

# The effect of Yoga on health related to physical fitness programme on the female of Amravati town

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## ABSTRACT

This study was aimed to see the effect of Yoga practices on the 50 female of mean age 38.3 years of Amravati town. The physical variables on which the effect of Yoga practices observed were flexibility of abdominal muscles, abdominal muscle endurance, cardiovascular endurance, waistline and body mass index (BMI). The participants were female of Amravati town. Programme of Yoga health related was given to these participants for 14 weeks. 5 days a week and one hour daily from 7 a.m. to 8 a.m. pre-training and post training tests were conducted. The results were analyzed by T-Test of SPSS which was based on the basis of  $p = 0.05$ . It showed the significant differences ( $p < 0.01$ ) between before and after being trained by this programme by focusing the effect of Yoga on (1) Flexibility, (2) Abdominal muscles, (3) Abdominal muscle endurance, (4) Cardiovascular endurance, (5) Waist line and (6) Body mass index. These noticeable differences revealed that Yoga training is fit for female and worth waste promising everywhere.

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**Key words :** Yoga, Flexibility, Health related physical fitness

Looking forward to the twenty first century, the demand of health resource goes higher and higher although the working hours are cut down, the past time is increased and the average of life span is prolonged for the coming of hi-tech era. It is prevalent to see over weight students on campus caused by lack of exercising, the percentage of the public's civilization disease breaks the new record each year.

According to the numerous documents, regular and proper exercising strengthens people's figures and body functions and improves people's quality of working efficiency and recreation at the same time (Allson *et al.*, 1993). Furthermore the exercise physicists also evidenced that steady and well planned exercise can improve and prevent hyperkinetic disease (Hsich, 1999). Every college and university continually released new researches about the health related physical fitness and that's what motivated the scholar to undertake a research on female of Amravati town and effects of Yoga health related fitness programme on female of Amravati town.

The purpose of this study was to see the effect of Yoga health related physical fitness programme of the physical parameter of female. (Flexibility, abdominal muscles, abdominal muscle endurance, cardiovascular endurance, waist line, body mass index)

## METHODOLOGY

Thirty female whose average age was 38.3 years

were selected as participants in the study. The Yoga health related programme was designed for one hour daily in the morning from 7 a.m. to 8 a.m. in the Town Hall of Amravati. The programme was given for 14 weeks and 5 days a week. Pre-tests of height, weight, flexibility, abdominal muscles (sit up times/30 seconds), abdominal muscles endurance (sit up times/60 seconds), cardiovascular endurance, waist line and body mass index (BMI) were conducted. The cardio-vascular endurance was tested by the step test for 3 minutes, the formula to calculate P.E.I. (Physical Efficiency Index) is as follows:

$$\frac{\text{Time of exercising sustainability (Sec.)}}{1 + 2 + 3 \# 2} = \text{PEI}$$

$$\frac{\text{Weight (kg)}}{(\text{Height}^2) \text{ m}} = \text{Body Mass Index (BMI)}$$

After the training of 14 weeks of Yoga, health related physical fitness frame final post-tests of physical variable were conducted and data were collected. The result of the training was obvious and effective examined by T-test of SPSS which was based on the basis of ( $p < 0.05$ ). It showed great differences ( $p < 0.01$ ) between before and after being trained by this Yoga health related physical fitness programme by focusing the effects of Yoga.

The result of the effect was analyzed and recorded computerized. The result of the training was obvious and

**Table 1: The effects of Yoga on health related to physical fitness programme**

Variables	Pre test average	S.D.	Post test average	S.D.	T	P	Result
Sit and reach back	29.65	11.34	35.50	9.28	-6.272	0.000	**
Hyper extension strength	31.30	10.14	39.95	10.10	-6.813	0.000	**
Sit-up	13.80	3.09	17.25	3.02	-11.716	0.000	**
Muscular endurance sit-up	23.15	3.09	17.25	3.02	-11.716	0.000	**
PEI	61.15	8.16	65.25	6.57	-7.479	0.000	**
BMI	22.20	2.62	21.96	2.61	3.713	0.001	**
Waist line	29.55	3.15	28.45	3.27	4.819	0.000	**

\* and \*\* indicate significance of value at P= 0.05 and P=0.01, respectively

Source : From the test scores.

effective examined by T-test of SPSS which was based on the basis of  $p < 0.05$ . It showed the great differences ( $p < 0.01$ ) between before and after being trained by this programme by focusing the effect of Yoga.

### OBSERVATIONS AND DISCUSSION

The participants average of ages was  $38.3 \pm 6.30$  years old height was  $159.05 \pm 6.11$  centimeter and weight was  $56.45 \pm 9.83$  kilograms. After being trained for 14 weeks 5 days a week and one hour per day, the result of the effects of training was analyzed and recorded in Table 1.

Table 1 reveals that the participants flexibility improved from 29.65 cm to 35.50 cm. The eventual variation was 5.58 cm. (The measured basis of sit and reach was 25 cm). The participants lower limbs and lower back reached on apparently visible achievement.

The posture of back hyper extension, the participant's flexibility improved from 31.30 cm to 39.95 cm. The participant's flexibility of the lower back had progressed the T between pre-test and post-test of flexibility was -6.813 which was highly significant.

The abdominal muscle force was tested by Bent Knee Sit-up Test (times/60 seconds). The participants sit-up frequency improved from 13.80/60 seconds to 17.25/60 seconds. The eventual improvement was 3.45/60 seconds. The T-value between pre-test and post-test of sit-up was -11.716 which was highly significant at ( $p < 0.01$ ).

Muscular endurance of participant was tested by Bent-Knee Sit-up test (Times/60 seconds). The participants sit-up frequency was 23.15/60 seconds before the start of training. After 14 months of Yogic training, it was improved to 17.25/60 seconds, the improvement was 5.8/60 seconds. The 'T' value between the pre test scores and post test scores was -11.716 at the ( $p < 0.000$ ) level of significant which was highly significant. During the training of Yogic practices, it was focused on the abdominal and back muscles. These two emphases noticeable strengthened the abdominal muscles force

and endurance.

Cardio-vascular endurance was tested by harward step test of the participants before the start of the training, and after the completion of training, the recovery period was calculated after doing step test for 30 minutes, the study showed that by doing the postures of squat with two hands closed together and warm up leaping directly strength the cardio vascular endurance. The participant's physical efficiency index was improved from 61.15 to 65.25. The improvement was 4.10 and the t value between pre-test and post-test of cardio-vascular endurance was -7.479 which was highly significant ( $p < 0.000$ )

The participants waist size had been reduced from 29.55 inches to 28.45 inches. The reduction was 0.9 inches and t value between waist line of participants before the start of training and after the training was 4.819 which was highly significant ( $p < 0.000$ ).

Coming with hi-tech, mechanization, automation, human bodies labour much less than before, besides, popularity of the high caloric fast food culture resulted in the increase of obese. Serious as heart attack, high blood pressure, diabetes and arterosclerosis, obesity had become on of the high threatening elements to human health.

The participants BMI before the start of training was 22.20 and after 14 weeks training of participants in Yogic practice, it was reduced to 21.96. The t value between pre-test and post-test of BMI was 3.713 which was highly significant at  $p < 0.00$  level.

### Conclusion:

After being trained for 14 weeks 5 days a week and one hour every day, the female of Amravati town had achieved fitness variables like body functions like flexibility, abdominal muscles, abdominal muscles endurance, cardiovascular endurance, waist line and Body Mass Index. Hence, it is recommended Yoga training be widely promoted for the male and female to improve their health.

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