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Evaluating the Effectiveness of Therapeutic Yoga Asanas on Body Mass Index in Class I Obese Individuals

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Abstract

The purpose of the present study was to examine the effect of therapeutic yoga asanas on body mass index (BMI) among Class I obese men. Thirty Class I obese individuals were selected from Madurai, Tamil Nadu, India, during 2024. The participants were aged between 30 to 40 years. The subjects were divided into two equal groups of 15 each: an experimental group and a control group. The experimental group participated in a six-week therapeutic yoga asanas program, while the control group did not engage in any special training during the study period. BMI was used as the primary criterion variable in this research and was measured using a body mass index analyzer. Pre-test measurements were taken prior to the training period, and post-test measurements were taken immediately after six weeks of intervention. The collected data were statistically analyzed using the 't' ratio to assess differences between pre-test and post-test scores within and between the groups. The analysis revealed a statistically significant reduction in BMI among participants in the experimental group, while the control group showed no significant change. These findings indicate that therapeutic yoga asanas can serve as an effective intervention for managing body mass index in Class I obese individuals. Regular practice of selected asanas likely contributed to improved metabolism, better physiological balance, and greater awareness of body-mind integration, thereby promoting healthier body composition. The study emphasizes the importance of incorporating therapeutic yoga into wellness routines for obesity management and overall health improvement.

Keywords: *Therapeutic Yoga Asanas, Body Mass Index, 't' Ratio.*

1. INTRODUCTION

Yoga is fundamentally intertwined with the well-being of the human body. While it is often said that the ultimate goal of yoga is to achieve Moksha or Nirvana, many yogic practices play a crucial role in maintaining good health. In contemporary society, sports and physical well-being have become deeply embedded in our lifestyles, influencing and being influenced by multiple sectors including

education, politics, and media (Alaguraja, K. et al., 2019)[4]. Yoga remains a universally beneficial discipline for people of all ages, not just for physical enhancement but also for fostering mental clarity and spiritual awareness. The ancient texts describe yoga as the process of silencing the modifications of the mind to fully realize the intrinsic nature of the Supreme Being (Alaguraja, K. et al., 2017).

In the domain of physical education, yoga has emerged as a vital component due to its holistic approach. Its practices support not only bodily flexibility and strength but also internal harmony and peace (Alaguraja, K. et al., 2018). Unlike regular physical activity, yoga engages both the body and the mind, allowing individuals to develop heightened awareness and emotional regulation. A balanced mind is critical for physical performance, and this balance is fostered through yogic practices that align breathing, posture, and attention (Alaguraja, K. et al., 2019).

Moreover, in the age of rising lifestyle-related disorders, obesity has become a prominent health issue across the globe. It is not only a cosmetic concern but also a medical condition that increases the risk of numerous diseases, such as type 2 diabetes, cardiovascular disorders, and metabolic syndrome. Among the various interventions explored for managing obesity, yoga asanas have gained recognition for their potential in weight management, stress reduction, and metabolic health. Unlike vigorous exercise routines, yoga offers a gentle, accessible, and sustainable approach to physical fitness.

Practicing yoga is not simply about performing physical movements; it requires the coordination of breath and mental focus (Alaguraja, K. et al., 2019). By integrating yoga into daily routines, individuals can experience long-term physical and psychological benefits, which are essential in combating obesity and associated comorbidities. The integration of yoga also encourages healthier lifestyle choices, improved digestion, and hormonal regulation, all of which contribute to maintaining a healthy body weight. Practitioners are encouraged to begin with simple breathing exercises or meditation to ground the body and mind before advancing to postures (Alaguraja, K. et al., 2019).

Given the contemporary emphasis on improved appearance, longevity, and physical fitness, yoga offers a scientific and sustainable solution. Evidence has highlighted its effectiveness in improving consciousness, reducing mental agitation, and enhancing physical metrics such as BMI (Alaguraja, K. et al., 2019). Yoga transcends religious affiliations, making it a universal practice accessible to all, aimed at physical and emotional liberation (Selvakumar, K. et al., 2019). Ultimately, true health, and thus happiness, can be attained through consistent yoga practice, particularly for individuals struggling with obesity, making it a valuable component in preventive and therapeutic health care.

2. RESEARCH METHODOLOGY

2.1 Selection of subjects

The purpose of the study was to examine the effect of therapeutic yoga asanas on body mass index (BMI) among Class I obese men. To achieve this, thirty Class I obese men were selected as subjects through random sampling. The participants' ages ranged from 30 to 40 years.

2.2 Selection of variable

- **Independent variable :** Therapeutic Yoga Asanas Practice
- **Dependent variable :** Body mass index

3. EXPERIMENTAL DESIGN AND IMPLEMENTATION

The selected subjects were divided into two equal groups, each consisting of fifteen subjects: the therapeutic yoga asanas training group (Experimental Group) and the control group. The experimental group underwent therapeutic yoga asanas training for six days per week over a period of six weeks. The control group, on the other hand, did not participate in any special training program, continuing with their regular physical activities as per their curriculum. Body mass index (BMI) was chosen as the criterion variable for this study. All subjects in both groups were tested on the selected criterion variable, with BMI measured using a body mass index analyzer both before and immediately after the training program.

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4. STATISTICAL TECHNIQUE

The‘t’ test was used to analysis the significant differences, if any, difference between the groups respectively.

5. LEVEL OF SIGNIFICANCE

The 0.05 level of confidence was fixed to test the level of significance which was considered as an appropriate.

6. ANALYSIS OF THE DATA

The significance of the difference among the means of the experimental group was found out by pre-test. The data were analysed and dependent‘t’ test was used with 0.05 levels as confidence.

Table-1: Analysis of t-ratio for the pre and post tests of experimental and control group onBody mass index(Scores counts in number)

Variables	Group	Mean		SD		df	‘t’ ratio
		Pre	Post	Pre	Post		
Body Mass Index	Control	32.20	32.16	1.14	0.92	14	0.32
	Experimental	32.40	30.92	1.29	1.95		**9.01***

*Significance at .05 level of confidence.

Table-I shows that the mean values of pre-test and post-test for the control group on Body Mass Index (BMI) were 32.20 and 32.16, respectively. The obtained ‘t’ ratio was 0.32. Since the obtained ‘t’ ratio was less than the required table value of 2.14 for significance at the 0.05 level with 14 degrees of freedom, it was found to be statistically insignificant.

On the other hand, the mean values of pre-test and post-test for the experimental group on BMI were 32.40 and 30.92, respectively. The obtained ‘t’ ratio was 9.01*, which was greater than the required table value of 2.14 for significance at the 0.05 level with 14 degrees of freedom. This result was found to be statistically significant.

The results of the study indicate that there was a significant difference in Body Mass Index between the control group and the experimental group. It can be concluded from the study that the experimental group showed improvement in BMI as a result of six weeks of therapeutic yoga asanas training.

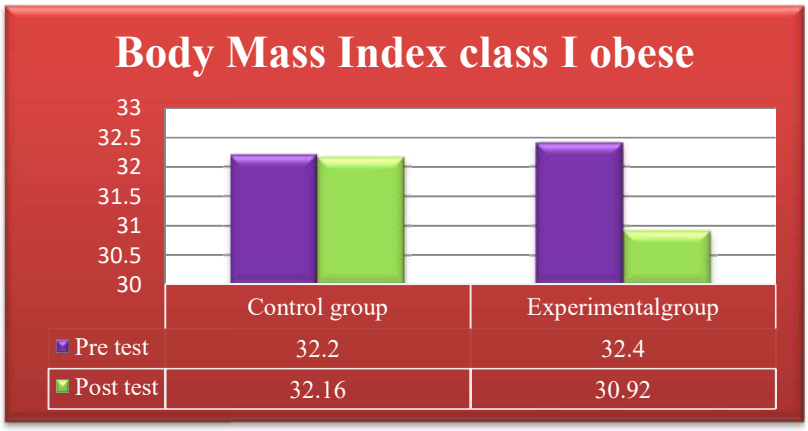

Fig-1: Bar Diagram Showing the Pre and Post Mean Values ofExperimental and Control Group on Body mass index

7. DISCUSSIONS ON FINDINGS

The results of this study confirm the efficacy of therapeutic yoga asanas in reducing BMI among Class I obese individuals. The significant decrease in BMI observed in the experimental group, compared to the control group, suggests that structured yoga interventions can provide measurable health benefits in a relatively short period. These findings align with existing research supporting the role of yoga in metabolic regulation and body composition improvement.

One of the key benefits of yoga in managing obesity lies in its ability to integrate physical, mental, and emotional aspects of health. Regular practice of therapeutic asanas likely contributed to enhanced metabolism, increased energy expenditure, and improved hormonal balance—all of which play essential roles in weight management. Furthermore, yoga practices improve parasympathetic activity, reduce sympathetic overdrive, and help regulate appetite and digestion, which are often disrupted in obese individuals.

This also reflects the holistic nature of yoga that not only targets physical exertion but also integrates mental discipline and breath control, thus positively influencing the physiological systems involved in obesity management. Participants who engaged in yoga may have experienced greater body awareness and stress resilience, reducing emotional eating behaviors that commonly lead to weight gain. The focused breathing and mindfulness cultivated through yoga may have played an indirect yet impactful role in achieving the observed improvements in BMI.

Moreover, yoga may reduce stress, a known contributor to obesity, thereby reinforcing its indirect benefits on BMI. The outcome supports earlier studies which reported improvements in various physiological parameters through yoga practices (Yoga, P. et al., 2019)[10]. The structured and consistent practice appears to have established an environment of discipline, mindfulness, and body awareness that contributed to significant outcomes. These insights highlight the relevance of incorporating yoga as a primary or adjunct strategy in the fight against obesity and lifestyle-related diseases.

8. CONCLUSION

Based on the results of the study, the following conclusions can be drawn:

- A significant reduction in Body Mass Index was observed in the experimental group as a result of six weeks of therapeutic yoga asanas.
- No such significant change was seen in the control group, highlighting the impact of targeted yoga intervention.
- Therapeutic yoga asanas proved to be an effective, non-invasive, and accessible intervention for managing Class I obesity.
- These findings support the growing body of evidence recommending yoga as an alternative or complementary approach in obesity treatment and health maintenance.

In conclusion, the study validates the therapeutic potential of yoga in addressing health challenges like obesity. The consistency, accessibility, and holistic nature of yoga make it an attractive intervention for diverse populations, particularly those seeking alternatives to pharmacological or high-intensity exercise programs. The simplicity of implementation and the absence of adverse effects further strengthen its applicability in public health frameworks. Future research could explore long-term effects and the integration of yoga with dietary modifications or psychological counseling to amplify outcomes. As obesity continues to rise globally, the incorporation of yoga into routine healthcare practices may offer a cost-effective and sustainable solution for improving individual and community health.

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