



## Exploring the Physical Effect of Ashtang Yoga on Abdominal Strength

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### Abstract

This experimental study consists of pretest and posttest. The experimental group underwent a training program for three months period, whereas the control group attended general workout sessions. Both groups shall consist of forty subjects each age's b/w 18 to 21 years. It was delimited to yogic activities training schedule prepared by a book "The practical encyclopedia of ashtang yoga and meditation" by Jean hall & Doriel hall (2009). It was delimited to Ashtang yoga of Patanjali yoga sutras comprise asana, pranayama & meditation. It was delimited to 80 students (male and female) both and 1hour morning duration training programme exclude Sunday and gazetted holidays. It was delimited to **Physical Fitness variable i.e. Abdominal Strength**. The study shows that ashtang yoga can improve Abdominal Strength of young adults. The study shows positive result in young adults & help to remove their stress in experimental group but there is no improvement in control group. This study is really helpful for positive effect in Abdominal Strength of young adults.

**Statistical Analysis:** The obtained data was compiled and tabulated variable- wise and group- wise. The analysis was done with the help of SPSS Version 16 (statistical package of social sciences) .In order to analyses the data the present study, t-test test has been used. To differentiate PrTMS and PoTMS of groups experimental and control, paired't'-test was considered and to differentiate PoTMS of groups experimental and control, Independent 't' test was considered. The CI was 0.05.

**Key Words:** Ashtang yoga, Abdominal Strength, Physical Fitness & Young Adults.

### 1. Introduction:

Yogascitta vritti nirodhah "Yoga is the restraint of the modification of the mind-stuff"- This is shown in Sage which is related Patanjali which having sutra 1.2; the whole translation was performed by the Swami Vivekananda. The yoga reference has also been seen in various traditional times text like Bhagavad Gita, Upanishads and Vedas etc. But the correct, cohesive and recognized framework has been mentioned and discussed by Patanjali and they have dictated a very orderly, organized and integrated philosophy and have stated that yoga teaching is one of the most effective, scientific and target-oriented. One of the aphorisms of Patanjali yoga have created the framework that maintain the core and spirit of yoga called 'shad-darshana'. This book contains one hundred and ninety five aphorisms, all of these are very concise in nature and have brief phrases so that these can be easily memorized. It can said that significant work has been performed by making yoga sutras and this work is very pertinent for the practice and philosophy of yoga. These are also called "Raj or Royal yoga" i.e. it stands for overall well-being of the humans. Yoga is primal practice for focusing, concentrating, breathing and postures that carries energy, tranquility, health and connect individual with oneself. In another language Sanskrit, yoga is named as 'union' or 'yoke' and it has been originated in 4500 BC. This can be performed and trailed by anyone regardless of gender (female & male) and age (children, old age, adults etc.). It is also often subjective in nature to collect evidence such that the overall well-being and health can be effectively authenticated (Yoga and mindfulness programs, 2018).

Abdominal Strength: Berat.T.K., (1976) research on effect of three year yogic exercise programme on motor function in school boys study found that active lifestyle tend to maintain considerably higher level of performance on the variables (viz cardio vascular endurance, abdominal muscle strength/endurance, body fat%, flexibility and balance)than do sedentary ones. (Gharote, 1970)conducted yogic training of three weeks duration and brought about a significant improvement in the strength and endurance of the abdominal muscles of 12 females as judged through sit up test.

## 2. Methodology:

### Modified Sit-Up

**Purpose:** Measure abdominal stamina, speed and strength

**Facilities And Equipment:** A stopwatch, mat, good floor, score sheet etc.

**Procedure:** The student lies down on his/her back with the legs bent up the feet flat on the floor close to the body. Put the hands behind head. On the ready and go signal, the student take up an sitting position, touch elbows with knees and go back to floor and initial position. Every subject must try to do as many pushups in 30 Seconds and a partner is required to hold his feet to floor..

## 3.Results and Discussion:

TABLE NO. 1.1

DA of Abdominal Strength (AS) at PrT and PoT Performance in Group experimental

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Pre Test	40	40	2	42	25.05	10.86
Post Test	40	43	5	48	29.40	10.91

Figure.1.1- Graphical Presentation of AS in PrT and PoT Performance of Group Experimental

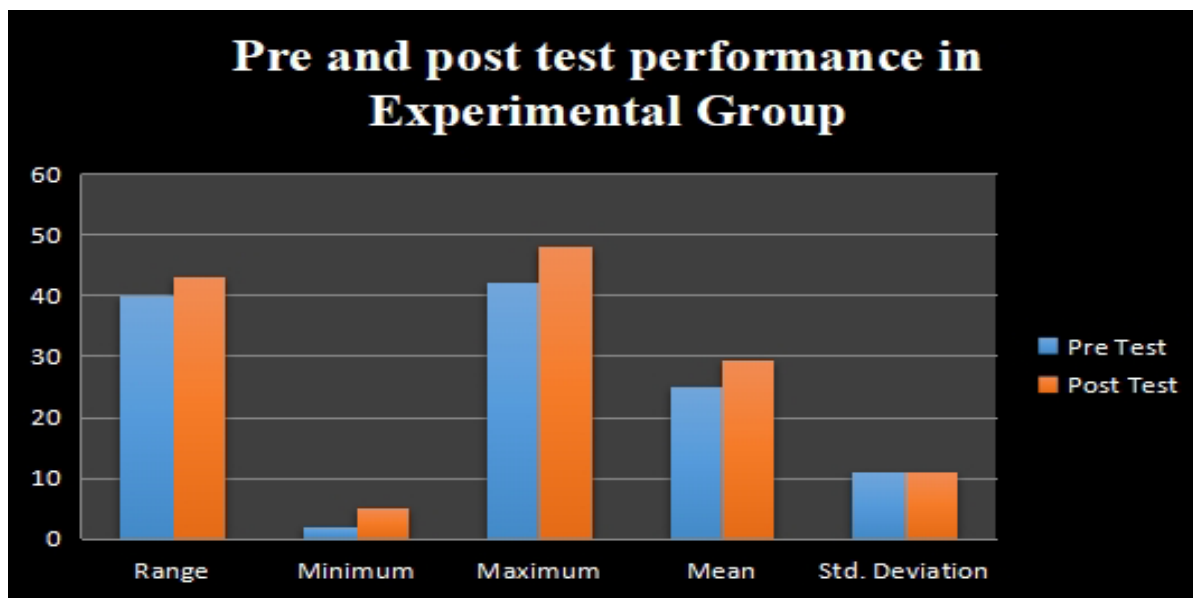


Table-1.1 reveals the DA of AS at PrT and PoT in group experimental. The values of mean and SD for PrT were deviation ( $25.05 \pm 10.86$ ) respectively and for PoT were ( $29.40 \pm 10.91$ ) respectively. Out of these, max and min values were 42 and 2 for PrT whereas for PoT were 48 and 5. The PrT and PoT range was 40 and 43. The graphical representation of DA of PrT and PoT performance in AS has been presented in figure 1.1.

TABLE – 1.2

PrT and PoT Performance difference of Group Experimental in AS (Physical Parameters)

Groups	Mean	SD	SE Mean	DM	SE Mean Diff.	"t" ratio
Pre test	25.05	10.87	1.718	4.35	.943	4.61*
Post test	29.40	10.91	1.725			

\*Significant level is 0.05 where  $t_{.05} (39)$  is equal to 2.042

Figure 1.2- Comparison of PrT and PoT SD and Mean for Group Experimental in AS

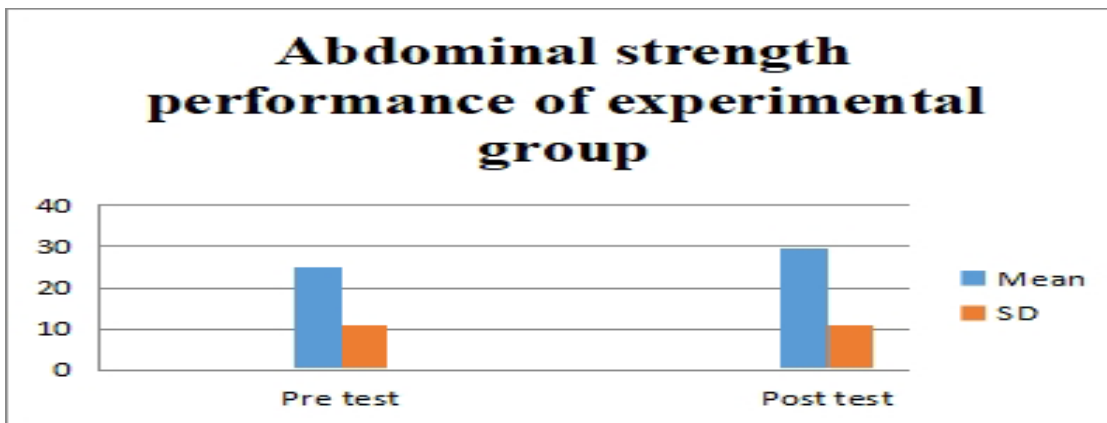


Table 1.2 clearly illustrated that difference exists between PrTMS and PoTMS in AS of group experimental. The mean difference was calculated as 4.35 and standard error of difference was .943, 't' paired obtained value and tabulated values were 4.61 and 2.042 respectively and obtained value is on higher side which is significant at CI of 0.05 and 39 df. The PrT and PoT SD and mean of group experimental in AS was represented in figure 1.2.

Table No. 1.3

DA of AS at PrT and PoT Performance in Group control

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Pre Test	40	33	2	35	17.12	9.57
Post Test	40	34	2	36	16.60	8.59

Fig.1.3- Graphical Presentation of AS in PrT and PoT Performance of Group Control

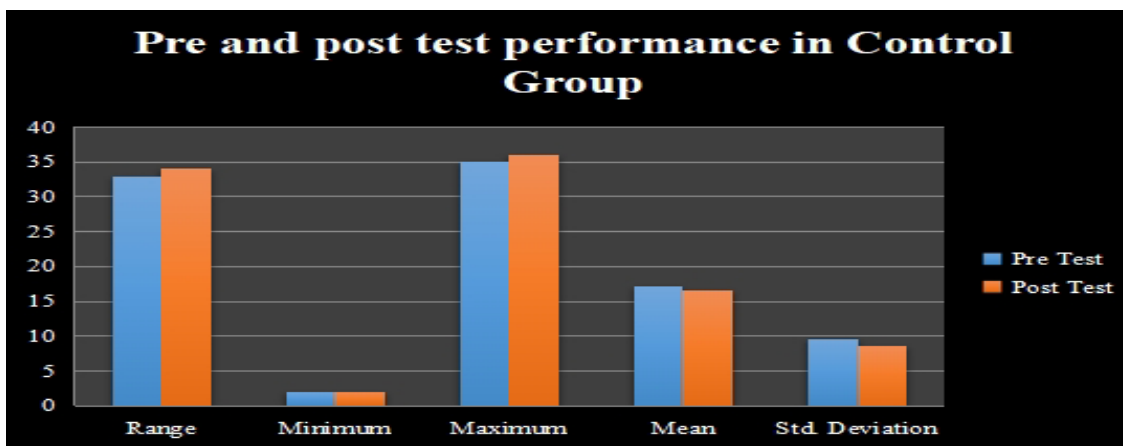


Table-1.3 reveals the DA of AS at PrT and PoT in group control. The values of mean and SD for PrT were deviation (17.12 ± 9.57) respectively and for PoT were (16.60 ± 8.59) respectively. Out of these, max and min values were 35 and 2 for PrT whereas for PoT were 36 and 2. The PrT and PoT range was 33 and 34. The graphical representation of DA of PrT and PoT performance in AS has been presented in figure 1.3.

TABLE -1.4

PrT and PoT Performance difference of Group Control in AS (Physical Parameters)

Groups	Mean	SD	SE Mean	DM	SE Mean Diff.	"t" ratio
Pre test	17.12	9.57	1.51	.525	.799	.656
Post test	16.60	8.59	1.36			

\*Significant level is 0.05 where  $t_{.05} (39)$  is equal to 2.042

Figure 1.4- Comparison of PrT and PoT SD and Mean for Group Control in AS

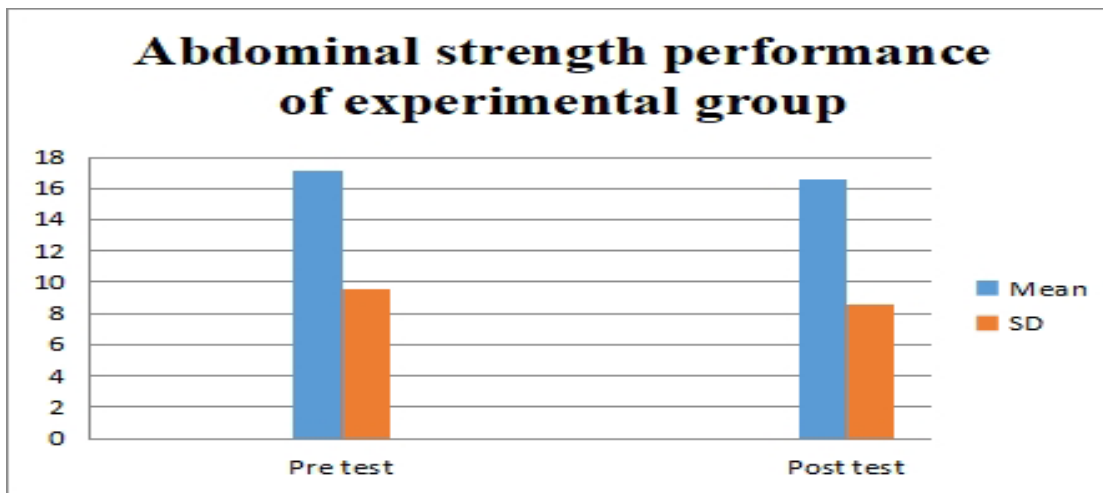


Table 1.4 clearly illustrated that no difference exists between PrTMS and PoTMS in AS of group control. The mean difference was calculated as .525 and standard error of difference was .799, 't' paired obtained value and tabulated values were .656 and 2.042 respectively and obtained value is on lower side which is not significant at CI of 0.05 and 39 df. The PrT and PoT SD and mean of group experimental in AS was represented in figure 1.4.

TABLE – 1.5

PoT Performance difference between Group Control and Experimental in AS (Physical Parameters)

Groups	Mean	SD	SE Mean	DM	SE Mean Diff.	"t" ratio
Experimental Post Test	29.40	10.91	1.72	12.80	2.195	1.95
Control Group Post Test	16.60	8.59	1.36			

\*Significant level is 0.05 where  $t_{.05} (78)$  is equal to 1.99

Figure 1.5- Comparison of SD and Mean for Group Control and Experimental in AS

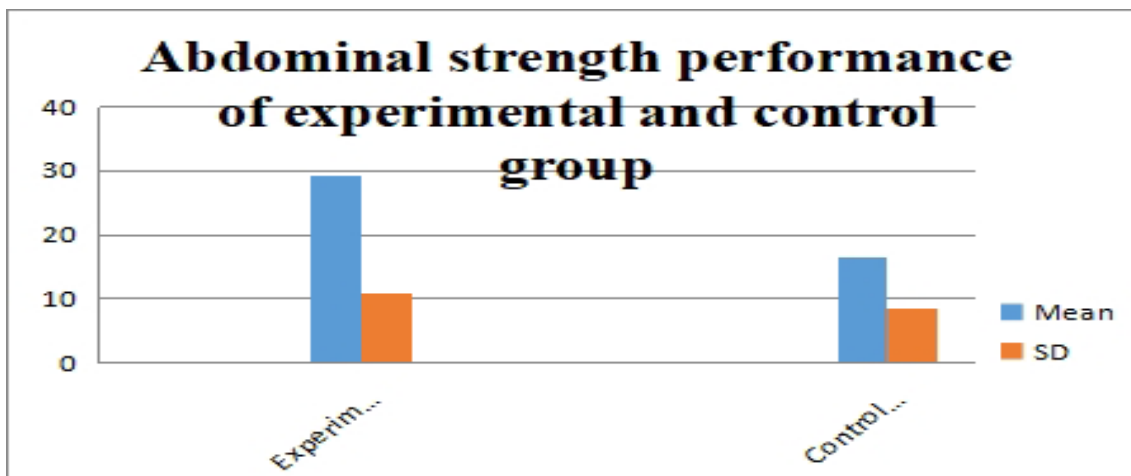


Table 1.5 clearly illustrated that no difference exists between PoTMS in BC (Subscapula) of group control and experimental in AS. The mean difference was calculated as 12.80 and standard error of difference was 2.195, independent 't' (two-sample t-ratio test) obtained value and tabulated values were 1.95 and 1.99 respectively and obtained value is on lower side which is not significant at CI of 0.05 and 78 df. The PoT SD and mean of group control and experimental in AS was represented in figure 1.5.

#### 4. Discussion of Findings:

##### Discussion with regard to Physical fitness Variables:

In **Abdominal Strength** of experimental group shows improved because they found highly significant better than the control group. The improvement in these physical parameter is mainly due to their yogic exercises the asana, suryanamaskar; pranayama, etc. are the best to improve these physical parameter. While on the other hand, there exist no differences that are significant in PrT and PoT outcomes of groups control and experimental (Sandhu, 1994). According to his findings, yoga asanas have the positive effects upon the development of speed, strength, endurance agility, flexibility, power, and balance. (Dhanaraj, 1974) .

#### 5. Conclusion:

- There was significant difference among ashtanga yoga training group on abdominal strength in experimental group.
- In case of abdominal strength, subject showed in no significant difference between experimental and control group in ashtanga yoga training group. It concludes that experimental and control group have shown difference but not significantly effect of training.

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