Study of Effects of Selected Yoga Training Program on Body Composition of Sportsman

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Abstract - The objective of the study was to know the effects of selected yoga training program on body composition of sportsman. For this study total 60 district level sports selected from district level sports school, the age group 12 to 17 years were selected for the study. 60 students equally divided into two groups i.e. 30 sportsmen in experimental Group and 30 sportsmen in Control Group. Selected yoga training was given to experimental group and no training given to control group. It was hypothesis that that there will be significant difference between selected yoga training program and Control Group on selected body composition such as body mass index and fat percentage. Statistical analysis was done of the raw scores and Mean, Mean Difference and Standard Deviation was found using "T" test and analysis of variance was set at 0.05% level of confidence, which is considered adequate for the purpose of the study. Total duration of training was 12 weeks. Study was indicated that selected yoga training program impact significant effect on body mass index. The study was also indicated that selected yoga training program impact significant effect on fat percentage, it mean the fat percentage was decreases by the selected yoga training program.

Introduction:

Yoga is a spiritual science for the integrated and holistic development of physical, mental and spiritual aspects of our wellbeing. Yoga is originated in India many thousands of years ago and it is the oldest system of personal development in the World encompassing body, mind and spirit. Yogsana have a deeper significant value in the development of the physical, mental and spiritual personality, whereas pure exercises only have a physical effect on the muscles and bones. Yoga poses are also designed to tone and exercise the muscles of the body to eliminate excess fat, and make it more flexible and stronger. Yogic practice reduces the obesity and also reduces the risk factors associated with obesity. A study shows there was a significant reduction in total cholesterol and increase in HDL after twelve weeks of yoga practices.[20] Various researches suggest that yoga exercise improves the BMI of sedentary human beings including boys. Within the last decade the number of individuals participating in yoga has greatly increased. Yoga began in India thousands of years ago, but only recently gained popularity in the United States. This boom in popularity is apparent by the numerous fitness centers, colleges, studios, DVDs, and videos that provide yoga instruction. Yoga instruction can consist of practicing asanas, pranayama, relaxation, and meditation. Yoga is a physical and mental discipline that originated in Indian culture over 2,000 years ago. From 1997, the number of yoga practitioners significantly increased in the world. In addition, adults participating in a yoga intervention found that yoga was easily learned and performed. Once learned, yoga can be practiced at any time on an individual basis, thus reducing common barriers to physical activity such as time conflicts and poor weather. The physical practice of postures (Asanas) was originally intended to prepare the body for meditation. Asana is only one of the eight "limbs" of yoga, the majority of which are more concerned with mental and spiritual well-being than physical activity.

Body mass index (BMI) - A ratio of an individual's body mass to their height squared. Used as a measure of body composition. Expressed in kilograms per meter squared (kg/m2). Body composition, the separation of body mass into fat free and fat mass, often expressed as a percentage of body fat. Obesity is a medical condition in which excess body fat has accumulated to the extent that it may have an adverse effect on health, leading to reduced life expectancy and/or increased health problems. It is a metabolic disorder which is affecting the people throughout the world and commonly caused by a combination of excessive food energy intake, lack of physical activity, genetic susceptibility, and other psychological problems, although a few cases are caused primarily by genes, endocrine disorders, medications or psychiatric illness.The negative health (obesity) consequences are less or more insulin resistance, chances of occurring type 2 diabetes, asthma, hyper tension, increase in high total cholesterol, low density lipoproteins, triglycerides and lowering the high density lipoproteins in blood, become sleep apnea, attaining early puberty, etc.

Indexes associated with high risk in obese persons often return to normal with appropriate physical activities, dietary habits, and a small weight loss even when body weight and percentage body fat remain above recommended amounts. Today many boys and girls live at an overweight (obese) in underdeveloped or developing countries. Fifty percent of chances that one parent is in obese and the boys too and if both, eighty percent chances of attaining obese. Those children who have BMI of above 95% percentiles are in obese. More children aged 2 to 5 years are obese, as are 17 percent of children aged 6 to 19 according to the Centers of Disease Control and Prevention (CDC). It is also evident that increasing mortality rate during adolescent are due to childhood obesity. A 2008 study has found that children who are obese have carotid arteries which have prematurely aged by as much as thirty years as well as abnormal levels of cholesterol. The obese children were abused and teased by their same age group and also by their family members quite often.

Objective of the Study

The objective of the study was to know the effects of selected yoga training program on body composition of sportsman.

Material and Methodology

For this study total 60 district level sports selected from district level sports school, the age group 12 to 17 years were selected for the study. 60 students equally divided into two groups i.e. 30 sportsmen in experimental Group and 30 sportsmen in Control Group. Selected yoga training was given to experimental group and no training given to control group. It was hypothesis that that there will be significant difference between selected yoga training program and Control Group on selected body composition such as body mass index and fat percentage. Statistical analysis was done of the raw scores and Mean, Mean Difference and Standard Deviation was found using "T" test and analysis of variance was set at 0.05% level of confidence, which is considered adequate for the purpose of the study. Total duration of training was 12 weeks.

Table-1

Showing the Difference of the Significance of the Means of Pre Test and Post Test of the experimental and Control Group in the body composition such as BMI

Group	Pre Test	Post Test	Mean Difference	T-Ratio
Experimental Groups	15.87	17.01	1.14	13.00
Control Group	14.93	15.04	0.11	2.56

Level of Significance at 0.05 for one tail test (29) = 1.96

In body composition such as BMI component experimental group Pre Test was 15.87 and Post Test mean was 17.01 mean differences was 1.14. Received "T" ratio was 13.00 which were found significant at 0.05 levels. While Control Group Pre Test was 14.93 and Post Test mean was 15.04 mean differences were 0.11 Received "T" ratio was 2.56 which were found not significant at 0.05 levels.

Graph-1

Graphical Presentation of the means of Pre Test and Post Test of the experimental Group and Control Group in the body composition such as BMI

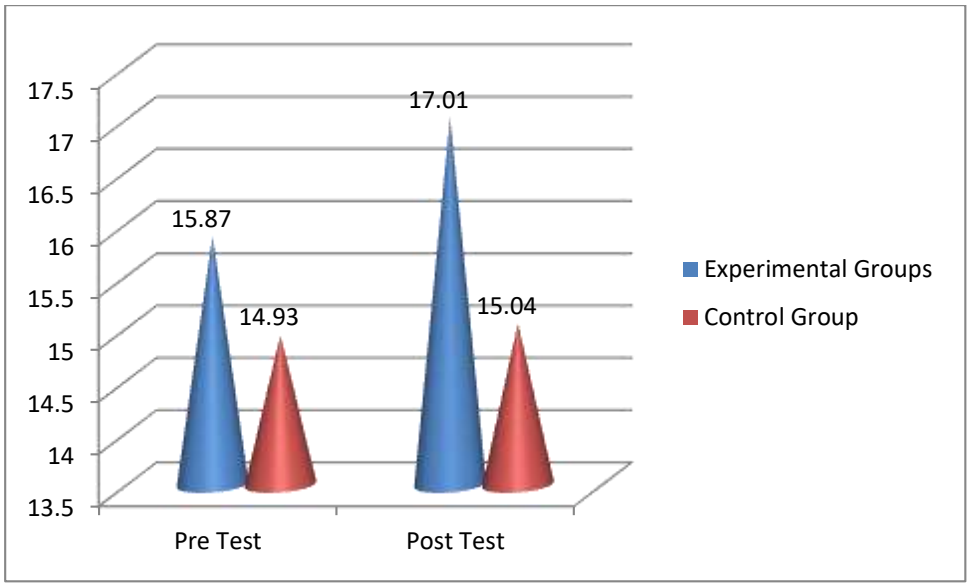

Table-2

Showing the Difference of the Significance of the Means of Pre Test and Post Test of the experimental and Control Group in the body composition such as Fat percentage

Group	Pre Test	Post Test	Mean Difference	T-Ratio
Experimental Groups	12.27	10.96	1.31	5.88
Control Group	11.20	11.10	0.1	0.88

Level of Significance at 0.05 for one tail test (29) = 1.96

In body composition such as fat percentage component experimental group Pre Test was 12.27 and Post Test mean was 10.96 mean differences was 1.31. Received "T" ratio was 5.88 which were found significant at 0.05 levels. While Control Group Pre Test was 11.20 and Post Test mean was 11.10 mean differences were 0.1 Received "T" ratio was 0.88 which were found not significant at 0.05 levels.

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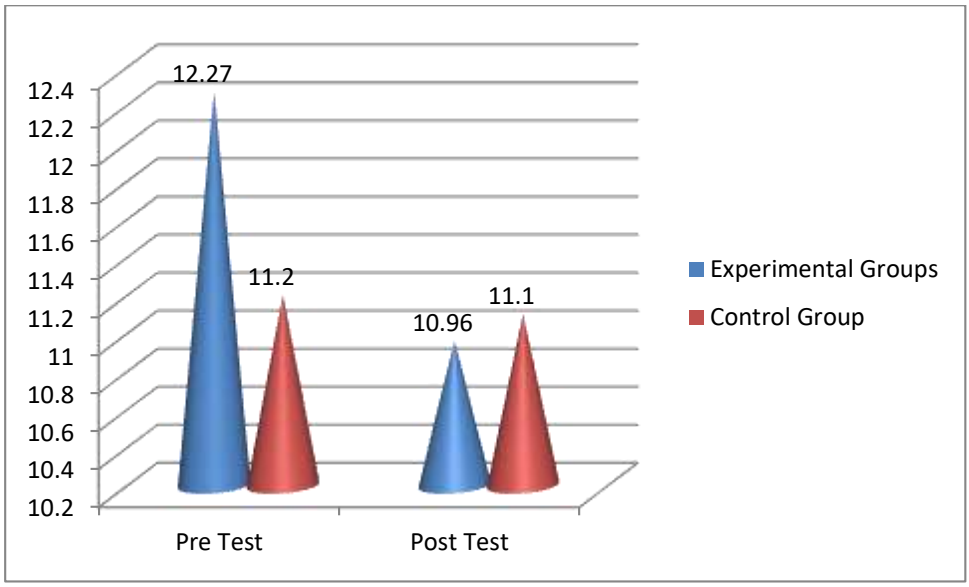
Graph-2

Graphical Presentation of the means of Pre Test and Post Test of the experimental Group and Control Group in the body composition such as fat percentage



Results of the study

At the end of the study following results were found.

1. At the end of the selected yoga training program in body composition such as BMI component the experimental group and control Group sportsmen was differ. So study was indicated that selected yoga training program impact significant effect on body mass index.
2. At the end of the selected yoga training program in body composition such as fat percentage component the experimental group and control Group sportsmen was differ. So study was indicated that selected yoga training program impact significant effect on fat percentage, it mean the fat percentage was decreases by the selected yoga training program.

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