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The effects of Zumba dance on body composition of obese college students

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Abstract

The purpose of the present study was to find out the effect of zumba dance on body composition of obese college students. For the purpose of this study, ten (10) male from Health centers in Amravati were selected as subjects. The age of the subjects was ranging from 18 to 25 years. Subjects underwent Zumba dance programme for 6 days per weeks. Body Composition was measured by Durnin and Womersley (1974) can be used to estimate body composition using skinfold test. The statistical analysis and interpretation was done on the basis of data collection. The data of before and after test was compared by using paired 't' test. The level of significance was set at 0.05 level of confidence. Results: There was significant effect on the biceps skinfold, triceps skinfold, sub scapular, suprailiac, body fat, absolute body fat and lean body weight of college students. There was significant effect on the body composition of college students through the statistical analysis after six weeks of Zumba exercise programme.

Keywords: Zumba dance, body composition, obese

Introduction

Nowadays, most people are becoming more cautious about their weight than before. Increasing the weight of obesity or body is such a problem in which the body fat starts to grow rapidly. Hormonal imbalance or excessive diet (overeating) is the main reason for weight gain. Weight also increases with the harmful effects of medicines. Compared with men, weight increases due to hormonal imbalance in most women's bodies. There are many other measures, including exercise and proper diet for weight loss, but Zumba dance is a remedy which can help reduce weight in very short days.

Zumbo Dance is a Latin aerobic dance and is composed jointly with various Latin dances like hip-hop. It is the music of Zumba Dance's main center. Zumba dance can reduce from 300 to 500 calories per day. Zumba dance is an interval training session, in which both slow and fast pace are danced. Zumba dance is a cardiac dance that reduces weight faster than other dance. This dance is based on the muscles in the body. It tones the body in every way and gives a charming body while giving strength to the body [1].

Methodology

For the purpose of this study, ten (10) male from Health centers in Amravati were selected as subjects. The age of the subjects was ranging from 18 to 25 years. Subjects underwent Zumba dance programme for 6 days per weeks. The subjects underwent their Zumba dance under the teaching and supervision of the researcher. One hundred forty four sessions of Zumba dance (six sessions per week) were held between 7.30 and 8.30 AM. An fifteen minute warm-up in each session comprised three pace; the primary pace lacked skips and jogging and comprised Zumba basic step, walk and front to back, side to side and jump which slowly speeded up with the musical pitches; the next pace comprised raise hands and making power actions so as to raise the heart rate and in the third step, muscles were gently tightened and abdomen actions were carried out while position even though the subjects were permitted to a little curve and bend. The main element of Zumba comprised six to eight main pieces of the Zumba dance, the intensity of which was determined by the pitches. Each part lasted two and four minutes and was followed by a 25-30 second break. Easy activities and light music make up the cool-down phase as the last part of Zumba dance. Body Composition was measured by Durnin and Womersley (1974) can be used to estimate body composition using skinfold test.

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Statistical Analysis

The statistical analysis and interpretation was done on the basis of data collection. The data of before and after test was compared by using paired ‘t’ test. The level of significance was set at 0.05 level of confidence.

Table 1: Comparison of biceps skinfold between pre and post-test of obese college students

Test	Mean	SD	SE	MD	OT	DF	Tt
Pre	16.26	3.02	1.32	1.21	7.52*	9	2.26
Post	15.05	2.87					

Table-1 shows that the significant difference in biceps skinfold between pre and post-test of obese college students.

Table 3: Comparison of sub scapular between pre and post-test of obese college students

Test	Mean	SD	SE	MD	OT	DF	TT
Pre	32.19	5.98	2.60	2.55	7.94*	9	2.26
Post	29.65	5.65					

Table-3 shows that the significant difference in sub scapular between pre and post-test of obese college students. The obtained ‘t’ value of 7.94 in greater than the table value of 2.26 with 9 degree of freedom.

Table 4: Comparison of supriliac between pre and post-test of obese college students

Test	Mean	SD	SE	MD	Ot	df	Tt
Pre	37.40	6.95	2.88	6.55	13.77*	9	2.26
Post	30.85	5.87					

Table-4 shows that the significant difference in supriliac between pre and post-test of obese college students. The obtained ‘t’ value of 13.77 in greater than the table value of 2.26 with 9 degree of freedom.

The obtained ‘t’ value of 7.52 in greater than the table value of 2.26 with 9 degree of freedom.

Table 2: Comparison of triceps skinfold between pre and post-test of obese college students

Test	Mean	SD	SE	MD	OT	DF	Tt
Pre	24.39	4.53	1.96	2.94	13.56*	9	2.26
Post	21.45	4.22					

Table-2 shows that the significant difference in triceps skinfold between pre and post-test of obese college students. The obtained ‘t’ value of 13.56 in greater than the table value of 2.26 with 9 degree of freedom.

Table 5: Comparison of body fat between pre and post-test of obese college students

Test	Mean	SD	SE	MD	Ot	df	Tt
Pre	28.84	2.43	1.10	1.63	15.38*	9	2.26
Post	27.21	2.49					

Table-5 shows that the significant difference in body fat between pre and post-test of obese college students. The obtained ‘t’ value of 15.38 in greater than the table value of 2.26 with 9 degree of freedom.

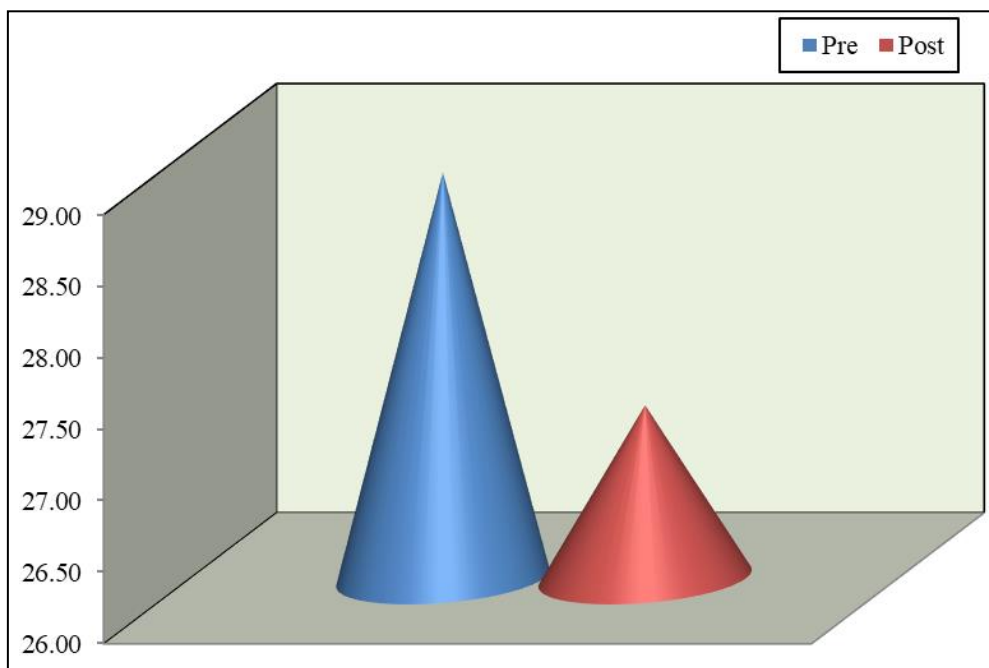


Fig 1: showing the mean value of body fat between pre and post-test of obese college students

Table 6: Comparison of absolute body fat between pre and post-test of obese college students

Test	Mean	SD	SE	MD	OT	DF	TT
Pre	24.50	3.34	1.48	3.80	9.59*	9	2.26
Post	20.70	3.27					

Table-6 shows that the significant difference in absolute body fat between pre and post test of obese college students. The obtained ‘t’ value of 9.59 in greater than the table value of 2.26 with 9 degree of freedom.

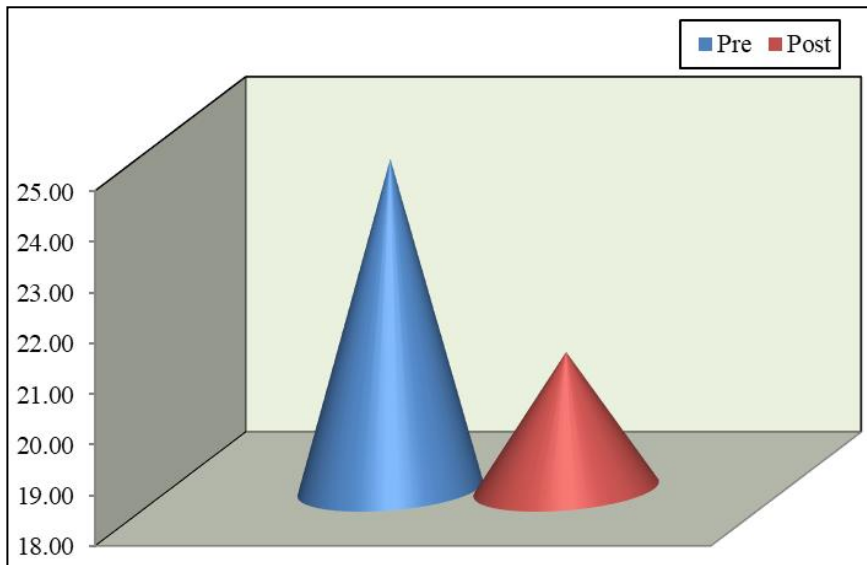


Fig 2: showing the mean value of absolute body fat between pre and post-test of obese college students

Table 7: Comparison of lean body weight between pre and post-test of obese college students

Test	Mean	SD	SE	MD	OT	DF	TT
Pre	60.40	5.66	2.47	5.20	5.41*	9	2.26
Post	55.20	5.37					

Table-7 shows that the significant difference in body weight between pre and post-test of obese college students. The obtained 't' value of 5.41 is greater than the table value of 2.26 with 9 degree of freedom.

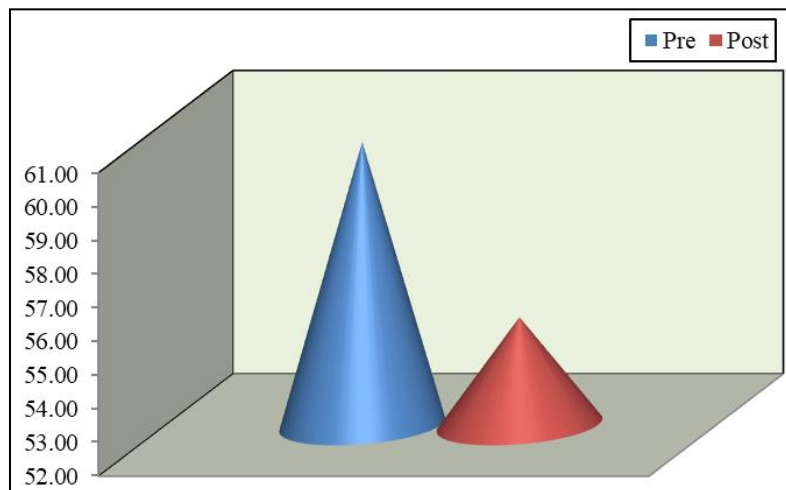


Fig 3: showing the mean value of lean body weight between pre and post test of obese college students

Discussion

The findings obtained suggest significant differences between the pre and post-test of college students in terms of the biceps skinfold, triceps skinfold, sub scapular, supriliac, body fat, absolute body fat and lean body weight. Additionally, six weeks of Zumba exercise significantly reduced the biceps skinfold, triceps skinfold, sub scapular, supriliac, body fat, absolute body fat and lean body weight in college students. Zumba exercise is currently used to lose weight; this type of activity is rarely addressed in practical explore as a weight loss method.

Conclusion

Statistical analysis the following conclusion was drawn.

1. There was significant effect on the body composition of college students through the statistical analysis after six weeks of Zumba exercise programme.
2. There was significant effect on the biceps skinfold, triceps skinfold, sub scapular, supriliac, body fat, absolute body fat and lean body weight of college

students through the statistical analysis after six weeks of Zumba exercise programme.

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