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**Sandeep U**  
Assistant Professor,  
Department of Physical  
Education and Sports, School of  
Social Work Roshni Nilaya  
Mangalore Karnataka, India

**M Chandra Chooda**  
Assistant Professor,  
Department of Physical  
Education, Dairy Science  
College, Bengaluru Karnataka,  
India

**Subraya Prabhu S**  
Assistant Professor,  
Department of Physical  
Education Veterinary College,  
Hassan Karnataka, India

**Correspondence**  
**M Chandra Chooda**  
Assistant Professor,  
Department of Physical  
Education, Dairy Science  
College, Bengaluru Karnataka,  
India

## Comparative study on health related physical fitness and motor fitness of college women in Sullia taluk, Karnataka state

**Sandeep U, M Chandra Chooda and Subraya Prabhu S**

### Abstract

The objective of the study is to analyse compare the physical fitness and motor fitness of college women. This type of study is very essential in the field of competitive sports. It helps the future players to maintain their level of physical fitness. A comprehensive fitness program tailored to an individual typically focuses on one or more specific skills, and on age or health-related needs such as bone health. Many sources also cite mental, social and emotional health as an important part of overall fitness. This is often presented in textbooks as a triangle made up of three points, which represent physical, emotional, and mental fitness. Physical fitness can also prevent or treat many chronic health conditions brought on by unhealthy lifestyle or aging. Working out can also help some people sleep better and possibly alleviate some mood disorders in certain individuals.

**Keywords:** Physical fitness, motor fitness, college women Sullia taluk, Mangalore Karnataka state

### Introduction

Fitness is defined as the quality or state of being fit. Around 1950, perhaps consistent with the Industrial Revolution and the treatise of World War II, the term "fitness" increased in western vernacular by a factor of ten. Modern definition of fitness describes either a person or machine's ability to perform a specific function or a holistic definition of human adaptability to cope with various situations. This has led to an interrelation of human fitness and attractiveness which has mobilized global fitness and fitness equipment industries. Regarding specific function, fitness is attributed to persons who possess significant aerobic or anaerobic ability, i.e. strength or endurance. A well rounded fitness program will improve a person in all aspects of fitness, rather than one, such as only cardio/respiratory endurance or only weight training. A comprehensive fitness program tailored to an individual typically focuses on one or more specific skills, and on age-or health-related needs such as bone health. Many sources also cite mental, social and emotional health as an important part of overall fitness. This is often presented in textbooks as a triangle made up of three points, which represent physical, emotional, and mental fitness. Physical fitness can also prevent or treat many chronic health conditions brought on by unhealthy lifestyle or aging. Working out can also help some people sleep better and possibly alleviate some mood disorders in certain individuals.

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Many sources also cite mental, social and emotional health as an important part of overall fitness. This is often presented in textbooks as a triangle made up of three points, which represent physical, emotional, and mental fitness. Physical fitness can also prevent or treat many chronic health conditions brought on by unhealthy lifestyle or aging. Working out can also help some people sleep better and possibly alleviate some mood disorders in certain individuals.

**Physical Fitness:** Fitness can be described as a condition that helps us feel and our best. Fitness in corporate physical and mental health as well as emotional satisfaction and self – awareness. It also includes nutrition education program should be foundation for fitness education, on which influences in Students lives can build i.e. promotion of health full habits in Student. Physical fitness is considered a measure of the body’s ability to function efficiently and effectively in work and leisure activities to be healthy to resist hypo kinetic diseases and to meet emergency situations. It enables us to perform up to our potential. It is the ability to endure to bear up, to with stand stress and is a major basis for good health and well being. Individuals are physically fit when they can meet both the ordinary and unusual of daily life safely and effectively without being overly fatigued and still have energy left for leisure and recreational activities. Physical fitness involves the performance of the heart lungs and muscles of the body.

Fitness is the ability to live a full and balanced life. The totally fit person has a healthy and happy outlook towards life. Fitness is the young man’s absolute necessity. It breeds self- reliance and keeps man mentally alert. Physical fitness is essential for human beings to adjust well with his environment as his mind and body are in complete harmony.<sup>1</sup> It is generally agreed that physical fitness is an important part of the normal growth and development of a child, a generic definition regarding the precise nature of physical fitness has not been universally accepted. Through research and scholarly inquiry, it is clear that the multi-dimensional characteristics of physical fitness can be divided into two areas: health related physical fitness and skill related physical fitness.<sup>2</sup> 1 H. David Clarke and H. Harrison Clarke, Appli.

Physical fitness for youth is usually defined as an outcome measured with a fitness test, most commonly the fitness gram or the president’s challenge. Therefore, a physically fit youth is defined as one who meets criteria measured by one these two tests. Products refers to an expected outcome, specifically, a fitness outcome. As described in the physical fitness definition, it is measured by fitness test and the sole objective is to measure physical performance in a single frame of time. 6 Process is defined as ongoing and continuous participation in physical activity. The process of activity can be measured, but the focus of attention is given to regular (daily) participation in some type of physical activity. Often, emphasis is placed on life style activities that will carry over into adulthood. Based on the definitions, it is clear that the authors view physical activity and physical fitness as different concepts. Although they are often used interchangeably, they need to be viewed separately. The fitness test is best used for personal fitness evaluation because it utilizes criterion referenced health standards. Each student strives to reach personal health standards rather than an arbitrary standard that is unrelated to health. The goal is to teach students the process of fitness testing so they can evaluate their health status during adulthood without a supervisor. The results are the

property of the student and are not posted or shared with other students. The self testing program is an educational endeavour, it allows for more frequent evaluation because it can be done quickly and informally. The personal best approach may appeal to gifted performers and to students who want to measure their maximum performance. The objective is to achieve a maximum score in each of the test items that 8 are normative-based. This type of program has been in place for years for most fitness tests, with a number of awards offered to high level performers. This is a formal testing program as compared to the self testing approach discussed above. It mandates that test items be performed correctly, following test protocol exactly. Since this program requires maximum performance, it may not be motivating to less capable students and requires a considerable amount of time to complete. Some students are threatened and fear embarrassment of failing to perform well in front of peers. Students can feel less threatened if they can choose to participate in a personal best testing session or decide to avoid such testing. Testing opportunities can be offered after or before school and on weekend when school is not session. The third approach, institutional evaluation, entails evaluating the fitness level of students to see if the school is reaching its desired objectives. Institutional objectives are closely tied to the physical education curriculum. If the curriculum being taught to students is adequate and the goals are reasonable, students should be able to reach in situational goals. A common approach is to establish a percentage of the student body that must meet or exceed criterion referenced health 9 standards for a fitness test. If the percentage is below established institutional objective standards, the curriculum should be modified to increase the percentage of students meeting the health standards. When the three different approaches for testing are reviewed, the personal fitness evaluation is most likely the most meaningful to students. It focuses on the process of evaluation rather than a product expressing a one time performance. It can be done in the least amount of time, is educational, and can be done frequently. In addition, little instructional time is lost, and youth learn to evaluate their personal fitness, a skill that will serve them for a lifetime.

Every individual must know the importance of physical fitness. In other words, one must have a fundamental knowledge of anatomy and physiology. This fundamental knowledge enables person to understand physical fitness. Physical fitness is the capacity of a person to function steadily and smoothly when situations arise. Physical fitness makes you feel mentally sharper, physically comfortable and more with your body and better able to cope with the demands that every day life makes upon you. Increased physical fitness not only improves health but improves your performance at work. Hundreds of American companies have backed with idea financially by employing full time directors of fitness for their work. Gorden Jackson (1985) The benefits of physical fitness are numerous. The person who is physically fit has greater amount of strength, energy and stamina an improved sense of well being better protection from injury because strong well developed muscles safeguard bones, internal organs and joints and keep moving parts limbers and Improved cardio respiratory function Bucher and Prentice (1985) It is necessary for every individual to be physically fit to perform their daily work with ease and to take part in various activities effectively. Everyone should be fit enough through participation in physical activities to develop the different physical fitness components.

**Methodology**

**Health related physical fitness**

1. Muscular strength
2. Muscular Endurance
3. Cardio Vascular Endurances
4. Flexibility

**Muscular Strength:** Muscular strength is the ability of muscles to exert or resist force. Most activities do not build strength in areas where it is needed-the arm-shoulder girdle and the abdominal-trunk region. When you push, pull or lift objects, for example, your muscles are exerting a force.

**Muscular Endurance:** Muscular endurance is the ability of a muscle, or a group of muscles to exert force over an extended period of time. Endurance postpones the onset of fatigue so that activity can be performed for lengthy periods. Sport activities require muscular endurance, because throwing, kicking, and striking skills have to be performed many times without fatigue.

**Cardiovascular Endurance:** Aerobic fitness offers many health benefits and is often seen as the most important element of fitness. Cardiovascular endurance is the ability of the heart, the blood vessels, and the respiratory system to deliver oxygen efficiently over an extended period of time. To develop cardiovascular endurance, activity must be aerobic in nature. Activities that are continuous and rhythmic in nature require that a continuous supply of oxygen be delivered to the muscle cells.

**Flexibility:** Flexibility is the range of movement through which a joint or sequence of joints can move. Inactive individuals lose flexibility, whereas frequent movement helps retain the range of movement. Through stretching activities, the length of muscles, tendons, and ligaments is increased. The ligaments and tendons retain their elasticity through constant use.

**Motor fitness:** Motor fitness refers to the ability of an athlete's for perform successfully at their sports. The components of motor fitness are. Speed, Agility, Power, Balance

**Speed:** Speed is the ability to perform a movement in the shortest possible time. It is essential in most sport related movement, including Track, Basketball, Football and Baseball.

**Agility:** The agility often called quickness, ability to change direction accurately while moving through space. It is essential in sports such as Basketball and Football.

**Power:** Power is ability to exert muscular strength rapidly. It combined speed and strength. Explosive skills require power fitness, which involves exerting force with marked acceleration. Olympic lifting and shot putting are examples.

**Balance:** Balance is the ability to maintain a position. Balance can be static or dynamic. Static balance means that the athlete is not moving, such as when performing a handstand. Dynamic balance means that the athlete maintains equilibrium while moving, such s in slalom ski events.

**Source of Data:** Four colleges of Sullia Talluk were selected for the study.

**Subject for the study:** 60 girls from four colleges are subjects for the study. The girls of age seventeen to twenty are selected randomly from colleges for the study. The tests are administrated to students in morning sessions.

**Selected Variables for Health Related Physical Fitness**

Sl. No	Test	What to measure	Unit of measurement
1	Muscular Strength	Standing board jump	Centimeter
2	Muscular Endurance	800 mtr race	Seconds
3	Cardio Vascular Endurance	Hard ward step test	Seconds
4	Flexibility	Sit and rich test	Centimeters

**Selected Variables for Motor Fitness**

Sl. No	Test	What to measure	Unit of measurement
1	Agility	Shuttle run(10mtrs)	Seconds
2	Speed	50 mtr dash	Seconds
3	Power	Shot putting	Centimeters
4	Balance	Stork balance test	Seconds

Before starting data collection researcher has given the instruction regarding present study and students were asked to clear it any doubts on the study. The study was related to the physical fitness and motor fitness among the college girl students. The researcher has given details regarding the physical fitness and motor fitness to the subjects for better idea regarding the concerned study.

**Result and Discussion**

In this analysis chapter, investigator is doing a comparative study on Health Related Physical Fitness and Motor Fitness of college women in Sullia Talluk. Sixty students were taken as subject for this study. The health related fitness and motor related fitness has been measured on the basis of AAHPER Youth Fitness Test performance in the events such as Standing Broad Jump, 800 mtr Race, Hard ward Step Test, Sit and Rich Test, Shuttle Run(10mtr), 50 mtr Dash(sprint), Shot Putting, and Stork balance Test. The statistical analysis to which the data subject and their level of performance as per the fitness test concern has been presented in this chapter with table and graph.

**Table 1:** Statistical Values of Performance in Health Related Fitness Variables

Statistical values	Muscular strength	Muscular endurance	Cardiovascular Endurance	Flexibility
Mean	2.22	3.61	18.92	11.01
Standard Deviation	0.51	0.50	2.07	2.08

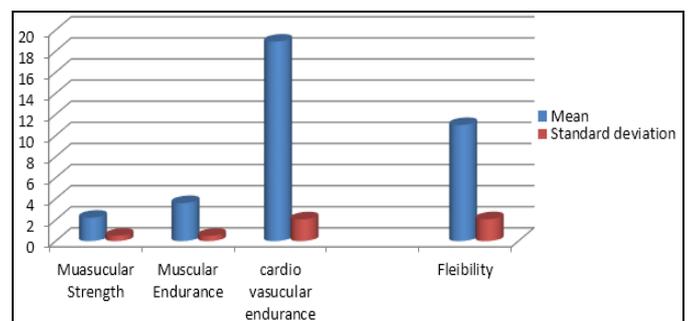
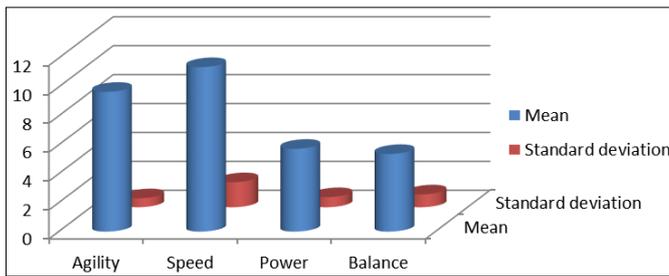


Table 1 indicates the performances of the subjects in motor related fitness variables. Similarly table 4 indicates the statistical values namely the Mean and Standard Deviation of each of the motor related performance variables.

**Table 2:** Statistical values of performance in motor fitness variables

Statistical values	Agility	Speed	Power	Balance
Mean	9.67	11.38	5.73	5.37
Standard Deviation	0.62	1.73	0.70	0.89



**Table 3:** Correlation of performance in health related and motor fitness related variables

Statistical Values	Health related Physical Fitness	Motor related Physical Fitness
Mean	-0.0053	0.000996
Standard Deviation	2.19	2.03
Correlation Coefficient	-0.1716	

Table 3 shows the final analysis of the performances of subjects in both health related and motor related performance variable z scores. The correlation coefficient is -0.1716.

The null hypothesis was that there would not be a significant positive relationship between health related and motor related performance variables. The correlation coefficient is -0.1716 at 0.5 level of significance for 118 degrees of freedom. As per the correlation table to accept or reject the significance the r should be equal or more than 0.174. Since r is less than the required value one can say that the null hypothesis is accepted and the research hypothesis is rejected. Therefore one can come to the decision that there is no relationship between performance in health related and motor related variables.

**Conclusion**

On the basis of the data analysis the researcher is confident of arriving at certain conclusions based on the result of the studies. They are:

- There is no significance relationship between health related and motor related fitness, though they show differences in individual events.
- The agility is motor fitness is better than the physical fitness among college women.
- The muscular endurance of physical fitness was good compared to the motor fitness among college women.
- The cardio vascular endurance of physical fitness is greater than the motor fitness among college women.
- The flexibility of physical fitness is greater than motor fitness among college women.
- The physical fitness and motor fitness performance should be improved by regular practice.
- The teacher can conduct the fitness test for the development of physical fitness and motor fitness of college women.
- Similarly this study can be conducted to identify the physical fitness and motor fitness of college women for the selection of students for sports and games.

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