



A Study on Physiotherapy Intervention Programme on Obesity Among Youths

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ABSTRACT

BACKGROUND: Obesity is a major public health problem with both genetic and environmental causes and associated with an increased risk of morbidity and mortality as well as reduced life expectancy. The last two decades of the previous century have witnessed dramatic increase in health care costs due to obesity and related issues among children and adolescents.

OBJECTIVE: This study was to evaluate and application of Physiotherapy intervention programme can reduce obese among youths.

STUDY DESIGN: Experimental.

SETTING: participants were randomly selected from the Saveetha medical college hospital Department of Physiotherapy.

METHODS: Thirty participants with 18 to 25 age group of both males and females were randomly selected from this study.

OUTCOME MEASURES: Height, Weight, BMI Calculator.

RESULTS: The data obtained was tabulated and statistically analyzed. Due to nature of outcome measures of. Height, weight and Body mass index are calculated and compare pre and post intervention, parametric statistical tests, dependent t sample test and un paired t test were used. The two-tailed P value is less than 0.0001 by conventional criteria; this difference is considered to be extremely statistically significant of experimental group.

CONCLUSION: Obesity in adolescents and children has raised to significant levels globally with serious public health consequences. In addition to cardiovascular, emotional and social issues, it poses a serious hazard to the basic health care delivery system. Physiotherapy intervention programme focusing on obesity persons can reduce obese and improve the quality of life among youths.

KEYWORDS

Physiotherapy, Obesity, Youth.

INTRODUCTION:

Obesity has reached epidemic proportions worldwide. Recent World Health Organization (WHO) projections estimate that globally approximately 1.6 billion adults older than 15 years were overweight and at least 400 million adults were obese. The WHO also underlines that this pandemic, once considered a problem only in high-income countries, is now dramatically on the rise in low- and middle-income countries, particularly in urban settings. Worldwide, disease profiles are transforming at a rapid pace catching the attention of medical professionals and policy makers alike. This is particularly true in low and middle-income countries that form the major chunk of global population. The emerging epidemics of obesity, cardiovascular disease and diabetes form the crux of this phenomenal change. Among these entities, obesity has become a colossal epidemic causing serious public health concern and contributes to 2.6 million deaths worldwide every year. The last two decades of the previous century have witnessed dramatic increase in health care costs due to obesity and related issues among children and adolescents-Worldwide, obesity trends are causing serious public health concern and in many countries threatening the viability of basic health care delivery. It is an independent risk factor for cardiovascular diseases and significantly increases the risk of morbidity and mortality. The last two decades have witnessed an increase in health care costs due to obesity and related issues among children and adolescents.

waist circumference to supplement this in individuals with a BMI under 35 kg/m².In adults, the diagnosis of obesity is most commonly made using [BMI levels](#). BMI is calculated as weight in kilograms (kg) divided by height in meters squared (m²). Ideal BMI is 18.5 to 24.9 kg/m².A BMI of 25-29.9 kg/m² is overweight. A BMI of 30-34.9 kg/m² is obese (Grade I). A BMI of 35-39.9 kg/m² is obese (Grade II).A BMI of ≥40 kg/m² is obese (Grade III) or morbidly obese, meaning that weight is a real and imminent threat to health. Obesity is a complex health issue to address. Obesity results from a combination of causes and contributing factors, including individual factors such as behavior and genetics. Behaviors can include dietary patterns, physical activity, inactivity, medication use, and other exposures. Additional contributing factors in our society include the food and physical activity environment, education and skills, and food marketing and promotion. Obesity is a serious concern because it is associated with poorer mental health outcomes, reduced quality of life, and the leading causes of death in the worldwide, including diabetes, heart disease, stroke, and some types of cancer. Physiotherapists, as exercise experts, join the worldwide concern for the ever growing epidemic of obesity, which affects adults and children alike. It is probably one of the greatest challenges to our health systems around the world in the 21st century.

There are two important interventions to prevent and manage obesity. One is optimal [nutrition](#). The other is increased [exercise and physical activity](#). Physiotherapists aim to promote successful weight management and improved general health by appropriately increasing patients levels of physical activity. The Physiotherapists then offer a treatment plan aimed at tack-

The National Institute for Health and Care Excellence (NICE) recommends the use of body mass index (BMI) to assess overweight and obese individuals. It advises the measurement of

ling these barriers and promoting the optimal activity for the obesity patient. The emerging role of physiotherapists could in part involve the youths and more beneficial in encouraging lasting lifestyle changes than simply educating individuals about the health risks of obesity and instructing them to exercise. Physiotherapy exercise programme to reduce fat and improve the quality of life among youths.

OBJECTIVE of THE STUDY:

To determine to evaluate the obesity and reduce obese and improve the quality of life among youths.

METHODOLOGY:

A convenience sample of subjects was solicited from Saveetha medical college hospital Chennai. This study randomized, clinical trial. This study was included that overweight and obese patients with BMI of above 30 will be taken from this study and excluded that hypothyroidism, medically ill patients.

PROCEDURE: Participants were n=30, age range 18-25 years. Subjects were then allocated into two groups; each group had one physiotherapist, who carried out all interventions. Before the study it was agreed that both groups would receive the same educational intervention. **Group A (Control Group)** were to give the educational strategy consisted of instruction with printed materials and just asked to walking daily advice given. **Group B (Experimental Group):** The intervention included abdominal exercises, treadmill walking and bicycling exercises, each exercises are 15 minutes given. If resistance training is incorporated, careful attention must be given to beginning this type of program. Strength equipment may not be an option for some morbidly obese individuals. In general, the exercise prescription for obese people should include resistance intensity in the range of 60% to 80% of an individual's one-repetition maximum (1RM,) performed for 8 to 15 repetitions for two sets each, with 2 to 3 min of rest after each bout. This plan will allow the person to perform 6 to 10 exercises in a 20 to 30 min session. Resistance exercises can be performed maximally on 2 or 3 d/wk. These exercises should focus on the major muscle groups of the chest, shoulders, upper and lower back, abdomen, hips, and legs. The primary acute benefit of the prescribed resistance program is to improve muscle endurance; the secondary benefit is to increase muscle strength. For obese individuals, the long-term benefit may be related to a higher resting metabolic rate (RMR) and protection of lean mass loss during rapid weight loss attempts.

MATERIALS: Body mass index calculator

RESULTS: Thirty participants are randomly selected from this study. They were recruited from September 2015 to December 2015. The data obtained was tabulated and statistically analyzed using SPSS 14.0 package. Due to nature of outcome measures are weight, height and using BMI calculator, parametric statistical tests; dependent t sample test and un paired t test were used. Subjects showed marked reduction in BMI when compared to baseline value. The improvement is almost where as BMI scores were recorded on day 0 and 1 month follow-up. The results show that their average mean age was 21.9 years, height 166.2 and weight 85.0.

GROUP	AGE	HEIGHT (cm)	WEIGHT(kg)
GROUP A	21.9 ± 2.12	166.2 ± 3.11	84.2 ± 5.61
GROUP B	20.7 ± 5.9	166.4 ± 2.8	85 ± 5.37

Table: 2 Pre Interventions:

Statistical measurement	GROUP A	GROUP B
Mean	36.3	36.7
Standard deviation	3.08	3.05
Variance(Standard deviation):	9.52	9.35
Population Standard deviation:	2.98	2.95

FIGURE: 1 PRE INTERVENTION:

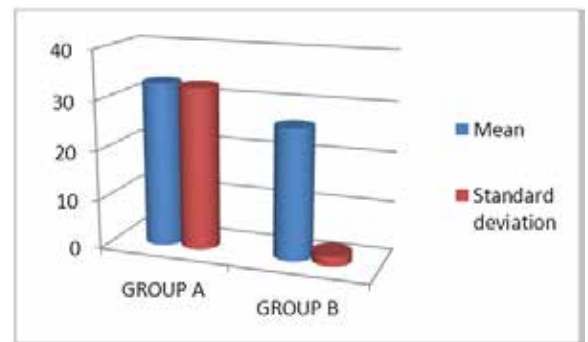


Table 3 post intervention:

Statistical measurement	GROUP A	GROUP B
Mean	31.2	18.2
Standard deviation	2.3	0.8
Variance(Standard deviation):	5.45	0.74
Population Standard deviation:	2.2	0.83

The results of the study shows that the identified a statistically significant effect of physiotherapy intervention in obesity among youths. The two-tailed P value is less than 0.0001 by conventional criteria; this difference is considered to be extremely statistically significant. The mean of Group One minus Group Two equals 13.000 95% confidence interval of this difference: From 11.712 to 14.288 .t = 20.6758,df = 28, standard error of difference = 0.629

FIGURE: 2: POST INTERVENTION

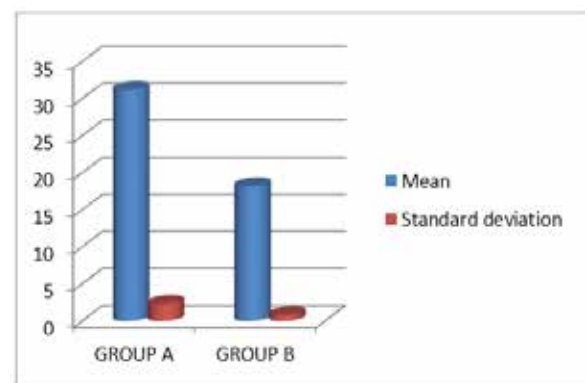


Table 4:

S.NO	OUT COME MEASURES	t value	difference	standard error of difference	results
1.	BMI	t = 20.67	df = 28	0.62	SIGNIFICANT

Suggestions and limitations:

This study revealed that physiotherapists believe they have a variety of roles to play in the rehabilitation management of patients with obesity, particularly in the area of exercise and mobility prescription for conditions associated with obesity. These are important components but do not by them constitute an overall management plan. Because overweight and obesity are modifiable disease risk factors that have reached epidemic proportions, it would seem prudent for physiotherapists also to begin to measure these factors and discuss the implications of obesity with their patients. Respondents reported working in a variety of environments, which may suggest that roles related to obesity cross settings and areas of practice. We did not seek out or analyze these sub-groups

separately, however, and future studies may need to consider the different perspectives of physiotherapists who work in hospital and outpatient settings and with unique patient populations. Some survey items, such as cardiovascular training programmes for impairments due to obesity, may have been unclear and therefore interpreted differently by different respondents. The use of specific examples would help to clarify roles as they relate to these interventions.

CONCLUSION:

Obesity in adolescents and children has raised to significant levels globally with serious public health consequences. In addition to cardiovascular, emotional and social issues, it poses a serious hazard to the basic health care delivery system. Unless this epidemic is contained at a war footing, the implications of this global phenomenon on future generations will be serious. Physiotherapy intervention programme focusing on obesity persons can reduce obese and improve the quality of life among youths.

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