ORIGINAL RESEARCH PAPER

Volume-8 | Issue-8 | August - 2019 | PRINT ISSN No. 2277 - 8179

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

EFFECT OF AEROBIC EXERCISE ON BODY COMPOSITION IN OBESE ADULTS

Nursing

Kaur Damanjit Lecturer State institute of nursing and paramedical sciences, Badal (Punjab) Baba farid university of health sciences, Faridkot

ABSTRACT

BACKGROUND AND PURPOSE: Physical inactivity is a leading cause of obesity among Childhood and adolescent that continuous leads to an increased risk for cardiovascular diseases. The purpose of the study is to check the effect of aerobic exercise on body composition in obese adults.

METHODS: Thirty obese subjects aged 25-35 years were included in the study.The subjects were conveniently divided into two groups each comprised 15 patients each. All the subjects were assessed for body mass index and waist hip ratio using weighing machine and inch tape respectively. The mean and standard deviation for the variable BMI and WHR of the subjects for Group A were 32.63±1.72,31.51±BMI and WHR of the subjects, for Group B the values were 31.86±2.23,31.86±2.31 and 1.08±0.15,1.08±0.15 respectively. Group A is an experimental group and Group B is a control group. Group A was given aerobic exercise on treadmill and for Group B was given no intervention. The anthropometric measurements were taken for both the groups on the first day and after the completion of four weeks.

RESULTS: All the subjects completed the four week aerobic exercise programme .For Group A , the variable body mass index showed statistically significant improvement within the group ($p < 0.05$) where as variable waist-hip-ratio did not show significant improvement within the group($p > 0.05$). For group B, these variables showed insignificant changes within the group.On the otherhand, the BMI showed insignificant differences ($P<0.05$) and waist-hip ratio showed significant differences($p<0.05$)between the groups.

CONCLUSION : These findings revealed the effectiveness of aerobic exercises in reducing body mass index and waist –hip ratio in obese adults.

KEYWORDS

BMI,WHR, Aerobic exercises,obesity.

INTRODUCTION

Obesity is a chronic diseases which results from a disrupted balance between energy intake and energy consumption, the excess energy being stored in adipose tissue. Obesity is a global problem, affecting an estimated 300 million people worldwide. (WHO,2002).As the incidence of obesity increases, the significant health and economic consequences also increases.The lack of physical activity in daily life induces obesity and increases the risk of hypokinetic diseases. Obesity is defined as body mass index (BMI) of 30kg/m² and higher (WHO, 2004).The risk of developing complications increases with the level of obesity. However, not only does the amount of excess fat need to be considered but where in the body it is distributed may also be of importance.

METHODOLOGY

The study is Experimental in nature in which Obese subjects with age group of 25-35 years were divided in two groups A&B. Group A patients were given aerobic exercise on treadmill whereas Group B was control group ,the patients were only under observation. The body mass index and waist hip ratio before (Pre) and after (Post) exercise protocol in experimental group were measured. Subjects in experimental group perform 5 minutes of warm up session with the normal heart rate and then 35-45 minutes of aerobic exercise in the form of walking on treadmill was done at 75 % to 85% of maximum heart rate. At the last 5 minutes of cool down with again coming to the normal heart rate (72 beats/ minute) was performed on treadmill. This exercise protocol lasted for 4 weeks.The pre and post readings were compared to see the effects of aerobic exercise on body composition in obese adults. For the control group these dependent variables were measured on the first day of study and after the completion of 4 weeks.

DATA ANALYSIS AND RESULTS

The results showed at in Group A that there was statistically significant improvement in body mass index (32.63±1.72) and (31.51±1.92), whereas there was no significant improvement in waist-hip-ratio (0.95±0.08) and (0.96±0.08). In Group B there was statistically insignificant improvement in bodymass index and waist-hip-ratio (31.86±2.23), (31.86±2.21) and (1.08±0.15),(1.08±0.15) respectively. Further on comparison between the two groups there was statistically insignificant difference in body mass index ($p>0.05$) whereas waist-hip-ratio showed significant difference at ($p<0.05$).

- **Mean, SD, SE and t-value of the Variable (BMI) for Group A**

GroupA	BMI	Mean	Standard deviation	t-value
	pre	32.63	1.72	5.535
	post	31.51	1.92	

Group B	BMI	Mean	Standard deviation	t-value
	pre	31.86	2.23	0
	post	31.86	2.21	

Group A	BMI	Mean	Standard deviation	t-value
	pre	0.95	0.08	1.426
	post	0.96	0.08	

Group B	BMI	Mean	Standard deviation	t-value
	pre	1.08	0.15	0
	post	1.08	0.15	

CONCLUSION

- According to most agreed evidence–based clinical guidelines on obesity management, a worldwide global consensus has been gained to consider physical activity a pivotal tool in the strategy for weight reduction and control. (Must et al. 1999; National Heart, Lung and Blood Institute, National Institutes of Health 1998; Wing, 1999).
- It was concluded that high intensity aerobic exercises showed significant effect on body composition in obese adults after 4 weeks.