

# Comparative Study of Motor Fitness of Male Students (General U.G. Courses) of Government and Non-Government Colleges of Haryana

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## ABSTRACT

The purpose of the study was to find out the comparison of motor fitness of male students (General U.G. Course) of Government and Non-Government Colleges of Haryana. Eight Hundred & Eighty male students (20 from Government and 20 from Non - Government Colleges' students from each district of Haryana) were selected randomly from the colleges of Haryana for the study. Subjects were advised to be original during the study and data collection. They were also advised to perform all activities sincerely, as the researcher demonstrated all activities before starting the data collection. To test the subjects' speed, they are advised to run 100 meters at their full speed and power. For testing the endurance of the subjects they are advised to 12 minutes run/walk with their full endurance and strength. To test the subjects' agility, they are advised to run at their full speed, balance, and mental presence. For testing the strength of the subjects they are advised to give their best by using maximum strength. For testing the flexibility of the subjects they are advised to give their best by using maximum flexibility of their backbone. All the collected data were arranged systematically and processes with the help of the following statistical techniques and tools.

Mean =

S.D. =

SED =

t =

The finding of the study is that the fitness of male students (General U.G. Course) of Government Colleges of Haryana is better than that of male students (General U.G. Course) of Non - Government Colleges' of Haryana. It may be due to the living and working style of the male students (General U.G. Course) as most students of Government Colleges of Haryana come from rural areas and have the habits of hard work at their home and farms. The students seeking admission to Government colleges belong to the middle economical class of the population and don't have facilities to travel by bus & car. They usually come to school by roadways bus, cycle, or by foot. However, the students who are studying in Non-Government colleges usually have better facilities as their transportation mode. It is also observed that middle economical class students are more involved in physical activities. This might be the reason that the government college students were having better Speed, Agility, Power, Strength, Flexibility, and Endurance factors of motor fitness as compared to Non-Government college boys.

**Key Words:** Resistance training, endurance training, physical activities, leg strength, back strength, motor fitness, and tidal volume.

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## INTRODUCTION

Motor fitness is the ability to make adequate physical and emotional adjustment to the demands of every day living's. Therefore the concept of motor fitness in the terms of meeting directly the requirements of the daily life has been widely accepted. Motor fitness is the ability of a person not only meets the daily requirements which are essential to carry out his job effectively but also is addition to unforeseen emergencies. According to the medical point of view, the

American Medical Association (AAHPHER, 1958) defined the term motor fitness as the general capacity to adapt and respond favorably to the demands put on the body. The degree of motor fitness depends upon the individual's state of health, constitution as well as present and previous motor activities. Regular participation in well planned systematic and segmental progressive program of physical education contribute to improvement of motor fitness and this in turn impress the skill and performance capacity of the participants. The main reason of poor performance shown by our sportsmen in the international competition is primarily the lack of emphasis in the development of sound program of physical education, games and sports at the college level. In our country promotion of motor fitness of college going children has been ignored.

### **REVIEW OF RELATED LITERATURE**

Honest and sincere efforts made by researcher to go through the related literature to know about the previous studies. Review of literature either from library or from any other source like internet plays very important and essential role behind any research work. The review of related literature is done by keeping following main points for the purpose of the present study:

- 1). Physical Fitness
- 2). Physical Fitness Measurement Tests
- 3). Statistical Tools

#### **Objective Of Study:**

The major objective of study was to compare the motor fitness of male students (General U.G. Courses) of Government and Non-Government colleges' of Haryana.

The details of objectives are as below:

- To compare the Speed of male students (General U.G. Courses) of Government and Non-Government colleges of Haryana.
- To compare the Agility of male students (General U.G. Courses) of Government and Non-Government colleges of Haryana.
- To compare the Strength of male students (General U.G. Courses) of Government and Non-Government colleges of Haryana.
- To compare the Endurance of male students (General U.G. Courses) of Government and Non-Government colleges of Haryana.
- To compare the Flexibility of male students (General U.G. Courses) of Government and Non-Government colleges of Haryana. To compare the Power of Govt. & Non-govt. school boys.

#### **Hypothesis:**

Keeping in view the objective of the study, Null hypothesis was framed for this study and these are detailed as under:

- There is no difference in **Speed** component of motor fitness of male students (General U.G. Courses) of Government and Non-Government colleges of Haryana.
- There is no difference in **Agility** component of motor fitness of male students (General U.G. Courses) of Government and Non-Government colleges of Haryana.
- There is no difference in **Strength** component of motor fitness of male students (General U.G. Courses) of Government and Non-Government colleges of Haryana.
- There is no difference in **Endurance** component of motor fitness of male students (General U.G. Courses) of Government and Non-Government colleges of Haryana.
- There is no difference in **Flexibility** component of motor fitness of male students (General U.G. Courses) of Government and Non-Government colleges of Haryana.

#### **Delimitations:**

The study was delimited for the following factors:

- The present study was based only on a sample of 880 college boys (440 for Government and 440 for Non-Government Colleges).
- Only 05 elements of motor fitness i.e. Speed, Agility, Strength, Endurance and Flexibility were measured through selected motor fitness test.
- The study was confined only to selected Government and Non-Government colleges of Haryana.

## RESEARCH METHODOLOGY

### Sample:

The sample is collected from 440 male students of General U.G. Courses (20 from each district of Haryana) as subject who were selected randomly from the different Non-Government colleges and 440 male students of General U.G. Courses (20 from each district of Haryana) total 880 students were selected randomly from the different Government colleges, which represented the Non-government & Government population from the all 22 district of Haryana state. Physical Education teacher of the related college is requested to convey the message to the subjects / students so that they can stay after college hours and cooperate.

### Tool Used:

The main objective of this study was to compare the motor fitness of male students (General U.G. Courses) of Government and Non-Government colleges of Haryana. In this investigation the motor fitness of the male students was studied in term of Speed, Agility, Strength, Endurance and Flexibility. These five elements of motor fitness were studied with the help of different tests. The following tests were selected for the study:

- **SPEED** : **100 meter Dash / Sprint**  
The best time taken in seconds out of the two attempts is the final score of the subject.
- **AGILITY TEST** : **Zigzag Run Test**  
The best time taken in seconds out of the two attempts is the final score of the subject.
- **STRENGTH TEST** : **8 Pound Shot-Put Test**  
Each throw / effort was measured in meters from the nearest fall of the shot to the inside of the circumference of the shot-put circle.
- **ENDURANCE TEST** : **12 Min. Run / Walk**  
The total distance covered in meters by the subject in 12 minutes is the final score.
- **FLEXIBILITY TEST** : **Bend & Reach Test**

The maximum range of bend of the subject in a two effort is the measured in centimeters with the scale which was fixed on table as final score.

### Statistical techniques used:

The data were analyzed with the help of the following statistical tools and techniques. For accuracy online tools are also used from the internet. In order to know the nature of data Mean, Standard-Deviation, Measure of central tendency were used with the following formula:

- **Average or mean:**  $1/n * (\text{sum of } x \text{ values})$  .where n is the sample size and x correspond to the observed value.
- **Standard deviation:** standard deviation shows how much variation or dispersion exists from the average, or expected value.

$$\sigma = \sqrt{\frac{1}{N} \sum_{i=1}^N (x_i - \mu)^2}, \text{ where } \mu = \frac{1}{N} \sum_{i=1}^N x_i.$$

- **Independent two-sample t-test:** The independent samples t-test is used when two separate sets of independent and identically distributed samples are obtained, one from each of the two populations being compared.

Where

$$t = \frac{\bar{X}_1 - \bar{X}_2}{s_{\bar{X}_1 - \bar{X}_2}} \quad s_{\bar{X}_1 - \bar{X}_2} = \sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}$$

## RESULT & DISCUSSION

The most important part of the research is the analysis and interpretation of data in systematic & an objective way. Analysis of data means studying the tabulated and classified raw material in order to determine inherent factor meaning. Before giving the analysis, interpretation and discussion of each test item, a comprehensive description of the statistic is given in the following way. For calculating the collected data / sample researcher also took help by using the internet and computer for the accuracy.

**Table – 01; showing N, Mean, Standard-Deviation and ‘t’-value of various test of Motor Fitness of male students (General U.G. Courses) of Government and Non-Government colleges of Haryana.**

Sr. No.	Test Items	Mean		S.D		SED	‘t’
		Govt. School	Non-Govt. School	Govt. School	Non-Govt. School		
1.	100 Meter Dash / Run Test	13.87	14.21	0.95	1.46	0.16	2.12
2.	Zigzag Run Test	12.07	12.87	0.87	.94	0.13	2.07
3.	8 Pound Shot-Put / Throw Test	8.89	8.45	1.66	1.78	0.22	2.03
4.	12 Minutes Run / Walk Test	2161.33	2133.16	301.46	214.45	34.05	2.55
5.	Bend & Reach Test	1.64	1.54	0.43	0.39	0.05	2.00

- The ‘t’ value of mean scores on 100 Meter dash / run test for male students (General U.G. Courses) of Government and Non-Government colleges of Haryana was found significant at 0.05 level of confidence indicated a significant difference in speed factor of motor fitness. The male students (General U.G. Courses) of Government colleges here found possessing better speed as compare to male students (General U.G. Courses) of Non-Government colleges of Haryana. **So here the Null hypothesis is rejected.**
- The ‘t’ value of mean scores on Zigzag run test for male students (General U.G. Courses) of Government and Non-Government colleges of Haryana was found significant at 0.05 level of confidence indicated a significant difference in speed factor of motor fitness. The male students (General U.G. Courses) of Government colleges here found possessing better speed as compare to male students (General U.G. Courses) of Non-Government colleges of Haryana. **So here the Null hypothesis is rejected.**
- The ‘t’ value of mean scores on Shot-Put test for male students (General U.G. Courses) of Government and Non-Government colleges of Haryana was found significant at 0.05 level of confidence indicated a significant difference in strength factor of motor fitness. The male students (General U.G. Courses) of Government colleges here found possessing better strength as compare to male students (General U.G. Courses) of Non-Government colleges of Haryana. **So here the Null hypothesis is rejected.**
- The ‘t’ value of mean scores on 12 minutes Run / Walk test for male students (General U.G. Courses) of Government and Non-Government colleges of Haryana was found significant at 0.05 level of confidence indicated a significant difference in endurance factor of motor fitness. The male students (General U.G. Courses) of Government colleges here found possessing better endurance as compare to male students (General U.G. Courses) of Non-Government colleges of Haryana. **So here the Null hypothesis is rejected.**
- The ‘t’ value of mean scores on Bend & Reach test for male students (General U.G. Courses) of Government and Non-Government colleges of Haryana was found significant at 0.05 level of confidence indicated a significant difference in flexibility factor of motor fitness. The male students (General U.G. Courses) of Government colleges here found possessing better flexibility as compare to male students (General U.G. Courses) of Non-Government colleges of Haryana. **So here the Null hypothesis is rejected.**

### CONCLUSION

The students seeking admission to government colleges belong to rural as well as middle economical class of the population of Haryana who don’t have facilities to travel by bikes & cars. They usually come to colleges by roadways buses, cycle or by foot. However the students seeking admission to non - government colleges usually have better facilities as their transportation mode. It is also observed that rural and middle economical class students are more involved in physical activities as they are working at agriculture land. The food habits of the rural and middle economical class students are also differ and natural in nature compare to non - government colleges students. This might be the reason that the government colleges students were having better Speed, Agility, Strength, Endurance & Flexibility factors of motor fitness as compare to Non-Government school boys.

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