

A Study on the Health Related Physical Fitness Components of Selected Professional College Male Students

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Abstract:

Physical fitness is a set of attributes that are either health- or skill-related. Health-related fitness refers to those components of fitness affected by habitual physical activity and related to health status. It is defined as a state characterized by (a) an ability to perform and sustain daily activities and (b) demonstration of traits or capacities associated with a low risk of premature development of diseases and conditions related to movement. The purpose of this study was to conduct a survey on "Health related physical fitness components of selected professional male college students". The subjects for this descriptive study of survey method were seventy five students from medical college, law college and Engineer college chosen randomly from three hundred of each Disciplines of Nair Medical college, Department of law University of Mumbai, and D.J.Sanghvi College of engineering with average age of 18 to 25 years of male students respectively. The selected 75 subjects were tested on the following Health related physical fitness variables of Muscular Strength, Muscular Endurance, Flexibility, Cardio vascular, and Body Composition administering the tests of Push-ups, Bent knee sit up, Sit and reach, 12 minutes run and walk, and Skin fold measurement respectively. The collected data were analysed by using the 't' test. The findings revealed that there was no significant difference in the health related fitness variables of medical, engineering and law college male students.

Key words: fitness, health, body composition

Introduction:

The expert committee of the World Health Organization described physical fitness as "the ability to undertake muscular work satisfactorily." Physical fitness is the capacity to early out, reasonably well, various forms of physical activities, without being unduly tired and includes qualities important to the individual's health and well-being. Every person has a different level of physical fitness which may change with time, place of work, situation and there is also an interaction between the daily activities, and the fitness of an individual, the point if where to put the level of optimum fitness. From the physiological point of view physical fitness may say to be ability at the body to adopt and recover from strenuous exercise.

Objectives of the Study:

- To find out the status of health related physical fitness of the different professional college students
- To find out the status in which variable professional college students are lacking in physical fitness
- To suggest any program to improve their status of health related fitness of professional college male students.

Hypotheses:

- There will not be any significant difference in the muscular strength of medical, engineering and law college male students.
- There will not be any significant difference in the muscular endurance of medical, engineering and law college male students.
- There will not be any significant difference in the cardiovascular endurance of medical, engineering and law college male students.
- There will not be any significant difference in the flexibility of medical, engineering and law college male students.
- There will not be any significant difference in the body composition of medical, engineering and law college male students.

Methodology:

The subjects for this descriptive study of survey method were seventy five students from Medical college, Law college and Engineer college chosen randomly from three hundred of each Disciplines of Nair Medical college, Department of law University of Mumbai, and D.J.Sanghvi college of engineering with average age of 18 to 25 years of male students. The selected 75 subjects were tested on the following Health related variables fitness of Muscular Strength, Muscular Endurance, Flexibility, Cardio vascular, and Body Composition administering the tests of Push-ups, Bent knee sit up, Sit and reach, 12 minutes run and walk, and Skin fold measurement respectively. The collected data were analysed by the 't' test.

Findings:

Table -1

The mean of the muscular strength of the professional colleges					
Professional Colleges	Mean	Standard Deviation	Standard Error	't' value	Significance
Medical	38.52	± 17.92	3.58	10.75	0.000(p<0.05)
Engineering	35.36	±12.88	2.58	13.73	0.000(p<0.05)
Law	39.12	±13.99	2.80	13.97	.000(p<0.05)

It is seen from table -1 , that Muscular Strength as measured by Push Ups test, the mean score of Medical , Engineering and Law Colleges male students are 38.52, 35.35 and 39.12 respectively, and 't' value are 10.75, 13.73 and 13. 97 respectively. As it is clearly seen that from graph 4.1 that there is no significant difference in mean of for muscular strength. It also means that the muscular strength of all three colleges are equally the same. Thus the null hypothesis H₀1 "There will not be any significant difference in the muscular strength of medical, engineering and law college male students" has been accepted.

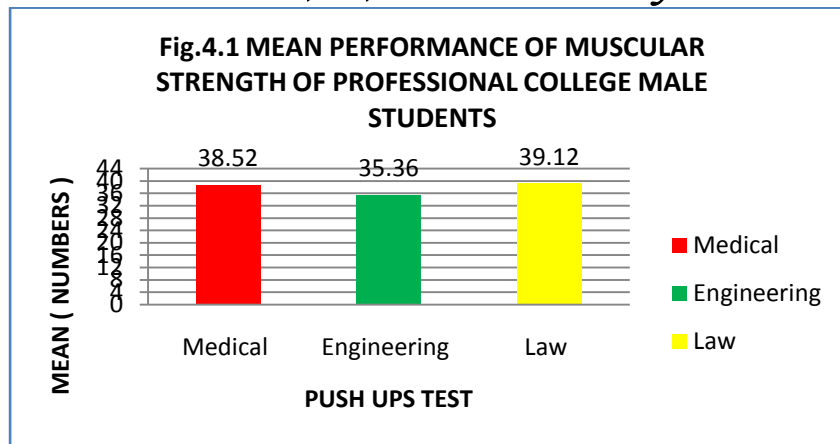


Table -2

The mean of the muscular endurance of the professional College Male Students					
Professional Colleges	Mean	Standard Deviation	Standard Error	't' value	Significance
Medical	34.94	± 13.71	2.74	2.70	0.000(p<0.05)
Engineering	34.80	±12.11	2.42	14.37	0.000(p<0.05)
Law	26.36	±10.95	2.19	12.04	.000(p<0.05)

It is seen from table -2 , that Muscular Endurance as measured by Bent knee sit ups test, the mean score of Medical , Engineering and Law Colleges male students are 34.94, 34.80 and 26.36 respectively, and 't' value are 2.70, 14.37 and 12.04 respectively, which are significant at 0.05 level ($p < 0.05$). As it is clearly seen from graph 4.2 that law students has low muscular endurance than the medical and engineering collage students but there is no significant difference in the mean of muscular endurance. Thus the null hypothesis H_0 "There will not be any significant difference in the muscular endurance of medical, engineering and law college male students" has been accepted.

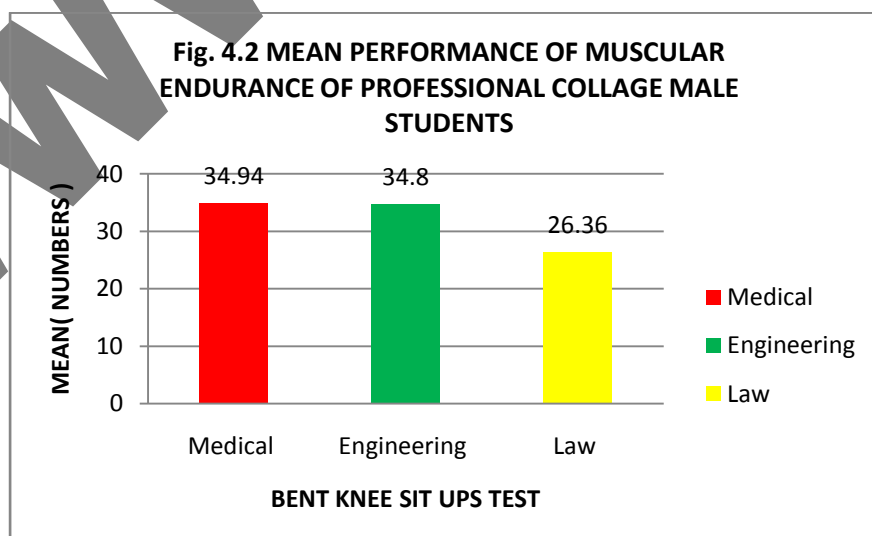


Table -3

The mean of the cardio-vascular endurance of the professional college male students					
Professional Colleges	Mean	Standard Deviation	Standard Error	't' value	Significance
Medical	1850.00	± 515.78	103.15	17.94	0.000(p<0.05)
Engineering	1888.28	±341.53	68.31	27.65	0.000(p<0.05)
Law	1863.36	±381.23	76.25	24.44	0.000(p<0.05)

It is seen from table -3, that cardiovascular endurance as measured by 9 mini. Run and walk test the mean score of medical , engineering and law college male students are 1850.00, 1888.28 and 1863.36 respectively, and 't' value are 17.94, 27.64 and 24.44 respectively, at 0.05 level (p<0.05).As it clearly seen from graph 4.3 that there is no significant difference in mean of cardiovascular endurance. It also means that the cardiovascular endurance of all three colleges are equally the same. Thus the null hypothesis H_{O3} "There will not be any significant difference in the cardiovascular endurance of medical, engineering and law college male students" has been accepted.

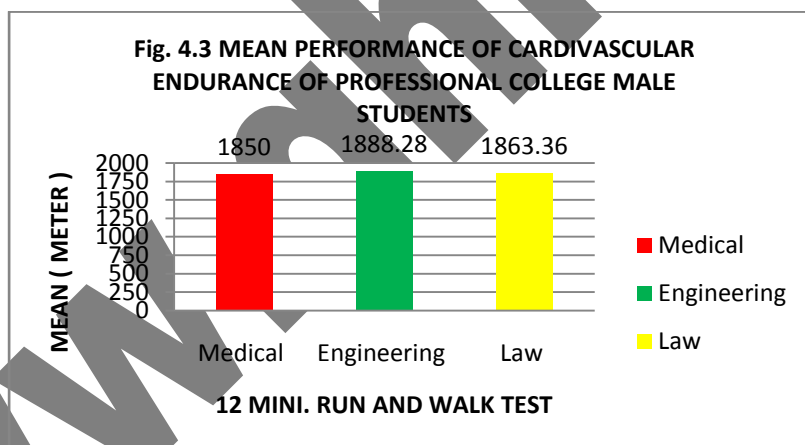


Table -4

The mean of the flexibility of the professional college male students					
Professional Colleges	Mean	Standard Deviation	Standard Error	't' value	Significance
Medical	11.68	± 3.06	0.61	19.06	0.000(p<0.05)
Engineering	9.84	±3.56	0.71	13.84	0.000(p<0.05)
Law	12.24	±3.42	0.68	17.90	.000(p<0.05)

It is seen from table -4, that Flexibility as measured by sit and reach test, mean score of Medical , Engineering and Law Colleges male students are 11.68, 9.84 and 12.24 respectively, and 't' value are 19.09, 13.84 and 17.90 respectively, 0.05 level (p<0.05). andthere is no significant difference in mean flexibility.. Thus the null hypothesis H_{O4} "There

will not be any significant difference in the flexibility of medical, engineering and law college male students” has been accepted.

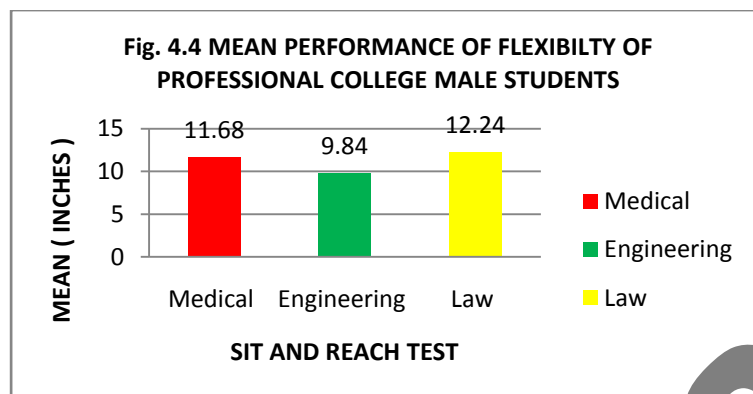
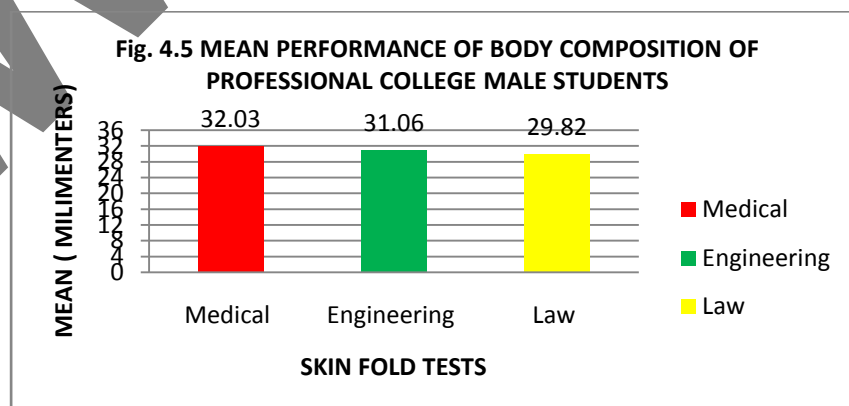


Table -5

The mean of the body compositions of the professional College Male Students					
Professional Colleges	Mean	Standard Deviation	Standard Error	't' value	Significance
Medical	32.03	± 6.80	1.36	23.56	0.000(p<0.05)
Engineering	31.06	±6.58	1.32	23.60	0.000(p<0.05)
Law	29.82	±6.96	1.39	21.42	.000(p<0.05)

It is seen from table -5 , that Body Composition as measured by skin fold caliper , the mean score of Medical , Engineering and Law Colleges male students are 32.03, 31.06 and 29.82 respectively, and ‘t’ value are 23.56, 23.60 and 21.42 respectively, at 0.05 level ($p < 0.05$). As it clearly seen from graph 4.5 that there is no significant difference in mean of skin fold test for body composition. It also means that body composition of all three colleges are equally the same. Thus therefore the null hypothesis H_{05} “There will not be any significant difference in the body composition of medical, engineering and law college male students” has been accepted.



Findings and Conclusions:

- There was no significant difference in the muscular strength of medical, engineering and law college male students.
- There was no significant difference in the muscular endurance of medical, engineering and law college male students.
- There was no significant difference in the cardiovascular endurance of medical, engineering and law college male students.
- There was no significant difference in the flexibility of medical, engineering and law college male students.
- There was no significant difference in the body composition of medical, engineering and law college male students.

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