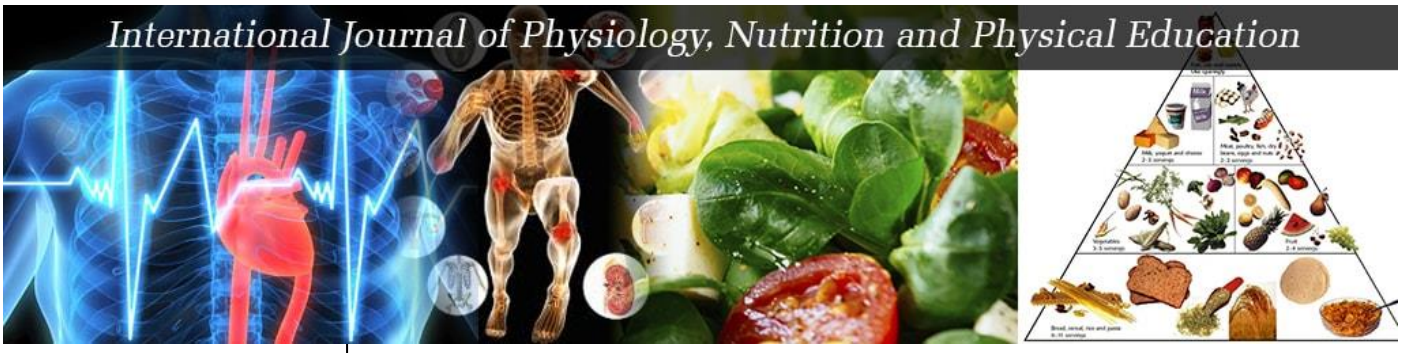

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Comparison of health-related physical fitness among government college and unaided college students in mahatma Gandhi university

Bijin Varghese

Abstract
Today there is a growing emphasis on looking good feeling good and leaving longer increasingly scientific evidence tells us that one of the key to achieving these ideas is fitness and exercises. Chronic diseases are major killers in the modern era. Physical inactivity is a primary cause of most chronic diseases. There are few jobs that require physical exertion we have become a mechanically mobile society relying on machines rather than muscle to get around. in addition, we have become a nation of observers with more people (including children) spending their leisure time pursuing just that leisure consequently, statistics show
that obesity and overweight the problems that come with high blood pressure diabetes, cardiac arrest etc. are on the rise. But statistics also show that preventive medicine pays off so one should not wait until doctor gives an ultimatum. The purpose of the study was to analyze the comparison of health-related physical fitness among government college and unaided college students in mahatma Gandhi university The participants of the study were total of 100 students randomly selected from government aided and unaided sectors college in mahatma Gandhi university.

Keywords: Health related physical fitness, fitness, health

Introduction
The modern age is an age of competition. In this age, one must be physically fit in all aspects to fight against adverse forces and various obstacles that arise in daily life. Physical fitness is a great weapon for soldiers to fight against enemies. It is a mastermind for scientists, engineers, research scholars, thinkers, investigators, statements and psychologists to achieve success in daily life.
Human life is based mainly upon the body as the body is the medium of every endeavor. All the activities of life are done with the help of the body. Nature has created human being to perform various activities efficiently. Physical activity is the inherent requirement of the human body lack of it will have ill effects on all the aspects of human beings i.e., physical, mental & social. Today modernization has made the human life easier, as most of the work is performed by the machines. The sedentary life style of man has reduced the efficiency of human. In the past our ancestor was quite healthy and fit. The main reason was that they had to perform a lot of hard physical activity, like walking, farming, cutting woods from the forest, bringing water from well/hand pump, milking. Moreover, they had less stress in their life. Today it is all opposite, i.e., physical activity is less; UN hygienically a condition exists all around, life is full of stress. Recreation is the activity which involved leisure in free time. Recreation is essential sometimes as an important part of psychology and biology. These kinds of activities are done regularly forgetting the fun which is a part of amusement or pleasure and maybe of enjoying within society or family. It refers to the healthy body and the refreshed mind of an individual.
These day's people are dying from diseases our farmer ancestors probably never had to worry about, the disease of civilization- like diseases related to heart, lungs, brain and joints etc. and on all the unending diseases due to unfavorable lifestyle, including an imprudent diet, inactive lifestyle, smoking habits and chronic unrelieved anxiety and this is showing the need of physical activity in daily life of an individual.

Now days the evidences are shown in the youngsters are having a high level of cholesterol in the blood, high blood pressure, obese body and many other symptoms which are associated with the disease of heart. The expert from the medicine claims the death due to heart disease like heart attack and heart failure on "changes in lifestyle characterized factors over which doctors have little or no control". Research suggests to do the physical activities on a regular basis from the child age may prevent degenerative diseases. Physical exercise improves or increased the tone of muscles, respiratory rate and blood circulation. It helps in better digestion and controlling the obesity and rehabilitation after injury or disease. It also helps in stimulating the growth and development properly. Melvin H. Williams; Research has shown that proper exercise and nutrition programs, even when implemented in late in life as the 60's and 70's can elicit physiological benefits such as improved cardiovascular functioning, decreased blood pressure, decrease body fat, as well as the psychological benefits of decreased tension, depression, fatigue, decrease confusion and increased vigor, self-esteem and independence. A positive health or healthy lifestyle prevents or helps to slow the rate of decline of the wide variety of physical and psychological changes that normally occurs with aging. It also improves the quality of life and sometimes the quantity of life as well. 3 Teach component of HRPF contributes to a healthy and disease free life. The adequate level of fitness is reflected in the individual while an individual able to cope well with daily needs of life and provides the resistance to hypo kinetic diseases. It is the proper combination of good lifestyle, nutritional habits by doing the adequate physical exercise or activity. The Cardiovascular Endurance is the main components of HRPF of complete health and it is the gateway of improving the other parameter of fitness. Cardiovascular Endurance is an ability to sustain a steady pace of exercise without reaching a high level of tiredness. Jogging, cycling, swimming, walking and aerobics are the main exercises to develop the Cardiovascular Endurance. On the daily practical level, we can say that CVE is the capacity to do all physical tasks of our daily lives without fatigue.

Kamat says to learn the art of healthy living one should learn to tackle his best ability, his physical, biological and social environments. The health of a person is really the foundation upon which all their power of the state depends. The real wealth of a country is its healthy men and women and not the mineral wealth or natural resources. The health of the people reflects the nation's economic and social well-being. Health is our most precious possession both individually and collectively. Nothing is possible without health. Health is not everything but health's affects everything. Health is a very flexible state of body or mind, it is never static, it fluctuates and to keep pace with it, it has to be renewed every now and then. It has to be earned by individual efforts. It is a key to success in life. So to make the live fuller, richer and happier one must have a strong will to live healthy. Unless there is a will to live healthy it is impossible for anyone to draw the best of life. Children of any country are the highly valuable assets of the nation. Children's are the main key to future generations on which the health and daily productive life is based on the nation. Unfortunately, today's modern culture, children's are tends to eat high fat foods, sodium and sugar. They 4 were more likely to be obese than their counterparts in the past. They are less physically active than being children in past generations. To save the health of children's as well as nation a team work is required by teachers, parents, social leaders, other professionals from the health industry so they may able to meet the demands of the next century. As an educator, you must consider reforming and supplementing your current physical education curriculum to help attain this goal.

G. Jackson, stated that having a moderate amount of each HRPF component is essential to take precaution or prevent the ailments and the promotion of health. To some extent, having exceptionally high levels of health related physical fitness is similar to having a high level skill related physical fitness, is based on heredity. Just as physical fitness is influenced by heredity, so are other parts of total fitness and health predispositions to various disease and health problem can be inherited doing physical activity is one of the many health lifestyles that contribute to optional health and quality of life. Unlike hereditary, lifestyle can be changed to improve fitness and health. The obese person seems likely to be fit in comparison to others, but they usually faced more serious medical complications in their life in later stage. For example, these children at high risk for coronary heart disease, respiratory impairments, diabetes, orthopedic problems and certain types of cancer. The strength of any country is largely depends on the health status of their citizens and it also responsible for the future of the citizen's health. The citizen's health depends to a large extent of promotion and preservation of health because it is the fundamental human right of all individuals. The implication of health is that, health may be a continuum along linear scale, from near death at one end to optimum health of the other. Optimum health would be that level, which would enable the individual to 5 live to the fullest. Health is the ability of the body of an individual to maintain the adaptive efforts and tends to involve the power of body, vitality and ability to overcome the tiredness. Health is sometimes considered as the total outcome of the organism, Neuro- muscular, interpretive and emotional development. Health is the highest asset of an individual. It is not merely the absence of ailment. Health educationalist are a slowly evolving away from the view that health is merely the treatment and prevention of illness, to a more open ended view that emphasizes the individual's own responsibility for this own well-being. It may be emphasized that health is neither static nor isolated from external circumstances, our health depends on the way we relate to our environment and to each other, where we live, the jobs we do, the food we eat, the water we drink and air we breathe are all important. We are now coming to realize that health is extricable bound up without drink and air we breathe are all important. We are now coming to realize that the health is extricable bound up without minds, environment and way of living. The benefits of physical activity are universal for all people. The participation of people in sports and physical activities promotes and enhances overall wellbeing. One unlucky health results of sedentary life is the weakening of the body's insulin regulatory and regulatory mechanisms. High levels of insulin and blood glucose level are few characteristic features participated in the development of non-insulin dependent diabetes mellitus. When insulin start to function, it starts breaking down, the body's blood sugar levels increase, leads eventually to the onset of pre diabetes and then type II diabetes. Diabetes cases are increasing among young generation, largely as a consequence of obesity and sedentary lifestyle. Regular oxygen consumption, exercise meaningfully increases insulin sensitivity and glucose metabolism, 6 which means the body's cells, can more competently carry glucose into the cells of the liver, muscles

and yellowish tissue. Improvements in glucose metabolism with strength training, incontrovertible evidence the regular motor movement helps to the primary and secondary prevention of several chronic diseases and is associated with a reduced risk of early death. There seems to be an effective linear relation between the volume of motor movements and health status, such that the most physically active people are at the lowest risk. However, the greatest improvements in health status are seen when sedentary people who are least fit become physically active.

Health Extent of continuing physical, emotional, mental, and social ability to cope with one's environment. Good health is harder to define than bad health (which can be equated with presence of disease) because it must convey a more positive concept than mere absence of disease, and there is a variable area between health and disease. A person may be in good physical condition but have a cold or be mentally ill. Someone may appear healthy but have a serious condition (e.g., cancer) that is detectable only by physical examination or diagnostic tests or not even by these. Health is a state of complete physical, mental, social, emotional and spiritual well-being, not merely the absence of disease or infirmity.

The meaning of health has evolved over time. In keeping with the biomedical perspective, early definitions of health focused on the theme of the body's ability to function; health was seen as a state of normal function that could be disrupted from time to time by disease. An example of such a definition of health is: "a state characterized by anatomic, physiologic, and psychological integrity; ability to perform personally valued family, work, and community roles; ability to deal with physical, biological and social stress". Then, in 1948, in a radical departure from previous definitions, the World Health Organization (WHO) proposed a definition that aimed higher, linking health to well-being, in terms of "physical, mental, and social well-being, and not merely the absence of disease and infirmity". Although this definition was welcomed by some as being innovative, it was also criticized for being vague and excessively broad and was not construed as measurable. For a long time, it was set aside as an impractical ideal, with most discussions of health returning to the practicality of the biomedical model. Just as there was a shift from viewing disease as a state to thinking of it as a process, the same shift happened in definitions of health. Again, the WHO played a leading role when it fostered the development of the health promotion movement in the 1980s. This brought in a new conception of health, not as a state, but in dynamic terms of resiliency, in other words, as "a resource for living". In 1984, WHO revised the definition of health defined it as "the extent to which an individual or group is able to realize aspirations and satisfy needs and to change or cope with the environment. Health is a resource for everyday life, not the objective of living; it is a positive concept, emphasizing social and personal resources, as well as physical capacities." Thus, health referred to the ability to maintain homeostasis and recover from adverse events. Mental, intellectual, emotional and social health referred to a person's ability to handle stress, to acquire skills, to maintain relationships, all of which form resources for resiliency and independent living. This opens up many possibilities for health to be taught, strengthened and learned.

Since the late 1970s, the federal Healthy People Program has been a visible component of the United States' approach to improving population health. In each decade, a new version of Healthy People is issued, featuring updated goals and identifying topic areas and quantifiable objectives for health improvement during the succeeding ten years, with assessment at that point of progress or lack thereof. Progress has been limited to many objectives, leading to concerns about the effectiveness of Healthy People in shaping outcomes in the context of a decentralized and uncoordinated US health system. Healthy People 2020 gives more prominence to health promotion and preventive approaches and adds a substantive focus on the importance of addressing social determinants of health. A new expanded digital interface facilitates use and dissemination rather than bulky printed books as produced in the past. The impact of these changes to Healthy People will be determined in the coming years.

Systematic activities to prevent or cure health problems and promote good health in humans are undertaken by health care providers. Applications with regard to animal health are covered by the veterinary sciences. The term "healthy" is also widely used in the context of many types of non-living organizations and their impacts for the benefit of humans, such as in the sense of healthy communities, healthy cities or healthy environments. In addition to health care interventions and a person's surroundings, a number of other factors are known to influence the health status of individuals. These are referred to as the "determinants of health", which include the individual's background, lifestyle, economic status, social conditions and spirituality; Studies have shown that high levels of stress can affect human health.

In the first decade of the 21st century, the conceptualization of health as an ability opened the door for self-assessments to become the main indicators to judge the performance of efforts aimed at improving human health. It also created the opportunity for every person to feel healthy, even in the presence of multiple chronic diseases or a terminal condition, and for the re-examination of determinants of health (away from the traditional approach that focuses on the reduction of the prevalence of diseases).

Life is man's most valuable possession and next in order of value is health without health life is deprived not only of much, if not all, of its usefulness, but also of its Joy and Pleasures for if the body is not in good health one cannot do about at will; he cannot do what he would enjoy doing he cannot eat the food he would enjoy eating.

A, Sick men not only suffers pain and discomfort himself and is unable to supply his own needs but he requires one or more persons to stop doing their ordinary word and spend their time in caring for him. In this way he becomes a burden to others because they must nurse him and supply his food and Clothing-A. C.

One who has good physical health is able to use life more fully than one who is ill. The quality of life is more important than the life itself. This is one he of life's real lessons and blessed child - (Alex Currel). The physical health is not only a good complexion, clean skin, bright eyes, lustrous hair, firm flash optimism fat and coo-ordinated movement but it also covers sweet breath, good aptitude with normal functioning bowel and bladder the child must get sound sleep for needed hours in relation to age.

Along with physical health the fitness is also to be kept in mind, Strength, power, flexibility, agility resting pulse rate and recovery rates after exercise etc. all special senses should word in harmony occurred within the range of normality. - (Park).

Health related physical fitness (HRPF) is an indicator for the development, growths, and lifestyle of children and adolescents. There are five components of physical fitness

body composition, flexibility, muscular strength, muscular endurance, and cardiorespiratory endurance. A well-balanced exercise program should include activities that address all of the health-related components of fitness. Aerobic activities develop cardiorespiratory endurance and burn calories to aid in achieving a healthy body composition. Muscle-strengthening activities develop muscular strength and endurance and assist with the development of a healthy body composition. Activities such as stretching and yoga help improve flexibility.

Methodology

This chapter describes the methodology and procedure adopted. Precisely this includes selection of subjects, selection of variables, collection of data, and the statistical techniques employed for analysis of data.

Methodology is the description of procedures and techniques adopted in a research study. It occupies a very important position in any kind of research, as the validity and reliability of the findings depend upon the method adopted. The methodology includes sources of data, details about a sample, and methods of gathering data, the reliability of tools, and the statistical procedures used in the analysis.

The credibility of the research depends very much on the credibility of the methods used; suitable methods help the researcher to explain the various dimensions of the study.

The study was to compare the health related physical fitness among Government College and unaided college students in Mahatma Gandhi University.

Selection of Subjects

For the purpose of the study, a total number of 100 students within the age group of 18 to 23 years were randomly selected from Mahatma Gandhi University.

Selection of variable

Variables are the conditions or characteristics that the researcher manipulates, controls, or observes. They are concepts that serve a particular purpose in educational research. In the present study following variables were selected.

1. Abdominal strength.
2. Flexibility.
3. Upper body strength and endurance.
4. Cardio respiratory endurance.
5. Body Mass Index.

Selection of Test Items

The test battery Total Physical Fitness Program (TPFP)

- Sit-ups in 60 seconds.
- Modified pull-ups.
- Sit and reach test.
- Multistage Fitness Test / 20 m Shuttle Run Test / Bleep Test/ Beep test.
- Body Mass Index (BMI).

Collection of data

In the present study the researcher directly meet each and every subject and explain the study and take the permission to measure the health related physical fitness by using Total Physical Fitness Program (TPFP) and BMI for the collection of data. Finally, the recorded results were analyzed with statistical techniques such as mean, standard deviation and Independent t test.

Administration of Tests

1. Sit-ups in 60 seconds

Purpose: The purpose of the sit-up is to evaluate the abdominal muscular strength and endurance.

Test Description: To assure the starting position, the student's lies on his/her back with knees flexed, feet on floor with the hands on the opposite shoulders. The feet are held by partners to keep them in touch with the testing surface. The student, by tightening his/her abdominal muscles, curls to the sitting position. Arm contact with the chest must be maintained. The chin should remain tucked on the chest. The sit ups are completed when the elbows touch the to complete the sit-up the student returns to the down position until the mid-back makes contact with the testing surface (Figures and b). When the timer gives the signal "ready go", the sit- up performance should be started and the performance should be stopped on the command "stop" The number of correctly executed sit-ups performed in 60 seconds shall be the score

Equipment and Facilities: Mats or other comfortable surfaces are recommended. Stopwatch timing or sweep second hand from an electronic wrist watch may be used for timing.

Scoring: record the number of correctly executed sit-ups that are completed in sixty seconds.

2. Modified pull-ups

Purpose: The purpose of the Modified pull-ups test was to test the shoulder strength and endurance.

Test Description: The horizontal bar should be positioned at a particular height, which is just reachable to a student, who lies on his/her back 01 flat surface. Then the student should be asked to clasp the horizontal bar with over grasp. When the student is ready, the test leader should give signal "Go". On hearing the signal "go", the subject should start to raise the body by flexing the arm until the chin is pulled up to the level of the horizontal bar. Then the student should lower back to the starting position with shoulders touching the ground, this procedure should be repeated as many times as possible. The test will stop when the student pauses for two or more seconds. The testers should ensure that the subject keeps the knees straight during the test.

Scoring: The student's score is the number of correctly executed pull-ups.

3. Sit and reach test

Purpose: The purpose of the sit and reach was to evaluate the flexibility (extensibility) of the low back and posterior thighs.

Equipment: The test apparatus consists of a specially constructed box with a measuring scale where 23 cm is at the level of the feet.

Scoring

The score is the farthest distance point reached on the fourth trial measured to the nearest centimeter. The test administrator should remain close to the scale and note the farthest distant point touched the fingertips of both hands. If the fingertips reach unevenly, the test shoo be re-administered. The tester should place one hand on the subject's knees to ensure that they remain extended.

4. Multistage Fitness Test/20 m Shuttle Run Test /Bleep Test/ Beep test (Optional test for cardio-respiratory endurance)

Instructions: The 20 m multistage fitness test was a commonly used maximal running aerobic fitness test. It is also known as the 20 meter shuttle run test, beep or bleep test among others.

Equipment required: Flat, non-slip surface, marking cones, 20 m measuring tape, beep test ed player, recording sheets.

Procedure: This test involved continuous running between two lines 20 m apart in time to recorded beeps. For this reason the test if also often called the 'beep" or "bleep' tests. The test subjects stand behind one of the lines facing the second line, and begin running when instructed by the audio command from Ed. The speed at the stand is quite slow. The subject continues running between the two lines, turning when signaled by the recorded beeps. After about one minute, a sound indicates an increase in speed, and the beeps will be closer together. This continues each minute (level). If the line is not reached in time for each beep, the subject must run to the line turn and try to catch up with the pace within 2 more 'beeps". Also, if the line is reached before the beep sounds.

5. Body mass index

Body Mass Index is a simple calculation using a person's height and weight. The formula is BMI = kg/m2 where kg is a person's weight in kilograms and m2 is their height in meters squared.

Statistical Techniques used

Statistical techniques such as mean, standard deviation and Independent t test were used for the present study. The data was analyzed by using IBM-SPSS Version 20.0 (SPSS Inc., Chicago, IL).

Analysis of data and results of the study

This chapter details the analysis of the raw information collected and attempts to give a meaning full picture of the results. Analysis and interpretation are two major steps in the process of research "analysis of data is the heart of a research report. Analysis of data means, studying the tabulated material in order to determine the inherent facts of meaning."

The final and most critical part of the analysis process is interpretation. "Interpretation involves explaining the findings, answering 'Why' questions, attaching significance to particular results, and putting patterns into an analytic frame work. It is tempting the rush into creative work of interpreting the data before doing the detailed, hard work to putting together coherent answers to major descriptive questions."

The process of interpretation is not a simple routine mechanical process it is careful, logical and critical examination of the results of analysis considering all the limitations of the study. Interpretation is the critical examination of results of one's analysis in the light of all the limitations of data gathering'.

The major objective of the present study was to compare the health related physical fitness among Government College and unaided college students in Mahatma Gandhi University. The statistical techniques adopted were Arithmetic mean and standard deviation. To find out the significant difference independent t test were used. The data collected for the present study were analyzed with a view to throwing light on the objectives of this study. The analysis and interpretation of data are presented below. To test the hypothesis the level of significance was set at 0.05 levels.

Table 1: Descriptive statistics of health related physical fitness among Government College students

Health Related Physical Fitness			
Variables	**N**	**Mean**	**SD**
Abdominal Strength	50	48.44	3.14
Flexibility	50	17.28	1.06
Upper Body Strength	50	9.68	2.17
Cardio Respiratory Endurance	50	9.76	1.01
Body Mass Index	50	20.4	2.33

Table 1 indicates that mean and standard deviation of abdominal strength on government college students was 48.44 and 3.14. Mean and standard deviation of Flexibility on government college students was 17.28 and 1.06. Mean and standard deviation of Upper Body Strength on government college students was 9.68 and 2.17. Mean and standard deviation of Cardio Respiratory Endurance on government college students was 9.76 and 1.01. Mean and standard deviation of Body Mass Index on government college students was 20.4 and 2.33 respectively.

Table 2: Descriptive statistics of health related physical fitness among Unaided College students

Health Related Physical Fitness			
Variables	**N**	**Mean**	**S D**
Abdominal Strength	50	38.92	3.20
Flexibility	50	15.04	0.78
Upper Body Strength	50	4.8	1.95
Cardio Respiratory Endurance	50	7.84	0.85
Body Mass Index	50	26	3.17

Table 2 indicates that mean and standard deviation of abdominal strength on unaided college students was 38.92 and 3.20. Mean and standard deviation of Flexibility on unaided college students was 15.04 and 0.78. Mean and standard deviation of Upper Body Strength on unaided college students was 4.8 and 1.95. Mean and standard deviation of Cardio Respiratory Endurance on unaided college students was 7.84 and 0.85. Mean and standard deviation of Body Mass Index on unaided college students was 26 and 3.17 respectively.

Table 3: Independent t test of Abdominal Strength between Government College students and Unaided College students

Abdominal Strength	Mean	SD	Mean Difference	t-Ratio	Sig. (2 Tailed)
Government	48.44	3.14	9.52	8.35	0.0001
Unaided	38.92	3.20			

Significant at 0.05 level, df =98

Table 3 indicates that the mean value of Abdominal Strength among Government College students and Unaided College students was 48.44 & 38.92 and the Standard deviations were 3.14 & 3.20 respectively. The mean difference was 9.52. The calculated t test value was 8.35. Since the obtained t test value 8.35 greater than the table value 2.02 with df 98 at 0.05 level.

So, it was concluded that there was a significant difference exists on Abdominal Strength among Government College students and Unaided College students.

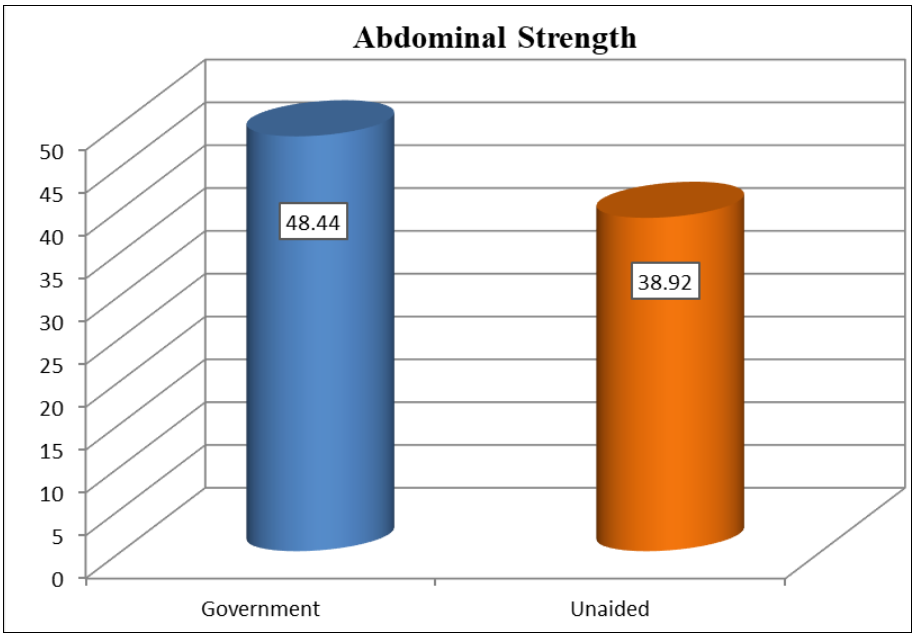

Fig 1: Graphical representation of Abdominal Strength between Government College students and Unaided College students

Table 4: Independent t test of Flexibility between Government College students and Unaided College students

Flexibility	Mean	SD	Mean Difference	t-Ratio	Sig. (2 Tailed)
Government	17.28	1.06	2.24	4.38	0.001
Unaided	15.04	0.78			

Significant at 0.05 level, df =98

Table 4 indicates that the mean value of Flexibility among Government College students and Unaided College students was 17.28 & 15.04 and the Standard deviations were 1.06 & 0.78 respectively. The mean difference was 2.24. The calculated t test value was 4.38. Since the obtained t test value 4.38 greater than the table value 2.02 with df 98 at 0.05 level. So, it was concluded that there was a significant difference exists on Flexibility among Government College students and Unaided College students.

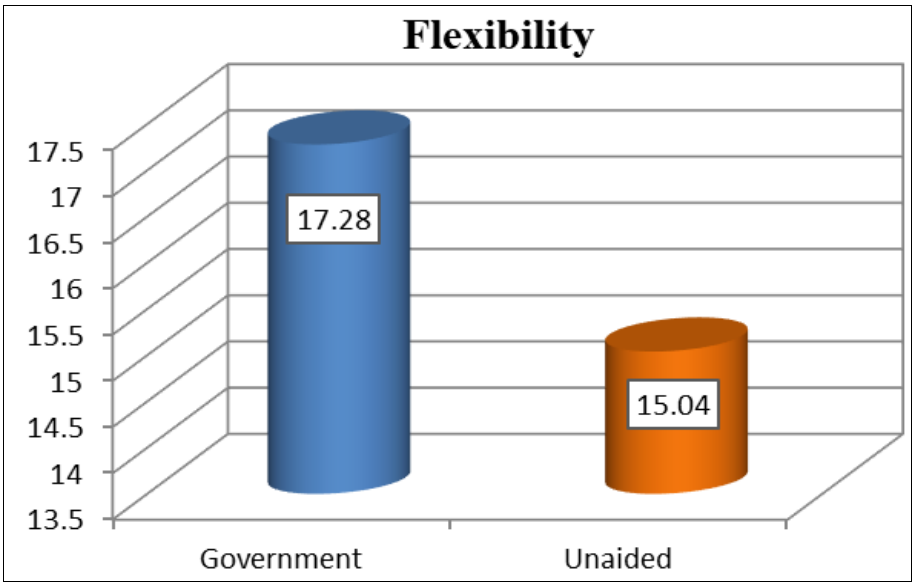

Fig 2: Graphical representation of Flexibility between Government College students and Unaided College students

Table 5: Independent t test of Upper Body Strength between Government College students and Unaided College students

Upper Body Strength	Mean	SD	Mean Difference	t-Ratio	Sig. (2 Tailed)
Government	9.68	2.17	4.88	6.78	0.0001
Unaided	4.8	1.95			

Significant at 0.05 level, df =98

Table 5 indicates that the mean value of Upper Body Strength among Government College students and Unaided College students was 9.68 & 4.8 and the Standard deviations were 2.17 & 1.95 respectively. The mean difference was 4.88. The calculated t test value was 6.78. Since the obtained t test value 6.78 greater than the table value 2.02 with df 98 at 0.05 level. So, it was concluded that there was a significant difference exists on Upper Body Strength among Government College students and Unaided College students.

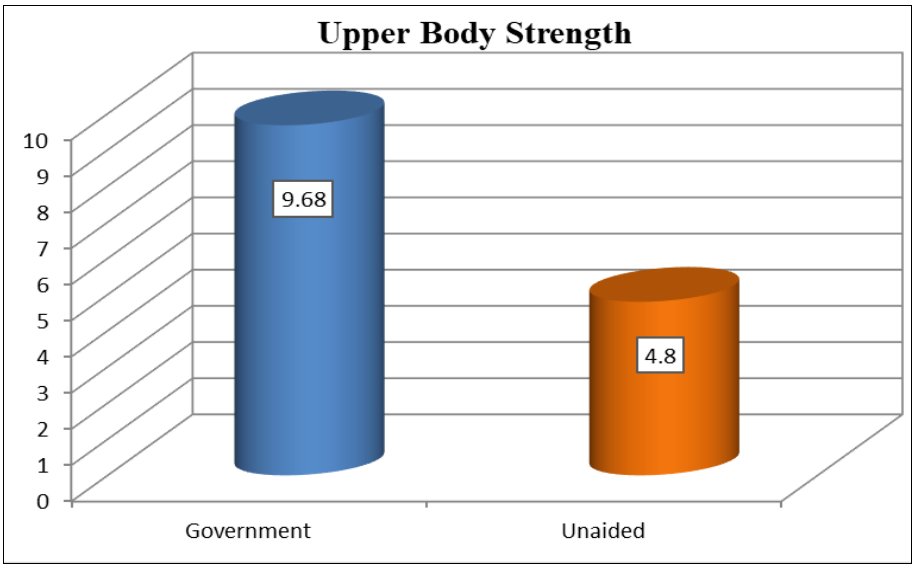

Fig 3: Graphical representation of Upper Body Strength between Government College students and Unaided College students

Table 6: Independent t test of Cardio Respiratory Endurance between Government College students and Unaided College students

Cardio Respiratory Endurance	Mean	SD	Mean Difference	t-Ratio	Sig. (2 Tailed)
Government	9.76	1.01	1.92	3.20	0.042
Unaided	7.84	0.85			

Significant at 0.05 level, df =98

Table 6 indicates that the mean value of Cardio Respiratory Endurance among Government College students and Unaided College students was 9.76 & 7.84 and the Standard deviations were 1.01 & 0.85 respectively. The mean difference was 1.92. The calculated t test value was 3.20. Since the obtained t test value 3.20 greater than the table value 2.02 with df 98 at 0.05 level. So, it was concluded that there was a significant difference exists on Cardio Respiratory Endurance among Government College students and Unaided College students.

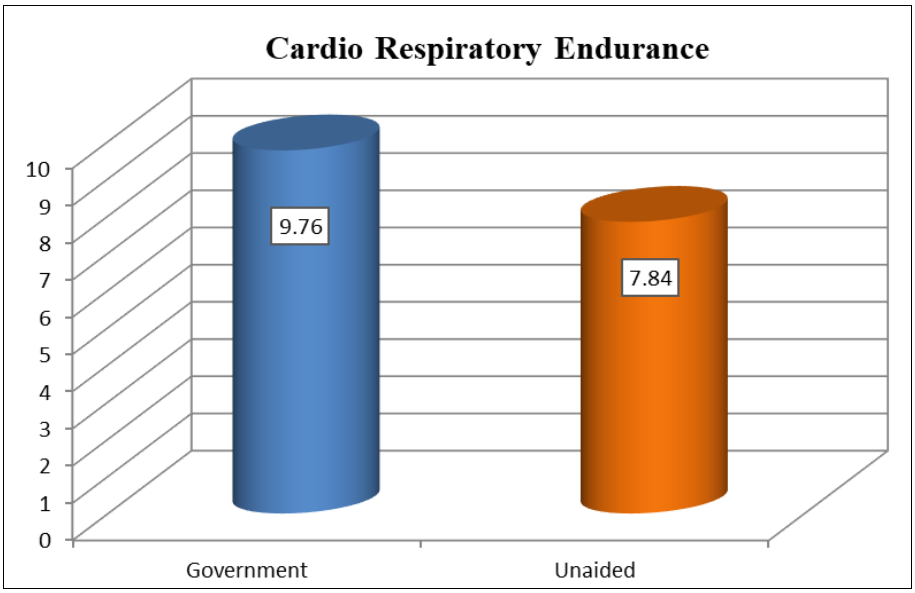

Fig 4: Graphical representation of Cardio Respiratory Endurance between Government College students and Unaided College students

Table 7: Independent t test of Body Mass Index between Government College students and Unaided College students

Body Mass Index	Mean	SD	Mean Difference	t-Ratio	Sig. (2 Tailed)
Government	20.4	2.33	5.6	7.24	0.001
Unaided	26	3.17			

Significant at 0.05 level, df =98

Table 7 indicates that the mean value of Body Mass Index among Government College students and Unaided College students was 20.4 & 26 and the Standard deviations were 2.33 & 3.17 respectively. The mean difference was 5.6. The calculated t test value was 7.24. Since the obtained t test value 7.24 greater than the table value 2.02 with df 98 at 0.05 level. So, it was concluded that there was a significant difference exists on Body Mass Index among Government College students and Unaided College students.

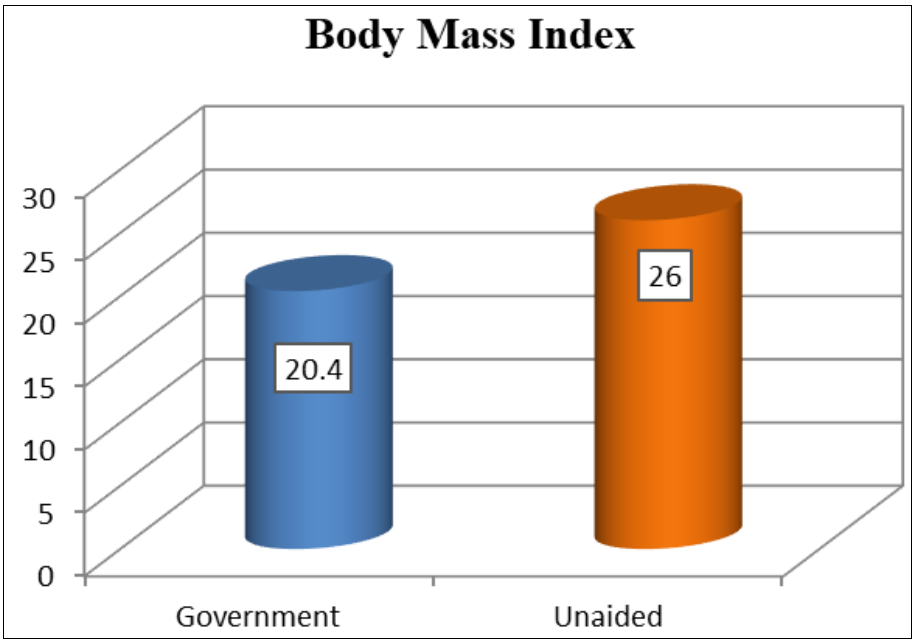

Fig 5: Graphical representation of Body Mass Index between Government College students and Unaided College students

Discussion of findings

Table 1 indicates that mean and standard deviation of abdominal strength on government college students was 48.44 and 3.14. Mean and standard deviation of Flexibility on government college students was 17.28 and 1.06. Mean and standard deviation of Upper Body Strength on government college students was 9.68 and 2.17. Mean and standard deviation of Cardio Respiratory Endurance on government college students was 9.76 and 1.01. Mean and standard deviation of Body Mass Index on government college students was 20.4 and 2.33 respectively.

Table 2 indicates that mean and standard deviation of abdominal strength on unaided college students was 38.92 and 3.20. Mean and standard deviation of Flexibility on unaided college students was 15.04 and 0.78. Mean and standard deviation of Upper Body Strength on unaided college students was 4.8 and 1.95. Mean and standard deviation of Cardio Respiratory Endurance on unaided college students was 7.84 and 0.85. Mean and standard deviation of Body Mass Index on unaided college students was 26 and 3.17 respectively.

Table 3 indicates that the mean value of Abdominal Strength among Government College students and Unaided College students was 48.44 & 38.92 and the Standard deviations were 3.14 & 3.20 respectively. The mean difference was 9.52. The calculated t test value was 8.35. Since the obtained t test value 8.35 greater than the table value 2.02 with df 98 at 0.05 level. So, it was concluded that there was a significant difference exists on Abdominal Strength among Government College students and Unaided College students. Government College students show higher Abdominal Strength.

Table 4 indicates that the mean value of Flexibility among Government College students and Unaided College students was 17.28 & 15.04 and the Standard deviations were 1.06 & 0.78 respectively. The mean difference was 2.24. The calculated t test value was 4.38. Since the obtained t test value 4.38 greater than the table value 2.02 with df 98 at 0.05 level. So, it was concluded that there was a significant difference exists on Flexibility among Government College students and Unaided College students. Government College students show higher Flexibility.

Table 5 indicates that the mean value of Upper Body Strength among Government College students and Unaided College students was 9.68 & 4.8 and the Standard deviations were 2.17 & 1.95 respectively. The mean difference was 4.88. The calculated t test value was 6.78. Since the obtained t test value 6.78 greater than the table value 2.02 with df 98 at 0.05 level. So, it was concluded that there was a significant difference exists on Upper Body Strength among Government College students and Unaided College students. Government College students show higher Upper Body Strength.

Table 6 indicates that the mean value of Cardio Respiratory Endurance among Government College students and Unaided College students was 9.76 & 7.84 and the Standard deviations were 1.01 & 0.85 respectively. The mean difference was 1.92. The calculated t test value was 3.20. Since the obtained t test value 3.20 greater than the table value 2.02 with df 98 at 0.05 level. So, it was concluded that there was a significant difference exists on Cardio Respiratory Endurance among Government College students and Unaided College students. Government College students show higher Cardio Respiratory Endurance.

Table 7 indicates that the mean value of Body Mass Index among Government College students and Unaided College students was 20.4 & 26 and the Standard deviations were 2.33 & 3.17 respectively. The mean difference was 5.6. The calculated t test value was 7.24. Since the obtained t test value 7.24 greater than the table value 2.02 with df 98 at 0.05 level. So, it was concluded that there was a significant difference exists on Body Mass Index among Government College students and Unaided College students. Unaided College students show higher Body Mass Index.

Discussion of hypothesis

In the beginning the investigator formulated two hypotheses that there will be a significant difference exists in physical fitness of college students in Government College and unaided college and Government college students having better physical fitness than unaided college students. The statistical analysis proved that there was a significant difference in physical fitness of college students in Government College and unaided college and Government college students having better physical fitness than unaided college students

Summary, conclusion and recommendations

Summary

Being physically active can improve your brain health, help manage weight, reduce the risk of disease, strengthen bones and muscles, and improve your ability to do everyday activities. Adults who sit less and do any amount of moderate-to-vigorous physical activity gain some health benefits. Physical activity or exercise can improve your health and reduce the risk of developing several diseases like type 2 diabetes, cancer and cardiovascular disease. Physical activity and exercise can have immediate and long-term health benefits. Most importantly, regular activity can improve your quality of life.

Present Study Explains about the health related physical fitness among Government College and unaided college students in Mahatma Gandhi University. To achieve the purpose of the study a total number of 100 students within the age group of 18 to 23 years were randomly selected from Mahatma Gandhi University. In the present study health related physical fitness variables were selected. Finally, the recorded results were analyzed with Statistical techniques such as mean, standard deviation and Independent t test were used for the present study. The data was analyzed by using IBM-SPSS Version 20.0 (SPSS Inc., Chicago, IL).

Conclusion

- It is concluded that there was a significant difference exists on Abdominal Strength among Government College students and Unaided College students.
- It is concluded that there was a significant difference exists on Flexibility among Government College students and Unaided College students.
- It is concluded that there was a significant difference exists on Upper Body Strength among Government College students and Unaided College students.
- It is concluded that there was a significant difference exists on Cardio Respiratory Endurance among Government College students and Unaided College students.
- It is concluded that there was a significant difference exists on Body Mass Index among Government College students and Unaided College students.

Recommendations

Based on the results and conclusions of the study, the following recommendations were drawn.

1. A study of similar nature may be conducted for female students.
2. A similar study may be attempted by selecting the state or national level
3. A similar study may be conducted in different environmental conditions.
4. Elite sportspersons can be chosen as subjects for a similar study.
5. Similar studies can be done by comparing subjects from different districts, states, and universities.
6. A similar study can be conducted with more number of samples selected from different games.

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