

A comparative study of physical fitness parameters between General college students and Training college students

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Abstract

Physical fitness is a required element for all the activities in our society. Physical fitness of an individual is mainly dependent on lifestyle related factors such as daily physical activity levels. Physical fitness is also considered as the degree of ability to execute a physical task under various ambient conditions. The aim of this study was to determine the comparative analysis of physical fitness components of general and training college students. To obtain data 25 female students age between 18-25 years were selected randomly in each college. Six physical fitness components viz., Explosive strength, Flexibility, Agility, Balance, Muscular strength, Muscular endurance, were considered as variable for the present study. The data were collected by standard tools and techniques. Mean and standard deviation was used as descriptive t-test was used to measure the significance of different between two groups. Result of the present study revealed that among various physical fitness variables explosive strength, flexibility, agility, balance and muscular endurance is better in training college students than the general college students. It is concluded that training college students are significantly more fit than the general college students.

Keywords: Agility, balance, physical fitness, muscular strength.

Introduction

Regular physical activity is an important component of healthy lifestyle and helps to keep the body fit. Physical activity is any bodily movement produced by skeletal muscle that results in energy expenditure. Physical fitness is required not only by athletes for better performance, but also by non-athletes for maintenance of a healthy body and healthy mind (Morteza et al., 2011).

Physical activity has been identified as the fourth leading risk factor of global mortality, causing an estimate 5.3 million deaths each year (Lee et al., 2012). Comprehensive meta-analyses have also demonstrated that high levels of extraversion and conscientiousness and low levels of neuroticism related to high levels of physical activity (Rhodes and Smith, 2006).

Considering the importance of physical fitness, this study was primarily designed to assess these dependent measures among general college student and training college student. Thus, the aim of the current investigation was to compare the physical fitness parameters between general college students and training college students and also to assess the impact of physical training programme.

Methodology

Subject

50 subjects were selected randomly from the training college and general college.

Procedure

The following criteria are selected to measure the different physical parameter of the subject:-

1. Explosive strength
2. Flexibility
3. Agility
4. Balance
5. Muscular strength
6. Muscular endurance

Tools and test used

Explosive strength, Flexibility, Agility, Balance and Muscular endurance were measured by AAHPERD test and Muscular strength was measured by Hand grip dynamometer.

Results and findings

Total fitness is a result of the genetic makeup and the interaction with the environment. The totally fit individual is Explosive Strength, Flexibility, Agility, Balance, Muscular strength, Muscular Endurance and socially adjustable to different circumstances prevailing in the society. The data were collected by standard tools and techniques.

Mean and standard deviation was used as descriptive t-test was used to measure the significance of different between two groups. The comparative analysis of physical fitness components of general and training college students are tabulated at table 1.

From the table 1 it was revealed that the mean \pm SD of general college students height is 153.8 ± 4.61 and mean \pm SD of training college students height is 158.24 ± 6.76 , mean \pm SD of general college students weight is 53.6 ± 12.24 and mean \pm SD of training college students is 51.72 ± 8.39 .

From the table-2 it was revealed that the mean \pm SD of Explosive strength in general college students is 1.09 ± 0.25 , training college students is 1.75 ± 0.15 , flexibility in general college students is 25.8 ± 11.03 , training college students 37.59 ± 8.97 , agility in general college students 14.84 ± 1.74 , training college students 11.67 ± 11.67 , agility (time taken for the shuttle run) of the training college students is significantly lower than general college students. So it is reflex that the training college students have more speed with which they may change their body position or direction. Balance in general college 6.84 ± 8.25 , training college 14.48 ± 11.76 , muscular strength in general college 35.04 ± 10.95 , training college 35.12 ± 10.22 , muscular endurance in general college 11.92 ± 7.67 , training student 27.28 ± 6.92 .

Discussion

From this table it is observed that except muscular strength there is significant difference of physical fitness parameters between general college students and physical training college students. From the table it is revealed that the mean explosive strength in general college students is 1.09 and training college students is 1.75.

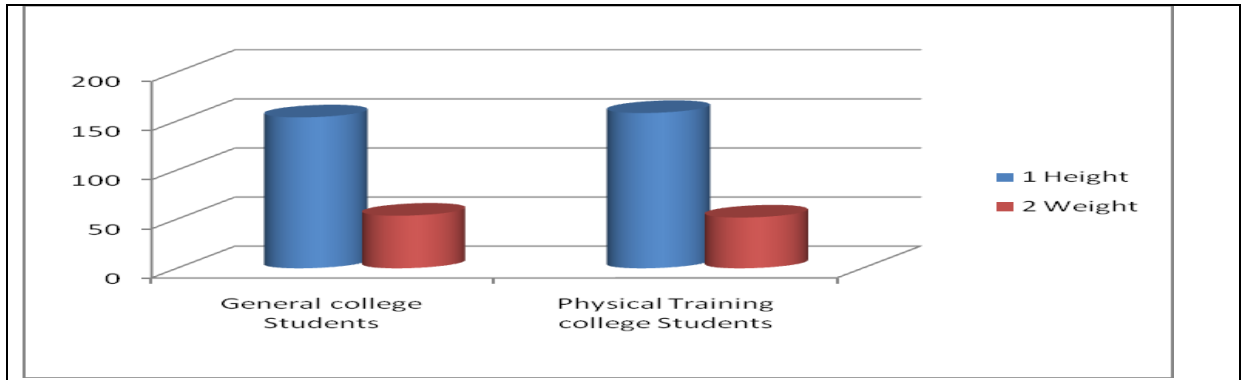


Fig. 1. Comparison of Physical parameters between General college Students and Physical Training college Students.

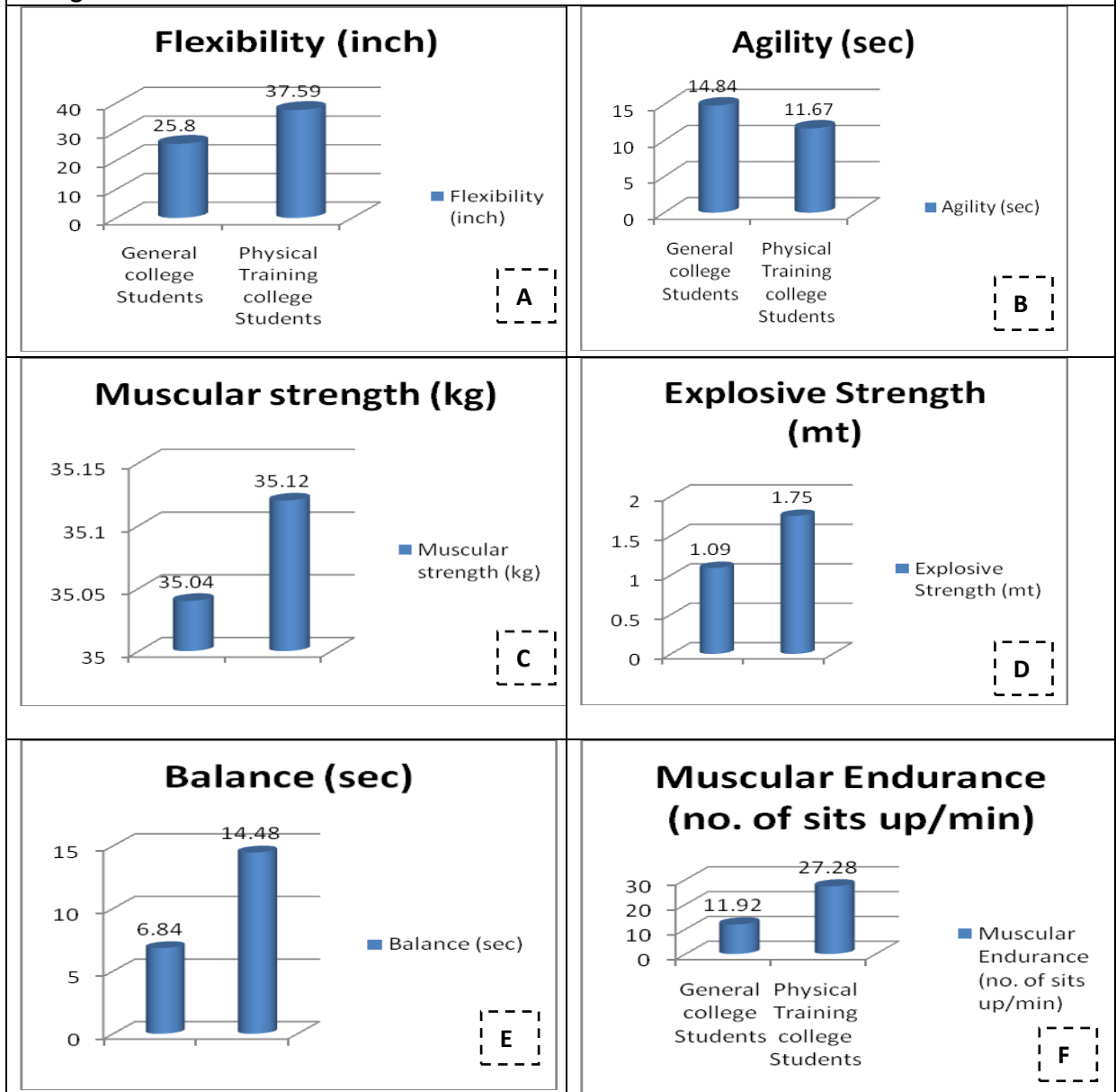


Fig. 2. (A-F). Comparison of Physical fitness components between General college Students and Physical Training college Students.

Table 1. Physical parameters

Sl No.	Physical parameter	General college Students	Physical Training college Students	T Value
1	Height	153.8±4.61	158.24±6.76	2.72*
2	Weight	53.6±12.24	51.72±8.39	0.63

Table 2. Physical fitness components of women students

Sl No.	Physical fitness components	General college Students	Physical Training college Students	T Value
1	Explosive Strength	1.09±0.25	1.75±0.15	11.45*
2	Flexibility	25.8±11.03	37.59±8.97	4.15*
3	Agility	14.84±1.74	11.67±11.67	8.83*
4	Balance	6.84±8.25	14.48±11.76	2.66*
5	Muscular strength	35.04±10.95	35.12±10.22	0.03
6	Muscular Endurance	11.92±7.67	27.28±6.92	7.66*

Significant statistically (at $p>0.05$ level).

In 1960 Espenschadethe showed that trained girls are superior in leg strength than the untrained girls. There have greater significant on selected strength variables of sports performer student than the normal or not sports performer (Cwtt, 2015). Flexibility in general college students is 25.8 and training college student is 37.59. This is an established fact that flexibility is a highly training dependent ability (Singh, 1991). The trained girls with continuous participation in physical activities develop a good amount of flexibility and maintain it according to the intensity, duration and quality of activities they perform (Sermeev,1966). Agility in general college students 14.84 but training college student is 11.67, agility (time taken for the shuttle run) of the training college students is significantly lower than general college students. This result reflex that the training college students have more speed with which they may change their body position or direction. Performance in agility run (Shuttle Run) depends upon factors like speed of movement, acceleration ability ,stride length and the ability to change direction quickly in the shortest possible

timeline (Ghai, 2007) . Improvement of these abilities is only possible through regular and systematic physical training and through participation in multidimensional physical activities of different games and sports. So physical training student’s agility is better than general students. But in case of muscular strength there was no significant. This might be because of the nature of activity of both the groups. Balance in general college student is 6.84, training college 14.48 so it can be said that training college students’ balance is better than general college students. In 2014, Baro M. also showed similar result in balance. Mean muscular endurance in general college student is 11.92 and training student is 27.28.

From the results it is clear that the students of physical training college have far better physical fitness than students of general college. As per curriculum training college students has to participate in the fitness training and various games and sports which may the great factor of improving the stated fitness variable. On the other hand there is less scope for general college students in the participation of such kind of fitness training.

Conclusion

Within the limits and limitation of the study, it can be concluded that training college students are significantly more physically fit than the general college students.

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