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Yuvaraja KB
Assistant Professor, Department of Physical Education, College of Agriculture, Shivamogga, Karnataka, India

Dr. SK Manjunatha
Assistant Professor, Department of Physical Education, College of Horticultural, Mudigere, Karnataka, India

T Viswanatha
Assistant Professor, Department of Physical Education, College of Horticultural, Hiriyur, Karnataka, India

Corresponding Author:
Yuvaraja KB
Assistant Professor, Department of Physical Education, College of Agriculture, Shivamogga, Karnataka, India

Effect of yogic exercises on selected physical fitness components of female athletes

Yuvaraja KB, Dr. SK Manjunatha and T Viswanatha

Abstract
Study was to determine the effect of six week Yogic training on selected physical fitness components on adolescent girls. It was hypothesized that various Yogic intervention strategies will significantly improve the physical parameters of adolescent female. 30 subjects (adolescent female) Thrissur district, Kerala in the age group of 17 to 25 yrs. Were selected randomly as subjects for the study. The subjects were randomly assigned as experimental and Control groups each group consisted of 15 subjects. The requirements of the study was explained to all the subjects. All the subject voluntarily agreed to undergo the testing and training programmes. The study was formulated as pre post test pre experimental design. Selection of variables, Physical Variables Abdominal strength, Flexibility, Speed, Height and Weight Physiological Variables Resting Heart Rate. The Result of the study has shown that physical fitness components of female adolescents who practiced yoga does not show any significant difference The study shows no significant difference on the components like the speed, flexibility and abdominal strength in the subjects. There is no significant decrease in weight of the subjects after the yogic practice.

Keywords: Yogic exercises, physical fitness components, female athletes

Introduction
Good health and freedom from disease is the best achievement of life. Modern medicine has made tremendous progress in recent years. Obesity is a chronic state of being overweight. Now a day's obesity is problem of every person. Over two thirds of adults are overweight and nearly one quarter obese. Children and adolescents are becoming increasingly overweight and obese. Overweight imposes unnecessary strain on the various bodily systems especially the circulatory, respiratory and eliminative systems.

Statement of the problem
The purpose of the study was to determine the effect of six week Yogic training on selected physical fitness components on adolescent girls.

Delimitation
1. The study was delimited to 30 girls of seventeen to Twenty years old age.
2. The study was delimited to Thrissur district.
3. Only participants who attended the Yoga session for all alternate days selected as the subjects.
4. The follow up period was limited to two months.
5. The study was further delimited to selected physical fitness components, that is height, weight, speed, abdominal strength and flexibility.

Limitation
1. All subjects were volunteers. Dealing with volunteers often makes it hard to choose a representative sample of the entire society of interest.
2. Lack of control over the life style, habits, diet and hereditary differences of the subjects will be considered as a limitation to the study.
3. Socio-economic and religious factors, which cannot be controlled by the scholar, might affect the responses of the students; these are considered as limitations for this study.

Hypothesis
It was hypothesized that various Yogic intervention strategies will significantly improve the physical parameters of adolescent female.

Selection of subjects

30 subjects (adolescent female) Thrissur district, Kerala in the age group of 17 to25yrs. Were selected randomly as subjects for the study. The subjects were randomly assigned as experimental and Control groups each group consisted of 15 subjects. The requirements of the study was explained to all the subjects. All the subject voluntarily agreed to undergo the testing and training programmes. The study was formulated as pre post test pre experimental design.

Selection of variables

Physical Variables

1. Abdominal strength
2. Flexibility
3. Speed
4. Height
5. Weight

Physiological Variables

Resting Heart Rate

Methodology

1. The study was formulated as a true random group design. Consisting of a pre test and post test the subjects (n =30) were randomly assigned to two equal groups of fifteen students each.
2. The groups were assigned as experimental group and control group respectively.
3. Pretest was conducted for all the subjects on selected Motor Ability Physiological Variables such as Flexibility, Muscular Strength, speed, height, weight, Resting Pulse Rate.
4. The experimental groups participated in their respective Yogic Practices for a period of 6 weeks.
5. The post test was conducted on the above said dependent variables after a period of 6 weeks in the respective treatments.

Test Administration

1. Flexibility (sit and reach test)
2. Muscular strength (sit ups)
3. Speed (60 meters dash)
4. Body mass index (BMI)
5. Weight- Weighing machine
6. Height- Stadiometer
7. Resting heart rate-

Analysis of data and the result of the study

't' test The level of significance to test t-ratio obtained by the analysis of variance was fixed at 0.05 level of confidence

Results and Discussion

Table 1: Descriptive statistics of pre –test and post-test of experimental group and control group in height

Group			No.	Mean	SD	't' ratio
Experimental group	Experimental group	Pre-test	15	1.57	4.51	0.041
Control group		Post test		1.57	4.51	
	Control group	Pre-test	15	1.57	4.506	0.167

Table 2: Descriptive statistics of pre –test and post-test of experimental group and control group in weight

Group	Test	No.	Mean	SD	't' ratio
Experimental group	Pre-test	15	54.93	24.02	0.484
	Post test		52.27	22.8	
Control group	Pre-test	15	53.57	23.649	0.4952
	Post test		53.73	23.67	

Table 3: Descriptive statistics of pre –test and post-test of experimental group and control group in sit-ups

		No.	Mean	SD	't' ratio
Experimental group	Pre-test	15	10.2	4.4	0.23
	Post test		16.7	5.86	
Control group	Pre-test	15	10.2	4.487	0.422
	Post test		10.53	4.439	

Table 4: Descriptive statistics of pre –test and post-test of experimental group and control group in sit ansd reach

		No.	Mean	SD	't' ratio
Experimental group	Pre-test	15	9.66	4.76	0.3
	Post test		13.1	4.8	
Control group	Pre-test	15	9.27	5.571	0.231

Table 5: Descriptive statistics of pre –test and post-test of experimental group and control group in 30 m dash

		No.	Mean	SD	't' ratio
Experimental group	Pre-test	15	6.82	3.19	0.49
	Post test		6.31	3.26	
Control group	Pre-test	15	6.82	3.17	0.22
	Post test		6.98	3.12	

Conclusion

1. The Result of the study has shown that physical fitness components of female adolescents who practiced yoga does not show any significant difference
2. The study shows no significant difference on the components like the speed, flexibility and abdominal strength in the subjects.
3. There is no significant decrease in weight of the subjects after the yogic practice.

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