

THE IMPACT OF YOGIC PRACTICES ON SPECIFIC MATHEMATICAL AND PERSONAL CHARACTERISTICS AMONG OBESE FEMALE STUDENTS IN INDIAN COLLEGES

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KEYWORDS

ABSTRACT

Yoga, Obesity, physiological

This research set out to answer the question, "What effect does yoga have on physiological variables related to obesity among college learners in the Indian state of Tamil Nadu?" For this study, the researchers enlisted the help of thirty overweight female students from the Vinayaka Missions Research Foundation university in Salem, Tamil Nadu, India. Participating students came from five separate accredited universities and had ages ranging from eighteen to twenty-two. Thirty patients were split evenly involving an experimental group and a control group using a random selection process. Hence, fifteen subjects made up each group. The procedure for giving the test was explained to each participant.

INTRODUCTION

YOGA

Sanskrit yuj means "to join," "to yoke," or "to unite," and it is from this root that the word "yoga" is derived. A key component of Yoga, according to the canonical texts, is the union of one's own awareness with the consciousness of the universe. All things, according to modern physicists, are just various faces of the same quantum fabric. A person who understands how everything is interdependent is said to be "in yoga" and is called a yogi who has reached enlightenment, which is called Mukti, nirvāna, kaivalya, or moksha. In addition to its external manifestations, the name "Yoga" refers to an interior discipline that teaches people how to balance their minds and bodies for the purpose of discovering who they really are. The objective of Yoga practice, also known as sādhanā, is to transcend various forms of pain and attain a state of well-being, of complete freedom and happiness in every part of life, including overall health, satisfaction, and oneness.

OBESITY

There are two aspects to the problem of malnutrition, and one of them is obesity. Apart from Asia and sub-Saharan Africa, the percentage of people who are overweight has recently surpassed that of those who are underweight worldwide. Even in low- and middle-income nations, the rate of overweight and obesity is on the rise, particularly in urban canterers. This is contrary to popular belief, which held that these regions were immune to the problem. The

prevalence of overweight and obese children has increased at a rate that is more than 30% higher in emerging nations compared to industrialized nations.

Problem Statement

University students in the Indian state of Tamil Nadu were the subjects of this study, which sought to determine the effects of yoga on physiological variables related to obesity.

Hypothesis

1. A significant difference in the effects of yoga on several physiological variables among overweight University female college students in Tamil Nadu, India, was postulated in the hypothesis.

Review and Literary

More than 1.9 billion individuals are overweight, with 650 million being obese, according to recent studies. Being overweight or obese is associated with almost 2.8 million recorded fatalities. Obesity and its complications, such as diabetes and ischemic heart disease, are rampant in underdeveloped nations because of people's penchant for eating unhealthy, high-calorie foods, their lack of physical activity, and the availability of health care and financial resources. Obesity affects around 135 million people in India. Obesity rates in India vary by demographic factors such as age, gender, region, income level, etc. The 2015 ICMR-INDIAB research found that the prevalence rates of obesity (11.8% to 31.3% overall) and central obesity (16.9% to 36.3% in particular). One of the major causes of CVDs in India is being overweight around the middle. According to a number of studies, the rate of obesity is far greater in women than in males. Government healthcare spending and lost productivity due to obesity is high. By raising awareness about the dangers of obesity and the steps people can take to avoid becoming obese, we can put an end to this epidemic. A healthy lifestyle, including good nutrition and regular exercise, has many advantages, and the government should do more to spread the word. The purpose of this article is to report on the obesity rate in India and to draw attention to the places where the problem is most severe. On January 1, 2019, Prakash Ranjan, Mondal, Ahirwar, and Rajeev.

Methodology

Researching the impact of yoga on several physiological factors in connection to obesity among university students in the Indian state of Tamil Nadu. Thirty overweight female students from Tamil Nadu, India's Vinayaka Missions Research Foundation university were selected to participate in the study. A total of five reputable college with students ranging in age from eighteen to twenty-two were considered for the study. A pair of groups, one serving as a group for experiments and the other as a group to be controlled, were generated using a random selection approach, with thirty patients each. Hence, 15 participants made up each group. A thorough explanation of how to administer the exam was provided to each participant

To compare the control and experimental groups' pre- and post-test measurements in terms of body mass index, statistical analysis was performed.

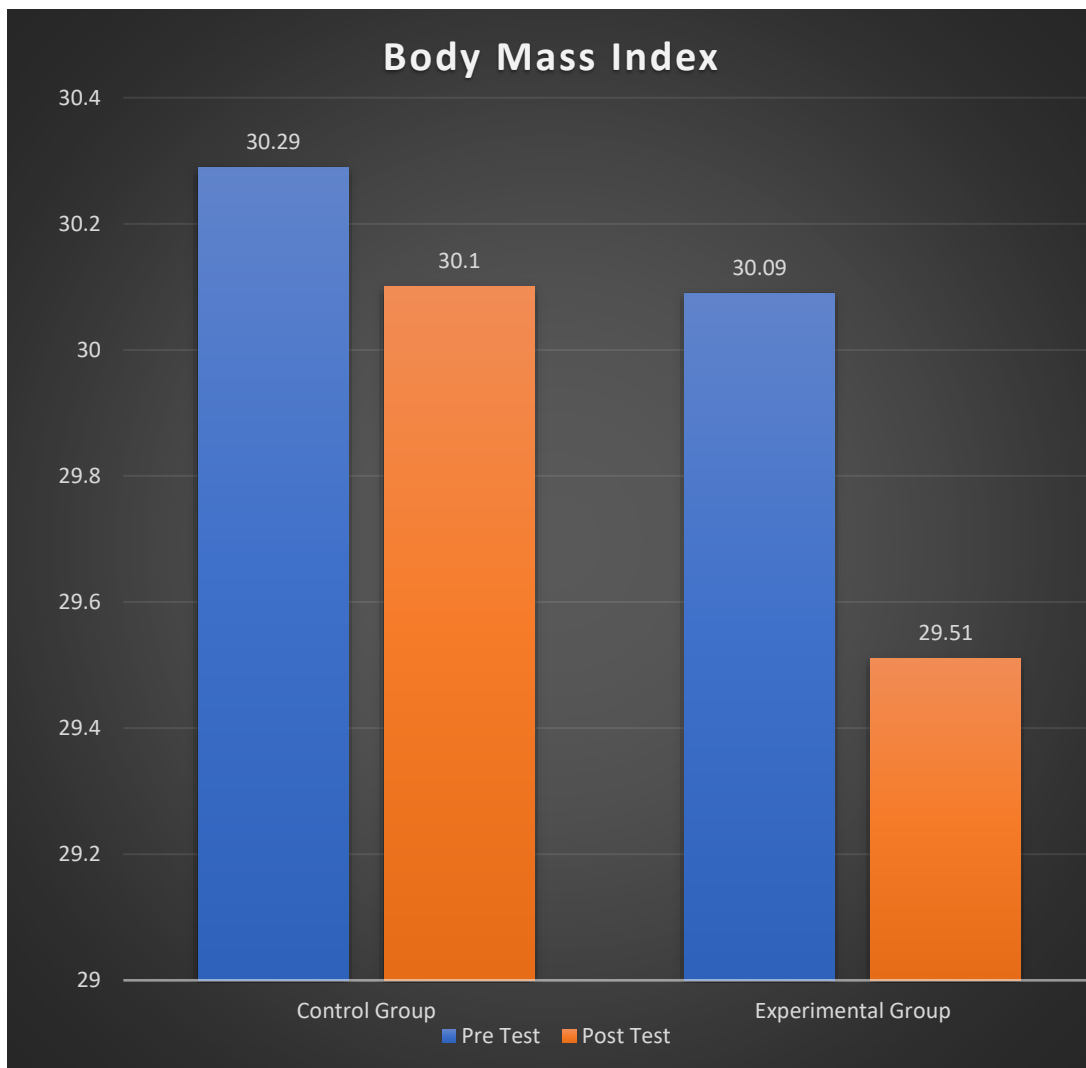
| Variables | Group | Mean | | SD | | Sd Error | df | 't' ratio |
|-----------------|--------------|-------|-------|------|------|----------|----|-----------|
| | | Pre | Post | Pre | Post | | | |
| Body Mass Index | Control | 30.29 | 30.09 | 2.30 | 1.89 | .16 | 14 | 1.03 |
| | Experimental | 30.10 | 29.51 | 1.50 | 1.35 | .12 | | 4.77* |

*Consideration at the 0.05 confidence level

The average BMI of the control group prior to and following the intervention was 30.09 and 30.29, correspondingly. The 't' ratio estimated, with 14 degrees of freedom and a significance level of 0.05, was 1.03, which is below the crucial table value of 2.15. As a result, it was determined that it did not possess statistical significance.

The pre-test and post-test average body mass indices of the experimental groups were 30.10 and 29.51, respectively. A 't' ratio of 4.77 was calculated, has fourteen degrees of freedom and a significance level of 0.05, surpassing the critical table value of 2.15. Thus, the conclusion of statistical significance was upheld. The findings indicated a notable disparity in BMI between the two cohorts. The inference the study found that the experimental group's body mass index showed a substantial improvement after six weeks of practicing yoga.

Both the experimental and control groups' average pre- and post-test values for body mass index are shown in the bar diagram.



Statistical Analysis of T-Ratio For Pre- And Post-Test Measurements Of Resting Heart Rate In The Control And Experimental Groups

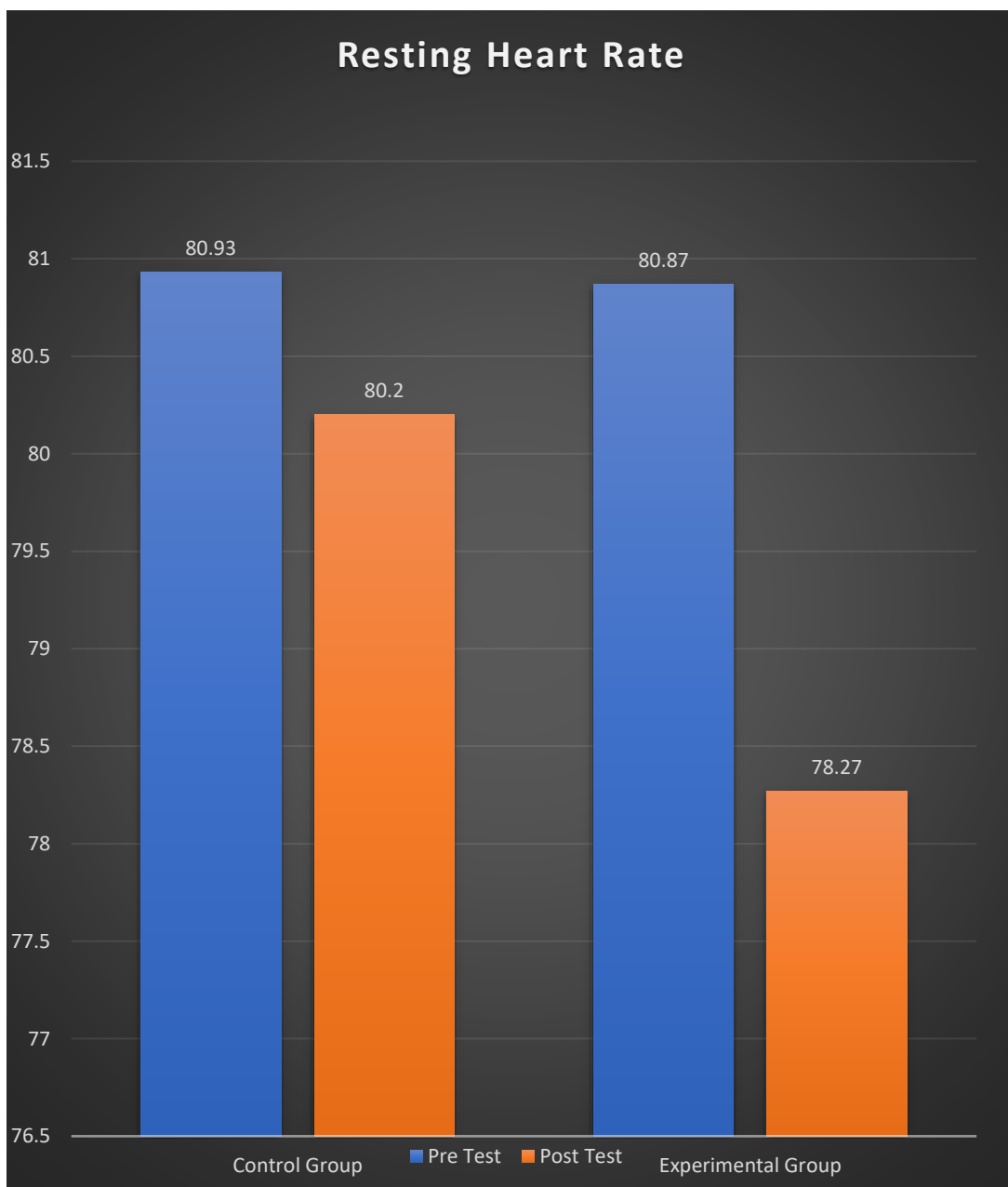
| Variables | Group | Mean | | SD | | Sd Error | df | 't' ratio |
|--------------------|--------------|-------|-------|------|------|----------|----|-----------|
| | | Pre | Post | Pre | Post | | | |
| Resting Heart Rate | Control | 80.93 | 80.20 | 3.23 | 2.98 | .58 | 14 | 1.26 |
| | Experimental | 80.87 | 78.27 | 3.02 | 2.90 | | | 4.57* |

*Consideration at the 0.05 confidence level

The mean resting heart rates in the control group prior to and during the experiment were 80.93 and 80.20, respectively. With 14 degrees of freedom and a significance threshold of 0.05, the anticipated 't' ratio of 1.26 was higher than the critical table value of 2.15. As a result, it was determined that it did not possess statistical significance.

The resting heart rate averages for the experimental groups were 80.87 and 78.27 before and after the test, respectively. The 't' ratio was calculated to be 4.57, which Using 14 degrees of freedom and a significance level of 0.05, surpassing the critical table value of 2.15. Therefore, statistical significance was confirmed. The findings indicated that the experimental group exhibited a markedly elevated resting heart rate compared to the control group. According to the research, it is presumed that the experimental group had a decrease in their resting heart rate after six weeks of practicing yoga.

Both the control and experimental groups' average pre- and post-test resting heart rates are shown in the bar diagram.



Evaluating outcomes

Researchers found that numerous dependent variables, such as body mass index, and resting heart rate, improved significantly in the experimental group that participated in yogic activities. This study found that yoga significantly affected the development of all dependent variables..

Examination of Subcutaneous Fat

Yogic practices (six sessions per week) significantly increase body mass index (4.77% vs. 4.73% in the control group), according to the study. The training regimen that the participants followed throughout the session is responsible for this, and it proves that Yoga is a great way to boost your body mass index.

Examination of the Resting Heart Rate

The results show that compared to the control group, those who participated in yogic practices (six sessions weekly) had a significantly higher resting heart rate improvement of 4.57%. This is because the individuals followed a specific training routine during the training time, which proves that Yoga is a great way to increase your resting heart rate.

Theories and Discussions Centering on Hypothesis

The hypothesis of the research was that yoga would Exert a substantial influence on many physiological factors, including resting heart rate, body mass index, many physiological factors, such as resting heart rate, body mass index, are significantly affected by yoga, according to the data. Therefore, the hypothesis proposed by the researcher was confirmed.

Conclusion

The findings of this study demonstrate that yoga significantly influences various physiological parameters, including body mass index, resting heart rate, and breath-holding duration. Participants who engaged in six weekly yoga sessions showed marked improvements compared to the control group, highlighting the effectiveness of a consistent yogic routine.

Specifically:

- **Body Mass Index (BMI):** A 4.77% improvement was observed in the experimental group compared to 4.73% in the control group, attributed to the structured training regimen.
- **Resting Heart Rate:** A notable 4.57% improvement was recorded in the experimental group, further emphasizing yoga's role in enhancing cardiovascular efficiency.

These results confirm the hypothesis that yoga significantly impacts multiple physiological factors. Consequently, yoga emerges as an effective and holistic approach to improving physical health and well-being. Future studies could explore its long-term benefits and potential applications across diverse populations.

BIBLIOGRAPHY

1. Iyengar BKS. The Gift of Yoga, New Delhi, Harpers Collins Publications India Pvt Ltd, 1999, P. 394.
2. Iyengar BKS. Yoga the Path of Holistic Health, Great Briton, 2001, P. 30.
3. Kamlesh ML. Psychology in Physical Education and Sport, 2nd Edition, Metropolitan, New Delhi. Kaul, H.K, 1988-1992.
4. Yoga Asana for Every One, Surjeet Publication, New Delhi. Mira Mehta, 1994. 5. How to Use Yoga, London, Annes Publishing Ltd. Nilima Patel, 2008.
6. Yoga and Rehabilitation, Jaypee Brothers Medical Publishers (P) ltd, New Delhi.

7. Edmondston SJ, Wallumrød ME, MacLéid F, K vamme LS, Joebges S, Brabham GC. Reliability of isometric muscle endurance tests subjects with postural neck pain. *Journal of Manipulative & Physiologica Therapeutics*. 2008;31(5):348-354.
8. Elleh Davis Kelly. A Comparative Study of Structure and Function of Normal, Pronated and Painfull Feet Among Children, *Research Quarterly o* (December), 1947, 291.
9. Ellen D. Kelly, *Teaching Pos ture and Body Mechanics* (New York The Ronald Press Company, 1949, p. 5.
10. Evelyn A. Davies, *Relationship Between Selected Postural Divergencies and Motor Abilities*, *Research Quarterly* 28 (March), 1957,