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## Effects of various physical exercise on health physical fitness some parameters in college students

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### Abstract

The aim of this study was to examine the effects of various physical exercises on some parameters of health and physical fitness in college students. To conduct this research, the researcher selected male students studying under Hanuman Rajarshee Shahu Science College, Chandur Railway, Dist. Amravati as subjects. The age of the selected subjects was between 18 and 25 years. A total of 40 subjects were selected for this study and those subjects were divided into two equal parts as physical exercise program group and control group. The subjects were tested before the start of the training program and the subjects were tested again after the completion of the training. A total of three components of physical fitness related to the health of the students were selected. In which Bent knee sit ups were used to test Muscular Endurance, Cardio Respiratory Endurance was measured by 12- Min run /walk and Flexibility was measured by Sit and reach box. To complete the study of the effect of physical exercise program on muscular endurance, cardio- respiratory endurance and flexibility of students, descriptive statistics and Paired 't' test was used. It was concluded that various physical exercises have positive effect on some parameters of health physical fitness in college students, wherein significant improvement was seen in health related physical fitness components like muscular endurance, cardio respiratory and flexibility. The control group did not show significant change in health related physical fitness components like muscular endurance, cardio respiratory and flexibility. Researchers recommend that students should do physical exercise regularly to improve their overall health. Researchers request colleges, schools and government to implement it strictly so that the health of the coming generation can be improved.

**Keywords:** Physical exercise, health, fitness

### Introduction

Health is very important in human life, to maintain a good health it is very important to have a good physical fitness of the individual so that the person can do all the activities of his life very comfortably. A person who is physically and mentally fit does not suffer from any kind of disease. Traditionally a physically fit person can be understood as being free from disease or physical disability, but as our health care has improved and people have started living longer and with many different conditions. Health is the real treasure of every person's life. Physical fitness related to health A person who is physically healthy and able. Health means overall health, but health-related physical fitness refers to a multidimensional structure, which includes components such as cardio-respiratory endurance, muscle strength, muscular endurance, flexibility and body composition. Health-related physical fitness means that a person has good physical health, his physical ability to work is higher. That is, health-related physical fitness is an important part of your overall health. To maintain health-related physical fitness, physical activity is very important. Health-related physical fitness can be improved through various types of physical exercises and yoga. Due to wrong lifestyle, many diseases are being faced today. Due to lack of physical exercise, many difficulties can be faced. Every person consumes or keeps eating food that contains calories. These calories go into our body and give us energy. Although calories are very important for the body, but if there is a lack of physical activity or exercise, then these calories start accumulating in our body as fat. This fat not only gives rise to obesity in the body, but it also causes diseases like diabetes and blood pressure. Exercise is very important in our daily life. By doing physical exercise, the body gets a shape and there is so much energy in the body that we can do every work easily. By doing exercise daily, the cardiovascular system also remains good.

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Physical exercise makes our muscles flexible and strong. When we exercise, many parts of the body are put under pressure. Due to this, the body tries to mold itself to bear this pressure. Due to this the muscles work more and become stronger. Muscles and bones become stronger through exercise. To clarify this, researchers have highlighted the effect of various physical exercises on health-related physical fitness parameters.

### Methodology

To conduct this research, the researcher selected male students studying under Hanuman Rajarshee Shahu Science College, Chandur Railway, Dist. Amravati as subjects. The age of the selected subjects was between 18 and 25 years. A total of 40 subjects were selected for this study and those

subjects were divided into two equal parts as physical exercise program group and control group. The subjects were tested before the start of the training program and the subjects were tested again after the completion of the training. A total of three components of physical fitness related to the health of the students were selected. In which Bent knee sit ups were used to test Muscular Endurance, Cardio Respiratory Endurance was measured by 12- Min run /walk and Flexibility was measured by Sit and reach box.

### Training program

This training program was conducted only 6 days a week for 6 weeks. Before the training all the students were made to run 2 rounds of 400 m track, and were given 10 minutes warm-up and 10 minutes rest after the training.

Day	Exercise	Rest after the Set	Week		
			1 to 2 (Rep. & Set)	3 to 4 (Rep. & Set)	5 to 6 (Rep. & Set)
Monday	Push Ups	1 m.	10 X 2	15 X 2	15 X 3
	Sit-Ups	1 m.	10 X 2	15 X 2	15 X 3
	Squats	1 m.	10 X 2	15 X 2	15 X 3
	Squats with Jumps	1 m.	10 X 2	15 X 2	15 X 3
	Jumps	1 m.	25 X 2	30 X 2	30 X 3
Tuesday	Push Ups	1 m.	10 X 2	15 X 2	15 X 3
	Sit-Ups	1 m.	10 X 2	15 X 2	15 X 3
	Squats	1 m.	10 X 2	15 X 2	15 X 3
	Squats with Jumps	1 m.	10 X 2	15 X 2	15 X 3
	Jumps	1 m.	25 X 2	30 X 2	30 X 3
Wednesday	Push Ups	1 m.	10 X 2	15 X 2	15 X 3
	Sit-Ups	1 m.	10 X 2	15 X 2	15 X 3
	Squats	1 m.	10 X 2	15 X 2	15 X 3
	Squats with Jumps	1 m.	10 X 2	15 X 2	15 X 3
	Jumps	1 m.	25 X 2	30 X 2	30 X 3
Thursday	Push Ups	1 m.	10 X 2	15 X 2	15 X 3
	Sit-Ups	1 m.	10 X 2	15 X 2	15 X 3
	Squats	1 m.	10 X 2	15 X 2	15 X 3
	Squats with Jumps	1 m.	10 X 2	15 X 2	15 X 3
	Jumps	1 m.	25 X 2	30 X 2	30 X 3
Friday	Push Ups	1 m.	10 X 2	15 X 2	15 X 3
	Sit-Ups	1 m.	10 X 2	15 X 2	15 X 3
	Squats	1 m.	10 X 2	15 X 2	15 X 3
	Squats with Jumps	1 m.	10 X 2	15 X 2	15 X 3
	Jumps	1 m.	25 X 2	30 X 2	30 X 3
Saturday	Push Ups	1 m.	10 X 2	15 X 2	15 X 3
	Sit-Ups	1 m.	10 X 2	15 X 2	15 X 3
	Squats	1 m.	10 X 2	15 X 2	15 X 3
	Squats with Jumps	1 m.	10 X 2	15 X 2	15 X 3
	Jumps	1 m.	25 X 2	30 X 2	30 X 3
Sunday	Rest				

### Statistical techniques

To complete the study of the effect of physical exercise program on muscular endurance, cardio- respiratory

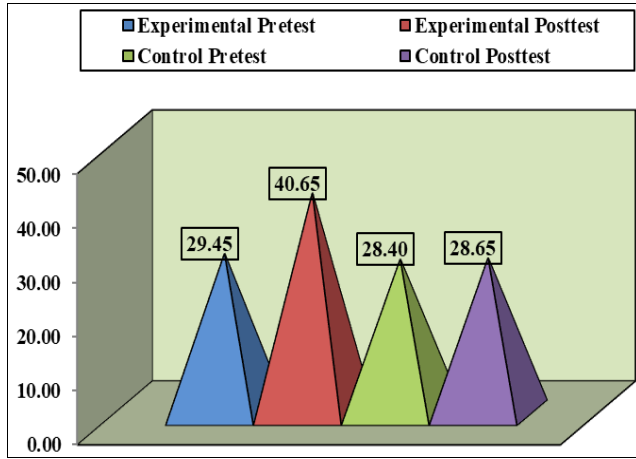
endurance and flexibility of students, descriptive statistics and Paired 't' test was used.

**Table 1:** Shows the comparison of muscular endurance between pretest and posttest of experimental and control group

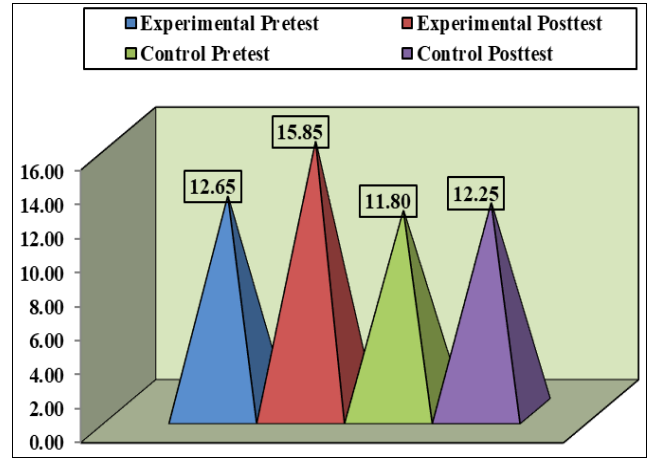
Group	Test	Mean	SD	SE	MD	Ot	df	Tt
Experimental	Pretest	29.45	2.93	1.55	11.20	6.187*	19	2.093
	Posttest	40.65	6.27					
Control	Pretest	28.40	2.72	1.00	0.25	0.737	19	2.093
	Posttest	28.65	3.57					

Table-1 shows that the significant difference in muscular endurance between pre and post test of experimental group. The obtained 't' value of 6.187 is more than the table value of

2.093 with 19 degree of freedom and control group is not significant difference between pretest and post test.



**Graph 1:** Mean of muscular endurance between pretest and posttest of experimental and control group

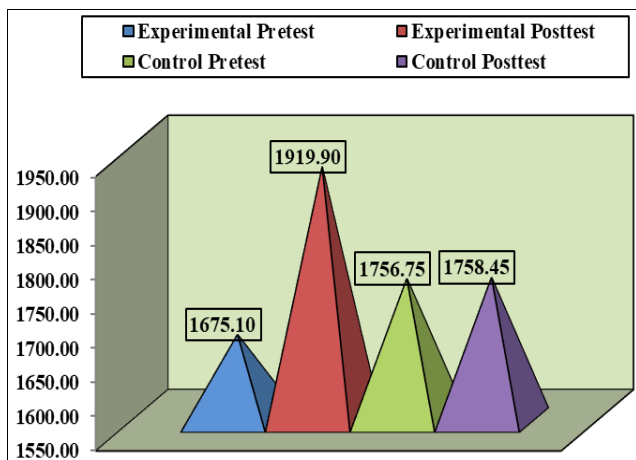


**Graph 2:** Mean of flexibility between pretest and posttest of experimental and control group

**Table 2:** Shows the comparison of cardio respiratory between pretest and posttest of experimental and control group

Group	Test	Mean	SD	SE	MD	Ot	df	Tt
Experimental	Pretest	1675.10	33.59	35.90	244.80	6.769*	19	2.093
	Posttest	1919.90	156.99					
Control	Pretest	1756.75	62.26	19.70	1.70	0.694	19	2.093
	Posttest	1758.45	62.36					

Table-2 shows that the significant difference in cardio respiratory between pre and post test of experimental group. The obtained ‘t’ value of 6.769 is more than the table value of 2.093 with 19 degree of freedom and control group is not significant difference between pretest and post test.



**Graph 2:** Mean of cardio respiratory between pretest and posttest of experimental and control group

**Table 3:** Shows the comparison of flexibility between pretest and posttest of experimental and control group

Group	Test	Mean	SD	SE	MD	Ot	df	Tt
Experimental	Pretest	12.65	2.74	1.02	3.20	3.338*	19	2.093
	Posttest	15.85	3.65					
Control	Pretest	11.80	3.33	1.08	0.45	1.577	19	2.093
	Posttest	12.25	3.52					

Table-3 shows that the significant difference in flexibility between pre and post test of experimental group. The obtained ‘t’ value of 3.338 is more than the table value of 2.093 with 19 degree of freedom and control group is not significant difference between pretest and post test.

**Conclusion**

It was concluded that various physical exercises have positive effect on some parameters of health physical fitness in college students, wherein significant improvement was seen in health related physical fitness components like muscular endurance, cardio respiratory and flexibility. The control group did not show significant change in health related physical fitness components like muscular endurance, cardio respiratory and flexibility. Researchers recommend that students should do physical exercise regularly to improve their overall health. Researchers request colleges, schools and government to implement it strictly so that the health of the coming generation can be improved.

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