

Vol 3 Issue 2 Aug 2013

Impact Factor : 1.2018 (GISI)

ISSN No :2231-5063

Monthly Multidisciplinary
Research Journal

*Golden Research
Thoughts*

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RNI MAHMUL/2011/38595

ISSN No.2230-7850

Indian Streams Research Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial Board readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

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EFFECT OF SURYANAMASKAR AND SWISS BALL PRACTICE ON ABDOMINAL STRENGTH OF SEDENTARY GIRLS

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Abstract:The aim of this study is to find out “The effect of suryanamaskar and Swiss ball training on selected physical variables on sedentary girls”. Forty five healthy, untrained girls were selected from Yenepoya Medical College, Mangalore, Karnataka, for this research. The subjects were divided randomly into three equal groups namely one control and two experimental groups consisting of fifteen girls in each group. The subject's age ranged between 18 to 23 years. Experimental groups were given 12 weeks suryanamaskar and Swiss ball training and the control groups were not allowed to participate in any of the training programmes. The training programme was given three days in a week for 45 minutes. Each group was tested before and after the training on abdominal strength. The data were computed statistically by using (anocova) to find out the significant changes. The result reveals that the suryanamaskar practice group and Swiss ball training group has significant effect on abdominal strength of sedentary girls when compared to control group.

Keyword:Suryanamaskar, Swiss ball, flexibility and abdominal strength.

INTRODUCTION:

Yoga gives an insight to know more about the self. The dormant inner powers blossom to give complete bliss and an introduction to the true self. It enables one to meet the supreme Soule and attain complete bliss. Yoga is important in our everyday life. It strengthens our physical and mental power and has numerous health benefits. Yoga is a type of exercise which is performed using various types of body postures. It does not need any special workout equipments. Yoga exercises recharge the body with high energy. The best equipment for improving core stability is the stability ball, also called the exercise ball, balance ball or Swiss ball. The biggest benefit to training using ball exercises is that they are very effective at targeting core muscles, those muscles that are essential for stability and good posture but are often overlooked when exercising with fixed position equipment. The best equipment for improving core stability is the stability ball, also called the exercise ball, balance ball or Swiss ball. The biggest benefit to training using ball exercises is that they are very effective at targeting core muscles, those muscles that are essential for stability and good posture but are often overlooked when exercising with fixed position equipment

METHODOLOGY

The study was designed to find out the effect of suryanamaskar and swiss ball practice on abdominal strength of sedentary girls. Forty five subjects were selected from the yenepoya medical college, Mangalore and their age ranged from 18-23 years. The subjects were equally divided into three groups namely control and two experimental groups with fifteen subjects in each group. Control group did

not undergo any training programme rather than their daily routine work. The experimental group (Group I) was treated with Suryanamaskar training and experimental group (Group II) was treated with swiss ball training. Training was given for a period of 12 weeks. The results of pre-test and post- test were compared by using Analysis of Covariance (ANCOVA). The subjects living condition and life style were not taken into consideration for this study.

Table I
ANALYSIS OF COVARIANCE FOR PRE-TEST, POST -TEST AND ADJUSTED POST TEST ON ABDOMINAL STRENGTH AMONG THE THREE GROUPS
(Scores in Numbers)

Test measures	Mean scores			Analysis of covariance				
	Exp.grp I (suryanamaskar)	Exp.grpII (swiss ball)	Control group	Source of variance	Sum of squares	Df	Mean squares	'F' ratio
Pre – test	19.6	25.53	18.4	Between	437.64	2	218.82	0.18
				Within	1696.93	42	40.40	
Post – test	26.27	32.2	18.33	Between	1452.13	2	726.07	21.05*
				Within	1448.67	42	34.49	
Adjusted Post – test	27.68	28.29	20.83	Between	465.88	2	232.94	116.79*
				Within	81.77	41	1.99	

* Significant at 0.05 level of confidence
The required table value df(2, 42) at 0.05 level= 3.22
df(2,41) at 0.05 level=3.23

Table –V shows that there is no significant difference among the three groups for the pre- test, since the calculated

value 0.18 is less than the required table value 3.22
For the post test, there is significant difference among the three groups since the calculated value 21.05 is greater than the required value 3.22

The obtained 'F' ratio for the adjusted post test means 116.79 is higher than the table value 3.23 at 0.05 levels. Hence it is concluded that there is significant improvement on abdominal strength among the three groups.

Since there is a significant difference, Scheffe's post hoc test was administered to find out the significant paired mean difference. This calculation helps to find out which group has significant improvement after the training programme. The result of Scheffe's post hoc test for abdominal strength is presented in table VI

**TABLE – VI
SHEFFEE'S POST-HOC TEST FOR THE
SIGNIFICANT DIFFERENCE BETWEEN PAIRED
ADJUSTED POST-TEST MEAN ON ABDOMINAL
STRENGTH
(Scores in Numbers)**

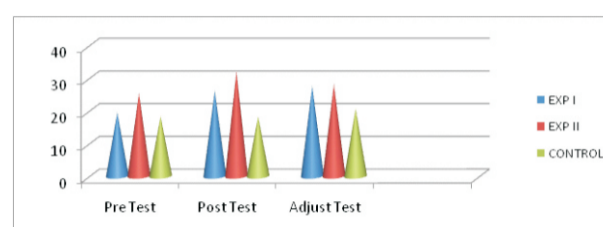
Exp. Gp I	Exp. Gp II	Cntrl Gp	MD	CI
27.68	28.29	-	0.61	1.31
27.68	-	20.83	6.86*	1.31
-	28.29	20.83	7.46*	1.31

*Significant at 0.05 level of confidence.

Table –VI shows that there is no significant difference between the suryanamaskar and swiss ball group as the mean difference 0.61 is less than the CI value 1.31 at 0.05 level of confidence. There is a significant difference between the suryanamaskar and control group as the mean difference 6.86 is greater than the CI value at 0.05 level of confidence. There is also a significant difference between the Swiss ball group and control group as the mean difference 7.46 is greater than the CI value at 0.05 level of confidence. The result reveals that there is a significant effect due to suryanamaskar and Swiss ball training on abdominal strength when compared to the control group. The Swiss ball training is found to be superior to suryanamaskar training on abdominal strength.

The mean values on abdominal strength are graphically represented in figure-4

**FIGURE 4
BAR DIAGRAM SHOWING THE MEAN VALUES
OF SURYANAMASKAR GROUP, SWISS BALL
GROUP AND CONTROL GROUP ON ABDOMINAL
STRENGTH
(Scores in Numbers)**



CONCLUSIONS

Within the limitations and delimitation of the study, the following conclusion are drawn

- 1.The Swiss ball training has significantly improved abdominal strength better than the suryanamaskar practice.
- 2.The suryanamaskar practice has significant effect in flexibility better than the swiss ball training compared with the control group.

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