EFFECT OF IRON YOGA PRACTICES ON ABDOMINAL AND CORE STRENGTH AMONG WOMEN STUDENTS

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Abstract: The aim of this study was to find out the effect of iron yoga practices on abdominal and core strength among women students. To achieve the purpose of this study, thirty women students were randomly selected as participants from women's Hostel Manonmaniam Sundaranar University, Tamilnadu, India. Their age were ranged from 18 to 22 years. The selected participants were randomly divided into two groups such as Group 'I' underwent iron yoga practices group (n=15) and Group 'II' acted as control group (n=15). Group 'I' underwent iron yoga practices for alternate three days and one session per day and each session lasted for an hour for six week periods. Group 'II' was not exposed to any specific training but they were participated in regular activities. The data on selected criterion variables on abdominal strength was measured by bent knee sit ups test (numbers) and core strength was measured by blank test (seconds). The pre and post-tests data were collected on selected criterion variables prior to and immediately after the iron yoga training. The pre and post tests scores were statistically examined by the dependent 't' test and Analysis of Co-Variance (ANCOVA) for each and every selected variables separately. It was concluded that the iron yoga practices group were improved criterion variables on abdominal strength and core strength when compared to the control group. However the control group had not shown any significant improvement on selected criterion variables.

Index Terms: Iron Yoga Practices, Abdominal Strength, Core Strength, Women Students.

I. INTRODUCTION

The training load should be increased in order to improve the performance load must be increased from time to time for improvement of the continuous performance. Training load can be increased gradually or step by step is result in strong and faster adaptation process and more effective reaction from the organism. Step by step of increase of load gives time to the organism to adapt to the increased demands. Beginning lesser load is greater improvement but latter higher load is necessary to produce even a small increase in performance [1].

Yoga as a physical activity can be differentiated from many typical forms of exercise in a number of ways according to yoga experts. In fact, yoga place greater emphasis on a person's relationship to themselves than to others [2].

Yoga, as an ancient discipline that applies a combination of practices including asana, breath work, and meditation, has recently shown potential as an intervention targeting a number of consequences related with lifestyle-related health conditions [3].Yoga is the science of physical and mental health. It synchronizes the functions of the muscle and the mind. It is the only path that can lead to holistic health [4].

Lack of physical activity among university students is due to low perceived benefits and high perceived barriers to exercise. In fact, the perceived benefits and barriers to exercise are vital mediators of physical activity behaviour change [5].

Iron Yoga is the practise of Yoga combined with the use of light weights. Iron Yoga is a unique and challenging practice that combines yoga poses with upper body weight training for a full body workout. In each Iron Yoga pose, your legs are active, your core is engaged and each weight training movement is controlled by the breath and performed with continuous tension through a full range of motion [6].

II. PURPOSE OF THE STUDY

The purpose of the present study was to find out the effect of iron yoga practices on abdominal and core strength among women students.

III. METHODOLOGY

To achieve the purpose of this study, thirty women students were randomly selected as participants from women's Hostel Manonmaniam Sundaranar University, Tamilnadu, India. Their age were ranged from 18 to 22 years. The selected participants were randomly divided into two groups such as Group 'I' underwent iron yoga practices group (n=15) and Group 'II' acted as control group (n=15). Group 'I' underwent iron yoga practices for alternate three days and one session per day and each session lasted for an hour for six week periods. Group 'II' was not exposed to any specific training but they were participated in regular activities. The data on selected criterion variables on abdominal strength was measured by bent knee sit ups test (numbers) and core strength was measured by blank test (seconds).

3.1 Experimental Design and Statistical Procedure

The experimental design used for the present investigation was simple random group design involving thirty women students for the effect of iron yoga practices. The pre and post-tests data were collected on selected criterion variables prior to and immediately after the iron yoga practices. The pre and post tests scores were statistically examined by the dependent 't' test and Analysis of Co-Variance (ANCOVA) for each and every selected variables separately.

3.2 Iron Yoga Training Protocol

The iron yoga practices group was scheduled for one session an alternate three days each session lasted between an hours. During the training period, the experimental group underwent iron yoga practices an alternate three days a week for six weeks. The training programme was conducted during the morning sessions between 6.30 a.m. to 7.30 a.m.

VI. RESULT AND DISCUSSIONS

4.1 Abdominal Strength

Table 4.1Computation of 't' - ratio between pre and post test means of iron yoga practices and control groups on abdominal strength (Numbers)

Tests		Pre Test	Post Test	't' - Value
Experimental Group	Mean	16.10	26.27	**8.10***
	SD	4.38	2.40	
Control Group	Mean	16.79	18.13	0.76
	SD	4.67	4.54	

***Significant at 0.05 level. The table value required for 0.05 level of significance with df 14 is 2.14.*

The table 4.1 shows that the pre-test mean values of iron yoga practices and control groups are 16.10 and 16.79 respectively and the post test means are 26.27 and 18.13 respectively. The obtained dependent t-ratio values between the pre and post test means of iron yoga and control groups are 8.10 and 0.76 respectively. The table value required for significant difference with df 14 at 0.05 level is 2.14. Since, the obtained 't' ratio value of iron yoga practices group was greater than the table value, it was understood that iron yoga practices group had significantly improved on abdominal strength. However, the control group has not improved significantly. The 'obtained t' value is less than the table value, as they were not subjected to any specific training.

Table 4.2 Analysis of Covariance on abdominal strength of iron yoga practices and control groups

Adjusted Post Test Means		Source of variance	Sum of squares	df	Mean square	F–ratio
Experimental Group	Control Group	Between	483.20	1	483.20	**35.09***
26.19	18.14	Within	371.79	27	13.77	

** Significant at 0.05 level. Table value for df 1, 27 was 4.21*

Table 4.2 shows that the adjusted post test means of experimental group and control groups are 26.19 and 18.14 respectively. The obtained F-ratio value is 35.09 which is greater than the table value 4.21 with df 1 and 27 required for significance at 0.05 level. Since the value of F-ratio is greater than the table value, it indicates that there is a significant difference among the adjusted post-test means of experimental group and control groups on abdominal strength.

The mean values of experimental group and control group on abdominal strength were graphically represented in the figure 4.1.

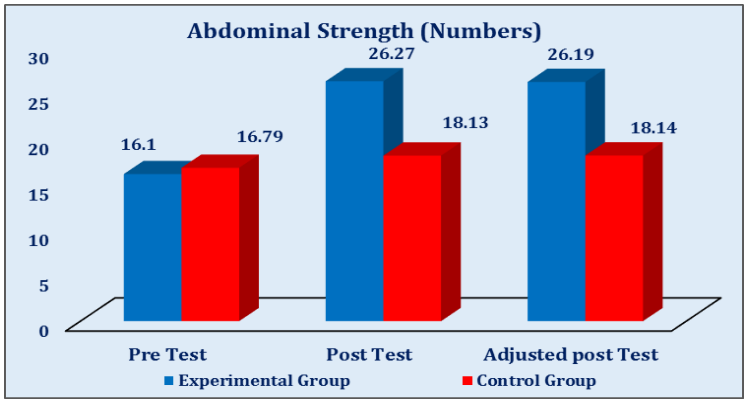

Figure 4.1: Pre, post and adjusted post tests mean values of iron yoga practices and control groups on abdominal strength.

4.2 Core Strength

Table 4.3 Computation of 't' - ratio between pre and post test means of iron yoga practices and control groups on core strength (seconds)

Tests		Pre Test	Post Test	't' - Value
Experimental Group	Mean	58.31	75.29	**13.15***
	SD	6.93	5.10	
Control Group	Mean	58.12	61.03	1.67
	SD	7.34	6.86	

***Significant at 0.05 level. The table value required for 0.05 level of significance with df 14 is 2.14.*

The table 4.3 shows that the pre-test mean values of iron yoga practices and control groups are 58.31 and 58.12 respectively and the post test means values are 75.29 and 61.03 respectively. The obtained dependent t-ratio values between the pre and post test means of iron yoga practices and control groups are 13.15 and 1.67 respectively. The table value required for significant difference with df 14 at 0.05 level is 2.14. Since, the obtained 't' ratio value of iron yoga practices group was greater than the table value, it was understood that iron yoga practices group had significantly improved on core strength. However, the control group has not improved significantly. The 'obtained t' value is less than the table value, as they were not subjected to any specific training.

Table 4.4 Analysis of Covariance on core strength of iron yoga practices and control groups

Adjusted Post Test Means		Source of variance	Sum of squares	Df	Mean square	F–ratio
Experimental Group	Control Group	Between	1521.46	1	1521.46	**48.69***
75.32	61.09	Within	843.75	27	31.25	

** Significant at 0.05 level. Table value for df 1, 27 was 4.21*

Table 4.4 shows that the adjusted post test means of experimental group and control groups are 75.32 and 61.09 respectively. The obtained F-ratio value is 48.69 which is greater than the table value 4.21 with df 1 and 27 required for significance at 0.05 level. Since the value of F-ratio is greater than the table value, it indicates that there is a significant difference among the adjusted post-test means of experimental group and control groups on core strength.

The mean values of experimental group and control group on core strength were graphically represented in the figure 4.2.

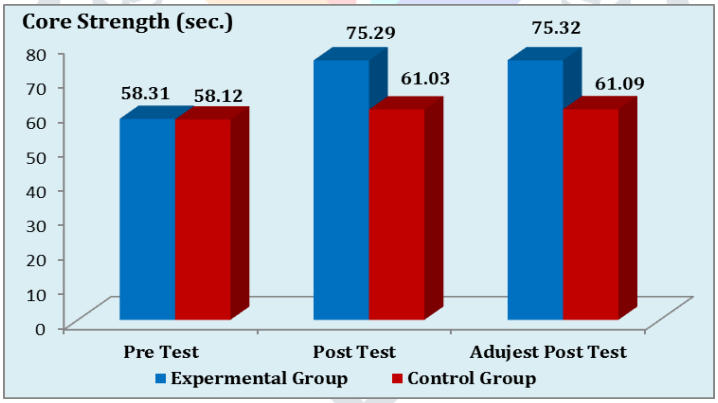

Figure 4.2: Pre, post and adjusted post tests mean values of iron yoga practices and control groups on core strength.

V. DISCUSSION ON FINDINGS

The result of the study indicates that the experimental group namely iron yoga practices groups had shown significant improvement on abdominal strength and core strength when compared to control group among the women students. The consistency is determining the significant contribution of iron yoga practices on developing variables in this study was similar to the findings of other studies using iron yoga practices as independent variables such as Selvaraja & Arumugam (2018) [7], Vigneshwaran (2016) [8] and Komathi & Kalimuthu (2011) [9].

VI. CONCLUSIONS

On the basis of the interpretation of the data, the following conclusions were drawn,

1. There was a significant improvement takes place on strength variables such abdominal strength and core strength due to six weeks iron yoga practices programme.
2. There was a significant difference exists between experimental and control groups on abdominal strength and core strength due to six weeks iron yoga practices programme

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