

**EFFECT OF YOGIC PRACTICES ON SELECTED PHYSIOLOGICAL
VARIABLES AMONG MIDDLE AGED OBESE WOMEN**
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ABSTRACT

The purpose of the random group experimental study was to find out the effect yogic practices on selected physiological, variables among middle aged obese women. It was hypothesized that there would be significant differences due to yogic practices on selected physiological middle aged obese women than the control group. For the purpose of the study, 40 school girls were selected randomly from Chennai, between the age group of 45 to 55 years and they were divided into two groups A and B having 20 subjects in each. Pre test was conducted for the two Groups (A and B) on the selected dependent variables before the start of the training program. Group A was given yogic practices; Group B (Control Group) didn't receive any specific treatment, but in active rest. After the experimental period of 6 weeks, the two Groups (A and B) were retested again on the same selected dependent variables as post test. The selected Physiological variable such as BMI. 'T'test was used to find out the significant differences between experimental group and the control group. The test of significance was fixed at 0.05 level of confidence. Hence, the hypothesis was accepted at 0.05 level of confidence.

KEY WORDS: Yogic practices, BMI.

INTRODUCTION

Obesity is an excessive accumulation of energy in the form of body fat which impairs health. The degree of health impairment is determined by three factors: 1) the amount of fat 2) the distribution of fat and 3) the presence of other risk factors.

An expert panel organized by the National Institutes of Health in 1998 recommended the use of the Body Mass Index (BMI) to define and classify obesity. The panel's recommendations have been adopted widely and although BMI represents a crude measurement, it correlates well with the amount of body fat in the majority of individuals.

$$\text{BMI} = \frac{\text{Weight in Kg}}{\text{Height in m}^2}$$

OR

$$\left[\text{BMI} = \frac{\text{Weight in pounds}}{\text{Height in inches}} \right] \times 703$$

Figure.3

The calculation of BMI requires only the measurement of an individual's weight and height as shown here. However, BMI has several limitations. It can overestimate body fat in people that are very muscular and it can underestimate body fat in people that have lost body muscle, such as many elderly people with chronic illness or extremely sedentary individuals.

BMI is only an indirect correlation of the amount of body fat. In a 70 kg normal adult male, 42 kg is water; 12 kg is protein storing 42 Mcal; 12 kg is fat storing 108 Mcal; 0.5 kg is glycogen storing 2 Mcal; and the rest is 3.5 kg storing no calories. If the objective is to directly measure fat mass, other techniques are available that are more expensive and complicated (although not completely accurate) than the measurement of BMI. For the present time, most of these techniques are reserved for the research laboratory.

Today, over 50 scientific and medical organizations have endorsed the NIH clinical guidelines supporting the use of BMI to define and classify obesity .

PURPOSE OF THE STUDY

The purpose of the study was to find out the effect of yogic practices on selected physiological variables among middle aged obese women.

HYPOTHESIS

It was hypothesized that there would be significant differences due to yogic practices on selected physiological variables among middle aged obese women than the control group.

REVIEW OF RELATED LITERATURE

Ronnie KL, Wells JC, McCaffrey TA, Livingstone MB. (2006) Reported that with the increasing prevalence of childhood obesity, there is an urgent need to identify risk factors that are amenable to preventative action. However there is a remarkable lack of consistency between studies that have investigated the relationship between measurements of physical

activity and energy expenditure and body fatness in children. This disparity could be because energy intake is a more important determinant in preventing obesity. Alternatively, some of the conflicting results could be related to methodological limitations in assessing activity and body composition. Erroneous conclusions may be drawn if physical activity energy expenditure is not adjusted for differences in body composition, or body fat is not appropriately adjusted for body size. For public health purposes it may be more informative to evaluate the amount and intensity of physical activity required to prevent fat-mass gain than to assess energy expended in physical activity. The lack of consensus in the cut-off points applied to define intensity levels is severely hindering comparisons between studies using accelerometers that have examined relationship between activity intensity and body fatness. Thus, it is not currently possible to develop a firm evidence base on which to establish physical activity recommendations until the limitations are addressed and more prospective studies undertaken. In order to turn research into effective prevention strategies a clearer understanding of the psycho-social, behavioral and environmental factors that influence activity is needed, including the interactions between physical activity and other behaviors such as time spent sedentary, sleeping and eating.

METHODOLOGY

For the purpose of the study, 40 middle aged obese women were selected randomly from Chennai, between the age group of 45 to 55 years and they were divided into two groups A and B having 20 subjects in each group.

Pre test was taken for these two Groups (A and B) on the selected dependent variables before the start of the training program.

Group A was undergone yogic practices for daily 1 hour for six days per week.

Group B (Control Group) was permitted to undergo their normal lifestyle during the course of experiment. They didn't receive any specific treatment.

After the experimental period of 6 weeks, the two Groups (A and B) were retested again on the same selected dependent variables..

Selected physiological variables—, BMI using standard measurement.

Ancova was used to find out the significant differences between the experimental group and the control group. The test of significance was fixed at 0.05 level of confidence.

RESULTS AND DISCUSSIONS

The data pertaining to the variables collected from the two groups before and after the training period were statistically analyzed by using 't' test to determine the significant difference and tested at 0.05 level of confidence.

The obtained 't' value for BMI were greater than the table value, it indicates that there was a significant improvement on BMI among the post-test and adjusted post-test means of the yogic practices than the Control Group.

Table 1

Analysis of t-ratio for the Pre-test and Post-test of Control Group and Experimental Group on Body Mass Index

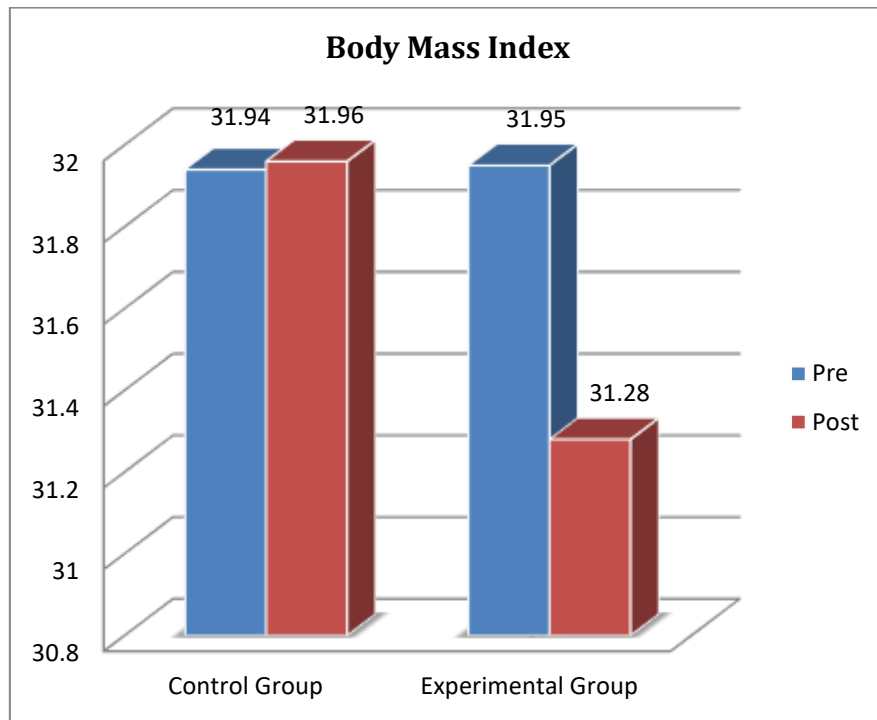
Variables	Group	Mean		SD		Sd Error	df	't' ratio
		Pre	Post	Pre	Post			
Body Mass Index	Control	31.94	31.97	1.16	1.30	0.11	14	0.20
	Experimental	31.96	31.28	1.47	1.46	0.21		3.16*

**Significance at 0.05 level of confidence*

The Table 4.4 shows that the mean values of pre-test and post-test of control group in body mass index were 31.94 and 31.97 respectively. The obtained 't' ratio was 0.20 since the obtained 't' ratio was less than the required table value 2.15 for the significant at 0.05 level of with 14 degrees of freedom it was found to be statistically insignificant.

The mean values of pre-test and post-test of experimental groups in body mass index were 31.96 and 31.28 respectively. The obtained 't' ratio was 3.16 since the obtained 't' ratio was greater than the required table value of 2.15 for significance at 0.05 level of with 14 degrees of freedom it was found to be statistically significant. The result of the study showed that there was a significant difference between control group and experimental group in body mass index. It may be concluded The result of the study that experimental group improved in body mass index due to six weeks of yogic practices.

Fig- 1 Bar Diagram shows the Mean Values of Pre and Post Tests of Experimental Group and Control Group on Body Mass Index



CONCLUSIONS

The value of BMI showed significant differences (decreasing) when compared to the control group

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