

How to Cite:

Ramkumar, N., & Suresh, R. (2022). Effect of yoga rehearses on selected physiological variables among the obesity men. *International Journal of Health Sciences*, 6(S6), 949–955.
<https://doi.org/10.53730/ijhs.v6nS6.10365>

Effect of yoga rehearses on selected physiological variables among the obesity men

Dr. NR. Ramkumar

Director of Physical Education - AMET Deemed to be University Chennai, India
Email: ram.sportive@gmail.com

Dr. R. Suresh

Asst. Director of Physical Education - AMET Deemed to be University Chennai, India
Email: sureshugc@gmail.com

Abstract---The purpose of the study was to find out the effect of yoga rehearses on selected physiological variables among the obesity men. Total 15 obesity men were taken as subjects at randomly for the study. All the subjects were selected by their respective from AMET University, Chennai and age group between 35 and 45. The study was formulated as a single group design consisting of a pre-test and post - test. The groups were assigned as experimental group (Yoga rehearses) respectively. Pre tests were conducted for all the 15 subjects on selected physiological variables. After the experimental period of twelve weeks post-test were conducted and the scores were recorded. The subjects were tested on physiological dimensions such as Resting heart rate and Blood pressure. Post test was conducted after twelve weeks of training Pre and Post test data were analyzed by applying Mean, SD and Paired samples 't' test. The level of confidence is fixed at 0.05 levels as the number of subjects was limited. The training effects of yogic practices evidenced significant influence over the physiological related variables of obesity men, Chennai. Particularly by Resting Heart Rate and Mean Arterial Blood Pressure levels were decreased.

Keywords---obesity, yoga, men

Introduction

Yoga has all the healing benefits to reduce obesity and stop related diseases. Sage Thirumoolar counselled that one should eat half the stomach full, drink water a quarter and leave the rest empty. This will keep the yogi or any human being in concord and serenity with the body, mind and the soul. Systematic practice of

asanas is useful to reduce fat in various parts of our bodies. This will help reduce weight and keep the body in proper health in the long run. Various postures, especially forward bending, twisting and backward bending, help reduce fat near abdomen, hips and other areas. Regular exercise of asana helps achieve ideal weight. Praised by a proper diet, this is a significant part of a healthy lifestyle to maintain a body weight in the long term. Yoga is completely a gift to humanity from our families. I believe they were very advanced in their thoughts about future peers, calculatedly or accidentally taking into account the constraint of space and time. Yoga practice neither needs any machines nor much space. Yoga has the solution for a healthy life style. It is a complete package with wonderful cardio, dynamic workout, meditative posture and influence on one's behavior and life style.

Benefits of yoga

Yoga has been everywhere for periods dating back to as old as the 5th - 6th Century BC. In numerous religious and ancient texts found in India, yoga dictates various forecasts of human wellbeing. These practices have then been changed and associated for the benefits it provides. To target a difficult like obesity or if we are looking to lose weight, yoga can be an abundant choice to pick. Yoga is practices through 5 different disciples that target your complete body 1, Exercise. 2, Diet. 3, Breathing. 4, Relaxation. 5, Meditation. Yoga is not a difficult task that demands a lot of our energy but simple poses or called asanas can help speed up our metabolism and help we shed some extra pounds without tools and associations to classes. Yoga can be easily learned, picked up at home and there is no essential mandate that a professional can train us. With no side effects, it is also a natural and safe way to approach weight loss and obesity. Yoga is the best option to consider for all our health concerns and here are some asanas that help target our fat.

Hypotheses

The purpose of the present investigation, the following hypotheses was formulated for this study.

1. It was hypothesized that there would not be any significant difference in the Resting Heart Rate among obesity men.
2. It was hypothesized that there would not be any significant difference in Mean Arterial Blood Pressure among obesity men.

Limitations

1. The heterogeneous characters of the subjects in hereditary and environmental factors were recognized as limitation.
2. The disparity prevailing in the internal and external factors which could have discouraged of motivated the subjects during training as well as testing period couldn't be controlled.
3. The uncontrollable changes in climatic conditions such as atmospheric temperature, humidity, and other meteorological factors during the pre and post tests were considered as limitations
4. The quantum of physical exertion, lifestyle and physiological stress and other factors that affect the metabolic functions were also considered as limitations.

Delimitations

The study was delimited in terms of sample and contents as follows:

The age of the subjects ranged between 35 and 45. All of them were obesity men.

Single group design (Yogic practices)

The criterion variables selected for the study were confined to the following variables.

Physiological variable:

Resting heart rate

Mean Arterial Blood Pressure

The Duration of the Training was for 12 Weeks

The number of sessions per week varied from 5 to 6.

During the experimentation the testing periods were restricted to 'pre' and 'post'.

In this study, the following variables were selected:

Criterion Variables

Resting Heart rate

Blood pressure

Independent Variables

12 weeks of Yoga Training

Method

Selection of the Subjects:

The purpose of the study was to find out Influence of yoga rehearses on selected physiological variables among the obesity men. To achieve the purpose of the study 15 obesity men in the age group of 35 and 45 years were single group design consisting of a pre-test and post - test. The groups were assigned as experimental group – (yoga exercises) respectively. Pre tests were conducted for all the 15 subjects on selected physiological variables. After the experimental period of twelve weeks post-test were conducted and the scores were recorded.

The subjects were given respective training to the subjects five days a week Monday to Friday except Saturdays and Sundays from 6.30 to 7.30 a.m.

Table I
Training Programme

S.No.	Yogic practice	Name	Duration (Minutes)	Total (Minutes)	Rest Between Asana
I	Asanas	1. Surya Namaskara	2	28 Minutes	30 Seconds
		2. Chaturanga Dandasana	2		
		3. Virabhadrasana	2		
		4. Trikonasana	2		
		5. Adho Mukha Svanasana	2		
		6. Sarvangasana	2		
		7. Nauka asana	2		

		8. Parivritta Utkatasana	2		
		9. Dhanurasana	2		
		10. Bhujangasana	2		
		11. Kumbhakasana	2		
		12. Paschimottanasana	2		
		13. Pawanmukt asana	2		
		14. Shavasana	2		
	Total				35.0

Tool And Technique

Table II
Showing the Variables, Tests / Tools and the Unit of Measurement

S.No.	Variable	Test/tools	Unit of Measurement
1	Resting Heart rate	Digital Heart Rate Machine	No. of Beats
2	Blood pressure	Sphygmonometer	Mm/Hg

Discussion

The follo

wing statistical techniques were used to find out the Influence of yoga rehearses on selected physiological variables among the obesity men.

For the purpose of finding out any significant change in the variables due to training the data collected will be analyzed statistically using SPSS statistical package. After eliminating the influence of Pretest, the adjusted posttest means of single group will be tested for significance using Mean, SD and Paired samples 't' test. The level of confidence is fixed at 0.05 levels as the number of subjects was limited.

Table III
Computation of Paired Samples T-Test on Resting Pulse Rate

Variable	Pre-test		Post-test		Mean Deviati on	SEM	t-ratio
	Mean	SD	Mean	SD			
Resting Heart Rate	73.93	4.25	70.0	3.98	3.93	0.345	11.42*

*Significant at 14 df at 0.05 level 1.761

The Table III reveals that the obtained t-ratio between pre and post-test values of yoga training groups on physiological component of resting heart rate. The pre-test mean values of resting heart rate were 73.93 respectively. The post-test mean values of resting heart rate were 70.0 respectively. The obtained t-values of yoga training Group for resting heart rate were 11.42 respectively. The required table value was 1.761. Since the obtained t-ratios are greater than the required table value at 0.05 level of confidence It was observed that the mean gains statistically significant resulting that twelve weeks practice of yoga training showed positive sign as having the significant improvement in resting heart rate (3.93 P < 0.05).

Hence this proved that there was significant difference on resting heart rate among obesity men.

The mean value on resting heart rate was presented through bar diagram for better understanding of the results of this study in Figure I.

Figure I
Bar Diagram on Means of Resting Heart Rate
(Scores in Beats Per Minute)

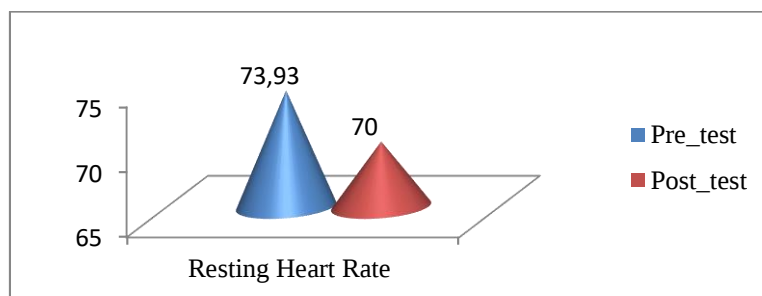


TABLE IV
Computation of Paired Samples 'T' Test on Mean Arterial Blood Pressure

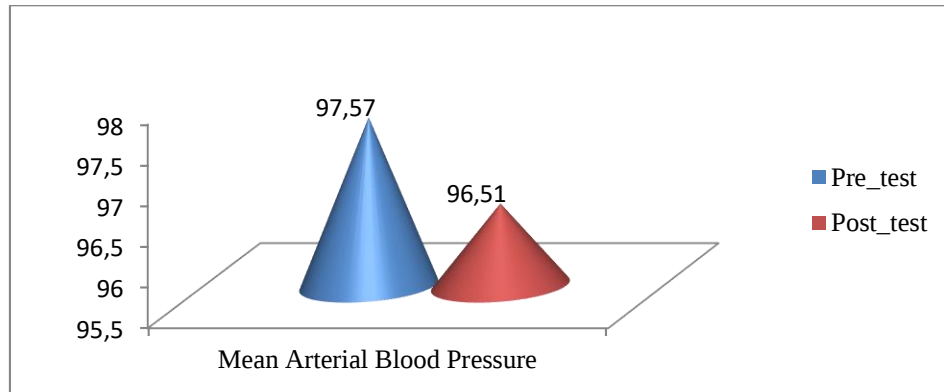
Variable	Pre-test		Post-test		Mean Deviation	SEM	t-ratio
	Mean	SD	Mean	SD			
Mean Arterial Blood Pressure	97.57	2.54	96.51	2.22	1.05	0.27	3.89

*Significant at 14 df at 0.05 level 1.761

The Table IV reveals that the obtained t-ratio between pre and post-test values of yoga training groups on physiological component of mean arterial blood pressure. The pre-test mean values of resting heart rate were 97.57 respectively. The post-test mean values of resting heart rate were 96.51 respectively. The obtained t-values of yoga training Group for mean arterial blood pressure were 3.89 respectively. The required table value was 1.761. Since the obtained t-ratios are greater than the required table value at 0.05 level of confidence It was observed that the mean gains statistically significant resulting that twelve weeks practice of yoga training showed positive sign as having the significant improvement in resting heart rate (1.05 $P < 0.05$). Hence this proved that there was significant difference on mean arterial blood pressure among obesity men.

The mean value on resting heart rate was presented through bar diagram for better understanding of the results of this study in Figure II.

FIGURE II
Bar Diagram on Means of Mean Arterial Blood Pressure
(Scores in mm Hg)



Discussion

Discussions on the findings

Resting Heart Rate

Telles, S et.al., (2004) investigated whether yoga reduces heart rate and whether the reduction would be more after 30 days of yoga training. Two groups (yoga and control, $n = 12$ each) were assessed on Day 1 and on Day 30. During the intervening 30 days, the yoga group received training in yoga techniques while the control group carried on with their routine. At each assessment the baseline heart rate was recorded for one minute. Both the baseline heart rate and the lowest heart rate achieved voluntarily during the six-minute period were significantly lower in the yoga group on Day 30 compared to Day 1 by a group average of 10.7 beats per minute (i.e., bpm) and 6.8 bpm, respectively. In contrast, there was no significant change in either the baseline heart rate or the lowest heart rate achieved voluntarily in the control group on Day 30 compared to Day 1.

Arterial Blood Pressure

Tejaswini D et al., (2016) To show the effects of yoga and pranayam on auditory and visual RT and on certain physiological parameters such as weight, body mass index, pulse rate, respiratory rate, systolic blood pressure, and diastolic blood pressure in normal and hypertensive subjects. It was carried on subjects between 30 and 60 years of age. Yoga and pranayam are more beneficial to hypertensive subjects. RT is an index of cortical arousal, and a decrease in it indicates an improved sensory-motor performance and an enhanced processing ability of the central nervous system.

Conclusion

Within the limitations, the results of present study seem to permit the following conclusion on office obesity men. The training effects of yogic practices evidenced significant influence over the physiological related variables of obesity men from

AMET University, Chennai. Particularly by Resting Heart Rate and Mean Arterial Blood Pressure levels were decreased.

References

- Palatini P (1988) "Blood pressure behavior during physical activity". *Sports Med*; 5: 353-374.
- Suryasa, I. W., Rodríguez-Gámez, M., & Koldoris, T. (2021). Get vaccinated when it is your turn and follow the local guidelines. *International Journal of Health Sciences*, 5(3), x-xv. <https://doi.org/10.53730/ijhs.v5n3.2938>
- Tejaswini D Sonwane, Neelam V Mishra (2016) "Study of effects of yoga and pranayam on human reaction time and certain physiological parameters in normal and hypertensive subjects" *National Journal of Physiology Pharmacy and Pharmacology*; Vol 6 Issue 4 323 -328.
- Telles, S., Joshi, M., Dash, M., Raghuraj, P., Naveen, K.V., and Nagendra, H R (2004) "An evaluation of the ability to voluntarily reduce the heart rate after a month of yoga practice" *Integrative Psychological and Behavioral Science*, 39, Page:119-125