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Effect of suryanamaskar on body mass index, systolic and diastolic blood pressure among obese working women

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Abstract

Obesity is highly prevalent in women when compared to men. Some evidence suggests that lack of physical activity rather than caloric intake is a major determinant of obesity. Surya Namaskar provides vigour and vitality and keeps us healthy and fit. The purpose of the study was to find out the effect of Suryanamaskar on BMI, Systolic & Diastolic Blood pressure among obese working women. Fifteen working women were randomly selected as samples from Ruby Grand Apartments, Thiruvanchery, Chennai. The subject's age group ranged between 28-42 years. Pretest was recorded for all the subjects. The subjects were advised to do Suryanamaskar in the morning five days a week for a period of twelve weeks. The post test was conducted on the above said dependent variables after a period of twelve weeks. The data collected from the subjects were statistically analyzed using T-Test. Though there was reduction in BMI. The results does not show significant difference on BMI and diastolic pressure level but significant change was observed in systolic pressure level. The study showed positive effect of Suryanamaskar on systolic pressure.

Keywords: Obesity, suryanamaskar, body mass index, systolic pressure, diastolic pressure

Introduction

Obesity has become a progressively important health problem in India. One of the causes of increased obesity is the broad shift over the last 20 years to more sedentary work pattern. In free time people spend by television viewing or using the computer which lack physical activities. In adding to a sedentary lifestyle, the diet pattern has changed with foods having high calorie value. This results in overall increase in energy intake. The sedentary life style in working place not only produces obesity but also influence the blood pressure. The systolic as well as diastolic pressure among working women is increased not only due to abnormal diet and sedentary work but also due to increase stress working place. Overweight and obesity are the fifth leading risk of deaths, resulting in around 2.8 million deaths of adults globally every year. ^[1]Yogic techniques though mild in nature, when used accurately and regularly, can keep individuals healthy, fit and proportionate ^[2]. It teaches people of right living and, as such is intended to be incorporated in daily life. The effects of yoga it works on all aspects of the person; the physical, physiological, anthropometrical, mental and spiritual Life which helps people to attain their highest potential and highest state of consciousness. Suryanamaskar an ancient Indian yoga is the art of solar vitalization and is a combination of 12 different postures, followed in a particular sequence with a specific breathing pattern. It is a complete meditative technique in itself as it includes Asanas, Pranayama, Mantras and Mudras. It has got three aspects: form, vital energy and rhythm. It is the easiest way for a person to get used to Yoga. It reduces fat from almost all parts of the body, as it stretches each and every muscle and tones it. In this study the working women were made to do suryanamaskar and its effects on different selected variables were studied.

Statement of the problem

The purpose of the study was to find out the effect of Suryanamaskar on BMI, Systolic & Diastolic Blood pressure among obese working women.

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Hypothesis

First Hypothesis: It was hypothesized that there would be significant differences between the pre and posttest BMI level due to effect of suryanamaskar among obesity.

Second Hypothesis: It was hypothesized that there would be significant differences between the pre and posttest systolic blood pressure level due to effect of suryanamaskar among obesity.

Third Hypothesis: It was hypothesized that there would be significant differences between the pre and posttest diastolic blood pressure level due to effect of suryanamaskar among obesity.

Methodology

To achieve the purpose of this study fifteen working women

were randomly selected as samples from Ruby Grand Apartments, Thiruvanchery, Chennai. The subject's age group ranged between 28-42 years. Pretest of selected variables were conducted for all the subjects. The subjects were advised to do suryanamaskar in the morning five days a week (Wednesday to Sunday) for a period of twelve weeks. The post test was conducted on the above said dependent variables after a period of twelve weeks. The data collected from the subjects were statistically analysed using T-Test.

Results

Results on Body Mass Index

The pre-test mean was 27.36 and post – test mean 26.5 and the Standard deviation value is +/- 1.49. The obtained T-value is 0.0578 lower than table value 1.761. Hence it was insignificant.

Table 1: shows Computation of mean, standard deviation and T-Test value of BMI level.
(Scores in kg/m²)

Pre-test Mean	Post-test Mean	Standard deviation	obtained T-value	Table Value
27.36	26.5	1.49	0.0578	1.761

Result on Systolic Pressure

The pre-test mean was 135.33 and post – test mean 126.67 and the Standard deviation value is +/- 6.141. The obtained T-

value is 4.037 higher than table value 1.761. Hence it is significant.

Table 2: shows Computation of mean, standard deviation and T-Test value of Systolic pressure level.
(Scores in mm of Hg)

Pre-test Mean	Post-test Mean	Standard deviation	obtained T-value	Table Value
135.33	126.67	6.141	4.037	1.761

Result on Diastolic Pressure

The pre-test mean was 74.4 and post-test mean 74.8 and the

Standard deviation value is +/- 3.719. The obtained T-value is 0.387 lower than table value 1.761. Hence it is insignificant.

Table 3: shows Computation of mean, standard deviation and T-Test value of Diastolic Pressure level. Scores in mm of Hg)

Pre-test Mean	Post-test Mean	Standard deviation	Obtained T-value	Table Value
74.4	74.8	3.719	0.387	1.761

Discussion

The first hypothesis is state that there would be significant differences between the pre and posttest BMI level due to effect of suryanamaskar among obesity. The result of study shows that there was reduction in BMI but there was not significant difference between pretest and posttest value of BMI. Komal A Jakhotia, *et al* 2015 ^[3] study also observed similar results with BMI. The result of study shows that there was significant difference between pretest and posttest value of systolic pressure level. But insignificant difference between pretest and posttest value of diastolic pressure level was observed. Ananda Balayogi Bhavanani *et al.* 2011 ^[4] study also reported that suryanamaskar has positive physiological benefits as evidenced by improvement of pulmonary function, respiratory pressures, hand grip strength and endurance, and resting cardiovascular parameters.

Conclusion

The twelve week Suryanamaskar practice does not show significant results on Body mass index and diastolic pressure level but significant change was observed in systolic pressure level. The study showed the positive effect of suryanamaskar on systolic pressure. Similar study can be conducted in nonworking women and postmenopausal women.

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