https://doi.org/ 10.48047/AFJBS.6.5.2024. 9115-9120

African Journal of Biological Sciences

EFFECT OF YOGIC PRACTICES ON BODY MASS INDEX AMONG MIDDLE AGED OBESE MEN

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Article History
Volume 6, Issue 5, 2024
Received: 15 May 2024
ccepted: 02 Jun 2024
doi: *10.48047/AFJBS.6.5.2024. 9115-9120*

ABSTRACT

The purpose of the random group experimental study was to find out the effect of yogic practices on Body Mass Index among middle aged obese men. It was hypothesized that there would be significant differences on Body Mass Index among middle aged obese men due to yogic practices than the control group. For the purpose of the study, 30 middle aged men were selected randomly from Chennai, between the age group of 35 to 45 years and they were divided into two groups A and B having 15 subjects each. Pretest 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 eight weeks, the two Groups (A and B) were retested again on the same selected dependent variables as post-test. Analysis of co-variance (ANCOVA) 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. The results of the study on the selected Body Mass Index proved that the Experimental Group showed significant differences than the Control Group due to Yogic practices. The hypothesis was accepted at 0.05level of confidence Hence, Yogic practices decreased Body Mass Index of middle-aged obese men.

KEY WORDS: Yogic practices, Body Mass Index

INTRODUCTION:

Obesity is a major public health challenge across the globe. Urbanization, economic growth, changing lifestyle and dietary habits have posed a "double burden" of diseases in rapidly developing low- and middle-income countries like India. It is well known that availability of high-calorie foods, decreased physical activity and loss of healthy habits are associated with urban living. Obesity predisposes to a myriad of medical conditions such as cardiovascular diseases, coronary artery disease, diabetes and musculoskeletal disorders. In men, obesity is a risk factor for cancers such as endometrial and it also increases the risk of depression, partly as a result of poor body image. Raised body mass index (BMI) increases complications from anaesthesia and surgery, often resulting in prolonged hospital stay and poorer outcomes compared with normal weight patients. Obese people have unusually high levels of leptin. This is because in some obese people, the brain does not respond to leptin, so they keep eating despite adequate (or excessive) fat stores, a concept known as leptin resistance. This causes the fat cells to produce even more leptin During the last decade, the percentage of overweight and obesity increased from 12.6 to 20.7 in India. In India, obesity is believed to be a problem of the affluent class and therefore remains neglected in poorer sections. Thus, this study focuses on the prevalence of obesity, lifestyle factors leading to obesity and its health consequences on the life of middle-aged (45–59 years) men in slum areas. **Savitribai Phule (2018).**

OBJECTIVES OF THE STUDY:

The objective of the study was to find out whether there would be any significant difference on selected physiological variables due to yogic practices on Body Mass Index among middle aged obese men.

PURPOSE OF THE STUDY

The purpose of the study was to find out the effect of yogic practices on Body Mass Index among middle aged obese men.

HYPOTHESIS

It was hypothesized that there would be significant difference on Body Mass Index among middle aged obese men due to yogic practices than the control group.

DELIMITATIONS

- The study was delimited to the middle-aged men from Chennai city only
- Age of subjects was ranged from 35 to 45 years only.
- The subjects were middle aged obese men only.
- The dependent variables were restricted to physiological variable BMI only.
- Independent variables were yogic practices only.

LIMITTIONS

- The factors like Socio – Economical status were not taken into consideration.
- The climatic conditions were not considered.
- Factors like life style habits were not taken into consideration.
- Subject's day to day activities were not taken into account.
- Diet and medication followed by subjects was controlled.

REVIEW OF RELATTED LITERATURE

Telles, S. et al., (2010) observed short term health impact of a yoga and diet change program on obesity. For this study 47 subjects were selected and underwent six days residential yoga program. they were tested body mass index (BMI), before and after one week yoga program. Subjects practiced yoga for 5 hours every day and had a low fat, high fiber, vegetarian diet. The collected data were compared by using t-test. After 6-day residential program, participants showed a decrease in BMI (1.6 percent), waist and hip circumferences, fat-free mass, total cholesterol (7.7 percent decrease), and an increase in postural stability and hand grip strength ($p<0.05$, all comparisons). They concludedthat 6 day yoga and diet change program decreased the BMI and the fat-free mass.

Telles, S. et al., (2010) and Venkatareddy, et al., (2003) conducted the study on the effect of yoga on weight and fat fold thickness among obese men. 30 obese men were selected according to their body mass index and divided into two groups. Group I consist of BMI greater than 35 and group II consist of BMI 25- 35. Obese men age ranged from 19-53 years. Subjects were underwent one-hour practice of asanas and pranayama in the morning for the duration of 90 days. A significantreduction in BMI was examined after the training period both groups. When comparing the two groups, I group had better reduction in BMI (BMI greater than 35) the II group (BMI 25- 35).

METHODOLOGY

To achieve the purpose of the study, 30 Obesity were selected randomly for the study from Chennai, between the age group of 35 to 45 years and they are equally divided into two groups I and II with 15 subjects in each group. Preliminary test was taken for the two groups (I and II) on the selected dependent variable before the start of the training program. Group I was given yogic practices for 60 minutes 6 days for a total period of eight weeks. Group II (control group) was permitted to undergo their routine and normal life style during the course of experiment without any specific training. After eight weeks, the two groups were rested again on the same selected dependent variable, the selected physiological variables such as Body Mass Index. Analysis of co-variance (ANCOVA) was used to find out the significant differences between experimental groups and the control group. The test of significance was fixed at 0.05 level of confidence.

YOGIC PRACTICES

1. Loosening the joints.
2. Surya Namaskar
3. Asanas

    Navasana
    Paschimottanasana
    Noukasana
    Ardha matsyendrasana
    Pawan mukatasana 2
    Bhddhakonasana
    Janusirsasana
    Sethubandhasana
    Ardha halasana
    Bhujangasana
    Savasana

4. Pranayama

    Anulomvilom
    Bhastirika
    Kapalapathi
    Ujjai

5. Yoga Nidra

RESULTS AND DISCUSSIONS

The data pertaining to the variable collected from the groups before and after the training period were statistically analyzed by using analysis of covariance (ANCOVA) to determine the significant difference and the hypothesis was tested at 0.05 level of confidence. The obtained F-ratio value for the Body Mass Index were greater than the table value , indicating that there was a significant difference among the post test and adjusted post test means of the yogic practice group than the control group on selected Body Mass Index.

Table – I

ANALYSIS OF COVARIANCE OF THE MEANS OF TWO EXPERIMENTAL GROUPS AND THE CONTROL GROUP ON BMI (Mg/dL)

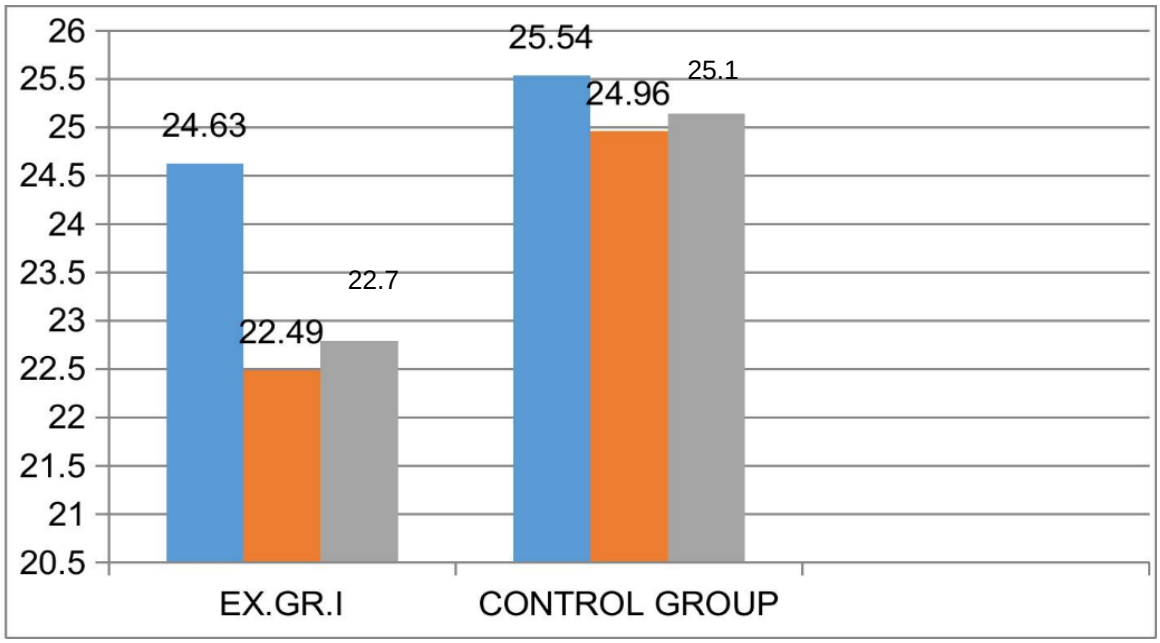
Tests/ Groups	EX. GR-I	CG - II	SV	Sum of Squares	Df	Mean Squares	"F" Ratio
Pre Test	24.63	25.54	**B**	0.69	1	0.344	**0.11**
			W	262.47	28	3.02	
Post Test	22.49	24.96	**B**	362.40	1	181.20	**53.69***
			W	293.60	28	3.37	
Adjusted Post Test	22.79	25.14	**B**	360.72	1	180.36	**53.22***
			W	291.466	27	3.39	

***Significant at 0.05 level of confidence. (Table F-ratio at 0.05 level of confidence for 1 & 28 (df) =4.21, 1 & 27 (df) =4.22)**

The obtained F value on pre test scores 1.04 was lesser than the required F value of 4.2 to be significant at 0.05 level. This proved that there was no significant difference between the groups a pretest and post test and the randomization at the pretest was equal. The post test scores analysis proved that there was significant difference between the groups, as obtained F value 53.69 was greater than the required F value of 4.20. This proved that the differences between the post test means of the subjects were significant. Taking into consideration the pre and post test scores among the groups, adjusted mean scores were calculated and subjected to statistical treatment. The obtained F value 53.22 was greater than the required F value of 4.20. This proved that there was a significant difference among the means due to eight weeks of practice of Simplified Kundalini Yoga practices on Heart Rate in line with the study conducted by **Telles, S. et al., (2010) and Venkatareddy, et al., (2003)**

The adjusted post mean values of yoga training group and control group on BMI are graphically represented in the Figure 1.

Figure 1
BAR DIAGRAM SHOWING THE MEAN DIFFERENCES AMONG THE GROUPS ON BMI (Mg/dL)



***Significant at 0.05 level of confidence. (Table F-ratio at 0.05 level of confidence for 1 & 28 (df) =4.21, 1 & 27 (df) =4.22)**

The results of the study on the selected physiological variables showed that Group I has significant differences on BMI, due to Yoga practices. Hence, the hypothesis was accepted at 0.05 level of confidence. The above finding can also be substantiated by the observations made by experts such as **Telles, S. et al., (2010) and Venkatareddy, et al., (2003)**

CONCLUSION

It was concluded that yogic practices decreased Body Mass Index level amongmiddle aged obese men.

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