

A study of effects of yoga and meditation exercises on body composition of obese women

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ABSTRACT

The major objective of the present research was to study the changes in body mass index (B.M.I.) by Yoga and meditation exercise training. Total 60 obese girls of 17 to 25 age groups studying in U. P. Arts College, Pilvai were selected as subjects in the present study. Analysis of variance and analysis of covariance was applied to know effects on BMI of obese girls. To test significant difference between all four groups, LSD (Least Significant Difference) was applied and difference was tested at 0.05 levels. However, decrease in B.M.I. of three experimental groups was found by twelve-week yoga, meditation and yoga and meditation training, in which more significant effect was found on BMI of yoga and meditation groups, all subjects were found obese in the present study.

1. Introduction

In Indian tradition, yoga is considered as one of the types of six types of *darshan*. Actually, yoga is an experimental picture of *Sankhya Darshan*. The whole universe is created by the concomitance of male and nature. As far as both is not separated, darkness of ignorance is seen among human beings. Yoga is the process of removing darkness of knowledge, which is caused by concomitance of male and nature. Amputating of this process is the major cause of yoga.

2. Objective of the study

The major objective of the present research was to study the changes in body mass index (B.M.I.) by Yoga and meditation exercise training.

3. Selection of subjects

Total 60 obese girls of 17 to 25 age groups studying in U. P. Arts College, Pilvai were selected as subjects in the present study.

Criterion measurement

No.	Variable	Test	Unit
1	Body Mass Index	Body Composition Analyzer Machine	Kilogram

4. Research design

Total 60 obese girls were randomly selected in the present study and were divided into four equivalent groups A, B, C and D groups, such as yoga group, Meditation group Yoga and meditation group and control group respectively. Pretest was held before training and posttest was held after completing twelve-week training. Finally, data was collected.

5. Statistical process

Analysis of variance and analysis of covariance was applied to know effects on BMI of obese girls. To test significant difference between all four groups, LSD (Least Significant Difference) was applied and difference was tested at 0.05 levels.

6. Results of the study

Table – 1
Analysis of variance and covariance of three experimental groups and control group on Body Mass Index (B.M.I.) Test

Test	Groups				ANCOVA Table			
	Group A	Group B	Group C	Group D	SS	df	MSS	'F'
Pretest mean	26.633	27.213	26.62	26.906	A 3.523	3	1.174	0.296
					W 222.024	56	3.964	
Posttest mean	25.446	25.153	24.9	27.133	A 45.757	3	15.252	3.832*
					W 222.868	56	3.979	
Adjusted mean	25.643	24.806	25.109	27.073	A 45.461	3	15.153	30.50*
					W 27.326	56	0.496	

*Significance at 0.05 levels 'F' = (3, 56) = 2.78

Statistical details of mean and analysis of variance and covariance of scores on pretest and posttest of Body Mass Index Test are mentioned in table – 1. 'F' ratio of pretest of performance on Body Mass Index Test was found 0.296, which is not significant at 0.05 levels according to table value. Means

the distribution of subjects into three experimental groups and a control group was found successful.

'F' ratio of four groups on posttest mean was found 3.832, which was found significant in comparison with table value

(2.78) at 0.05 levels. It proves that significant improvement was found in performance of subjects by training programme. 'F' ratio of adjusted mean between four groups was found significant. To test the effectiveness of experimental treatment

on yoga group, meditation group yoga and meditation group and control group, significance between adjusted mean was tested with critical difference by using LSD Test. The detail is mentioned in table – 2.

**Table – 2
LSD Test**

Mean				Mean difference	Critical difference
Group A	Group B	Group C	Group D		
25.643	24.806			0.837*	0.514
25.643		25.109		0.534*	
25.643			27.073	1.430*	
	24.806	25.109		0.303*	
	24.806		27.073	2.267*	
		25.109	27.073	1.964*	

* Significance at 0.05 levels

It is observed from table – 2 that significant difference was clearly found between adjusted means of three experimental groups and a control group. Mean difference between groups is indicated in table – 2. By comparing it with critical difference, it becomes easier to understand the improvement in any particular group. According to table – 2, improvement in meditation group – B was found at significant level (2.267). Then, improvement in yoga and meditation group – C was found at significant level (1.964), whereas improvement in yoga group – A was found at significant level (1.430). Among three groups, higher effect of experimental treatment was found on

Body Mass Index (BMI) of meditation training group, whereas significant effect was found on three experimental groups in compared with the control group.

7. Findings

- Decrease in B.M.I. of three experimental groups was found by twelve-week yoga, meditation and yoga and meditation training, in which higher effect of training was found on group – B.

References

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