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The Impact of Ashtang Yoga Practice on Flexibility

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Abstract

This experimental study consists of pre test and post test. 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. Flexibility.** The study shows that ashtang yoga can improve Flexibility 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 Flexibility 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, Flexibility, Physical Fitness, Young Adults.

1. Introduction:

Yoga History: Yoga in Pre-Classical Era (BC belongs to 500 whereas Vedas belongs to 10,000) initially, yoga mention was found in Vedas that were very much old like 10,000 years. The copy of Vedas that was discovered was about old to 7500 years, but people believe that phrases of Vedas were transferred in the form of orally to about 10000 years or even it can be much more. They are mainly the composition of culture, agriculture, mother nature, ethics, arts, mathematics, social sciences, Ayurveda, morality etc. They also consists of sacred chants, hymns, invocations and mantras. They have four parts namely Samhita, Upanishads, Brahman and Aranyaka. It was mentioned clearly that appearance of yoga was firstly seen in Upanishads and the goals were mind control, to get liberation and directing the senses. There exists four Vedas named as vajurveda, Rig-Veda, Atharvaveda and samveda. Nearly about more than 5000 years, the yoga traces were found that depicts a human pose of mediation.

Ramayana: The Lord Rama story that supposed to be a true and valid story, is very key story for the yoga science. There are a number of verses i.e. twenty four thousand 24000 and the whole describes about the King Rama life highlights as well as the distress and pain that were faced by Ayoudhya king. But in tough times, king Rama maintains his tranquility and lived an honorable exemplary life without bargaining on the values and the right principles and values. Due to his righteous conduct, he was able to justify his responsibilities, tasks and duties for everyone and of course, his selfless and noble life made him remain happy and live, peaceful life. This one is practically real thought of yoga.

Mahabharata: One more extremely significant and accurate story that really contributes to the yoga science in an incredible way. This story also covers the aspects of Lord Krishna who himself is a proficient and skillful yogi and he was on earth about five thousand years ago. The Vyasa who was a sage has written this epic and impressive Mahabharata. This series is the longest and have consisted of two lakhs verse lines. The traditional and relevant portion of yoga is Bhagavad Gita and that is also the chunk and share of Mahabharata. Gita is mostly known by others terms like "Psychology of yoga" and "Science related to Life" and helps to provide solutions such that humans get rid of problems and this whole has motivated generations. The book of Gita has been looked by experts, intelligent humans, seers as one of the valuable and principled book for philosophy and wisdom. It is basically a conversation about the Lord Krishna and Arjuna where first one exemplifies ultimate and the other one illustrates the consciousness of human. The second one asks questions to the Lord about the problems he has been facing and he is in the distress mood and helpless conditions,

then Lord has supported and told him about his life purpose, so that he should be able to live his life with satisfaction and harmony. The lord has explained about karma, jnana, dharma and bhakti.

Classical Yoga-500 BC: In 500BC, Patanjali has created the yoga in an systematic way and process of yogic. They have mentioned different sutras such that a proper channel or procedure for doing yoga can be made and they can contribute to emerging and expanding intellect, mind and life quality. Pranayama, Samadhi, Niyamas, Pratyahara, Asanas, Dharana, Dhyan, Yamas, were included in Hispath that is an kind of Ashtanga yoga. In sutras of yoga, there are four chapters and have Sanskrit lines of 196.

Post- Classical Yoga-800 AD: Shankar Acharya – In 800AD, a guru of yoga that is known as trailblazing guru, triggered off again and re-energized the yoga culture and philosophy. He united a number of traditions of yoga, have tried to sort the variations that are linked with moral values and tried to put yoga science in an more extensive and general way. His commentaries on Bhagavad Gita Upanishads, Vedant philosophies, show very intense insights. He has gave the concept of monks and Sannyasa that are very promising and vital for society.

Modern Times1890's: In the late 19thcentury, west has also began to like yoga. In 1897 at Chicago, One of first guru, Swami Vivekananda has given a very powerful, fascinated and subjective lecture of yoga to a large spectators. He was inspired by the doings of Ramakrishna Paramhans, which is from India and stayed in Kolkata in India. Basically, swami was a real and expert monk that tries to promote yoga and people of west should also be motivated by the yogic ideology and he also described the yoga significance for humanity purposes. Every student was extremely motivated by his talks on yoga that are mostly linked with Karma, Nana, Bhakti and Ashtanga. Ramakrishna Mission was established by him and have tried to do the tasks that are noble in nature and keep alive the spirits of yoga and always eager in serving the society and individuals (History of yoga, 2018)

Flexibility: Yoga practices are found to develop generally the working caliber and their performance. The wellbeing of the body is not only includes cardio respiratory health and strength of the muscles, but as well synchronization and elasticity of the various organs i.e. the variety of the bodily and mental health which may be sought as an incorporated capacity of whole system and arrangement used in context with performance (Gruber, 2008). That stretching enhances flexibility is a fact generally regarded true, and it is possibly the majorly recognized bodily yield of yoga. In accord with this fact, it appears most researches carried out to gauge the physiological consequences of yoga exercises, not incorporated measurement of litheness. Even though suppleness advantages are being recognized, while evaluated, there were limited dimensions to fit and test, which chiefly assess suppleness of the hamstring, trunk and hip. The earlier stated research by (Cowen, 2005) was being utilized to assemble and reach test for the assessment of suppleness, and registered momentous boost after the training of yoga for the duration of one month and two weeks. (Walls, 2007) also discovered noteworthy increase in trunk suppleness after doing yoga session once in week for the time period of two months, however discovered no noteworthy boost in flexibility of the shoulder. (Tran, 2001) utilized suppleness assessments' further than that of the sit in addition to reach test .Researcher gauged suppleness in four levels: flexibility in ankle, elevation in the shoulder, trunk expansion and flexion of trunk. Researchers establish noteworthy boost in every dimensions after training of yoga for the duration of two months. The prominent and notable enhancements found in altitude of the shoulder and trunk expansion, rising 155 percent and 188 percent correspondingly. The suppleness enhances represented by et al. additionally sustain preceding documents of augmented trunk suppleness, and authenticate understood suppleness increases all through the whole body, which is an outcome of the exercises of the yoga. (Gruber K., 2008).

2. Methodology:

Modified Sit-Up

Sit & Reach Test (SRT)

Purpose: To evaluate flexibility of the trunk

Facilities And Equipment's: Score sheet, Masking tape, a number of helpers and yardstick

Procedure: On the floor, put a yardstick and have an tape of 45.7 cm across 38.1 cm marks on yardstick. The yardstick should be properly covered by tape. The subjects have yardstick between the legs and 0-end yardstick corner must be

there. The heels of the subjects must be 12 cm apart and must be touching 15cm mark of the tape. Keep the leg straight, curve and bends gently and slowly in a forward position and touch the yardstick. The reach should be holded for a longer duration so that distance can be recorded for outcome purposes.

Scoring: Perform three trials .The best score, recorded to the nearest quarter inch, and is compared to the norms supplied.

3.Results and Discussion:

TABLE NO. 1.1

DA of Flexibility at PrT and PoT Performance in Group experimental

	N	Range	Minimum	Maximum	Mean	SD
Pre Test	40	18	10	28	20.65	4.01
Post Test	40	20	12	32	22.57	4.61

Fig.1.1- Graphical Presentation of Flexibility in PrT and PoT Performance of Group Experimental

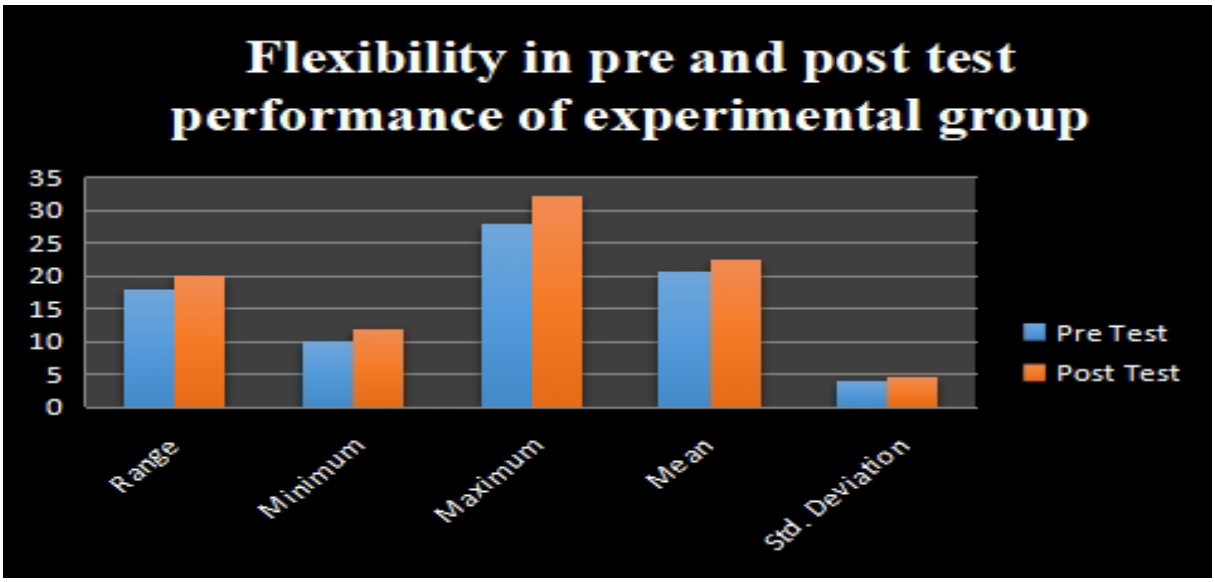

Table-1.1 reveals the DA of flexibility at PrT and PoT in group experimental. The values of mean and SD for PrT were deviation (20.65 ± 4.01) respectively and for PoT were (22.57 ± 4.61) respectively. Out of these, max and min values were 28 and 10 for PrT whereas for PoT were 32 and 12. The PrT and PoT range was 18 and 20. 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 Flexibility (Physical Parameters)

Groups	Mean	SD	SE Mean	DM	SE Mean Diff.	"t" ratio
Pre Test	20.65	4.01	.634	1.93	.461	4.17*
Post Test	22.57	4.61	.729			

*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 flexibility

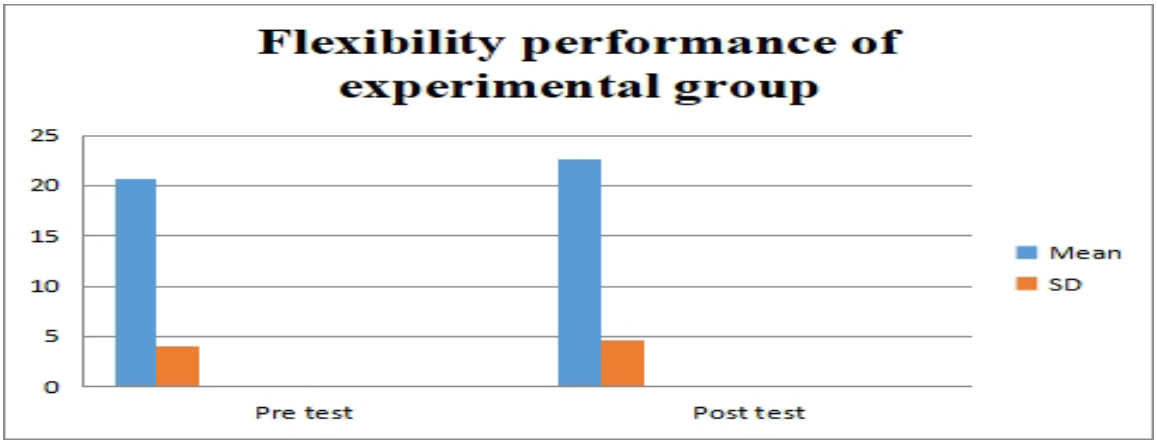

Table 1.2 clearly illustrated that difference exists between PrTMS and PoTMS in flexibility (sit and reach test) of group experimental. The mean difference was calculated as 1.93 and standard error of difference was .461,'t' paired obtained value and tabulated values were 4.17 and 2.042 respectively 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 Flexibility at PrT and PoT Performance in Group control

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Pre Test	40	16	10	26	19.35	3.27
Post Test	40	107	11	118	20.05	16.38

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

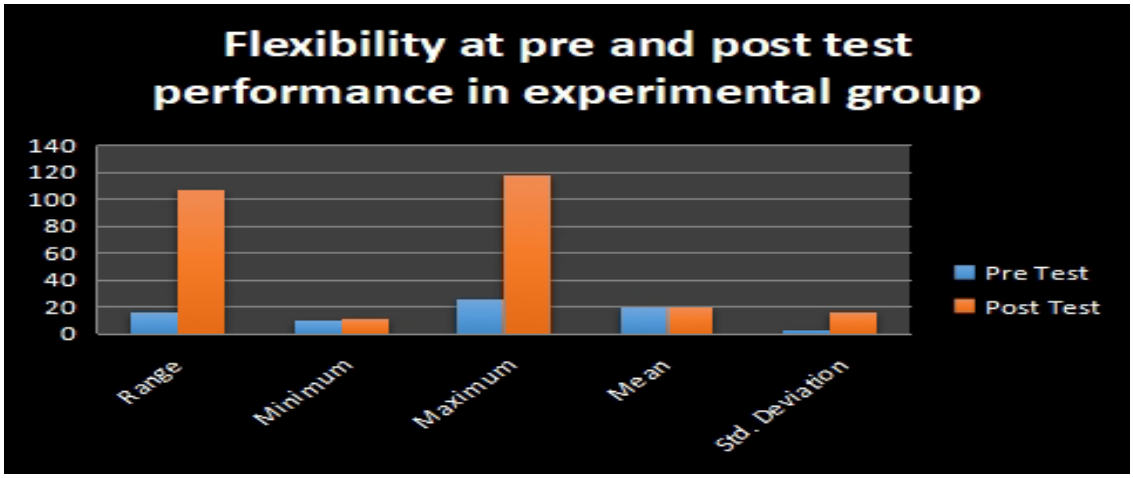

Table-1.3 reveals the DA of flexibility at PrT and PoT in group control. The values of mean and SD for PrT were deviation (1.35 ± 3.27) respectively and for PoT were (220.05 ± 16.38) respectively. Out of these, max and min values were 26 and 10 for PrT whereas for PoT were 118 and 11. The PrT and PoT range was 16 and 107. The graphical representation of DA of PrT and PoT performance in flexibility has been presented in figure 1.3.

TABLE – 1.4

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

Groups	Mean	SD	SE Mean	DM	SE Mean Diff.	"t" ratio
Pre Test	19.35	3.27	.517	.700	2.48	283
Post Test	20.05	16.38	2.59			

*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 Flexibility

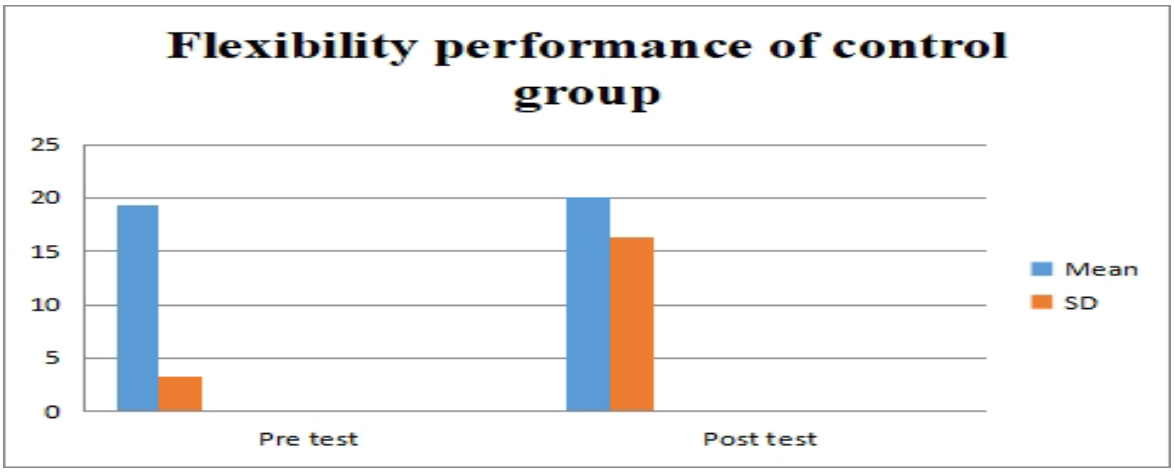

Table 1.4 clearly illustrated that no difference exists between PrTMS and PoTMS in flexibility (sit and reach test) of group control. The mean difference was calculated as .700 and standard error of difference was 2.48,'t' paired obtained value and tabulated values were .283 and 2.042 respectively and 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 Flexibility (Physical Parameters)

Groups	Mean	SD	SE Mean	DM	SE Mean Diff.	"t" ratio
Experimental Post Test	22.57	4.61	.729	2.525	2.94	.858
Control Group Post test	20.05	16.38	2.59			

*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 Flexibility

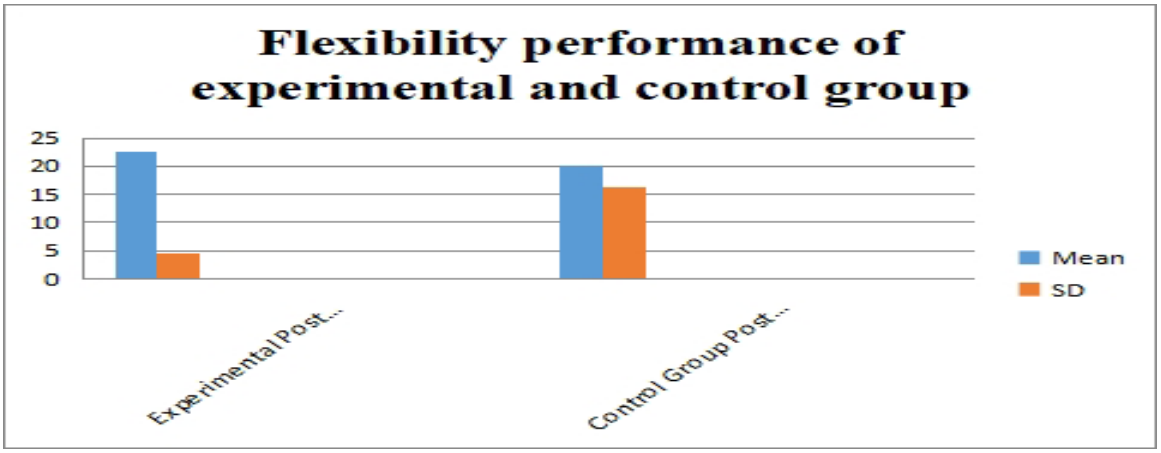

Table 1.5 clearly illustrated that no difference exists between PoTMS of group control and experimental in flexibility (sit and reach test). The mean difference was calculated as 2.525 and standard error of difference was 2.94, independent't' (two-sample t-ratio test) obtained value and tabulated values were .858 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 flexibility was represented in figure 1.5.

4. Discussionof Findings:

Discussion with regard to Physical fitness Variables:

In **Flexibility** 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**)** The author have said that flexibility increases after regular and proper practice of yoga at least for six weeks.

5. Conclusion:

- The result of this study indicates positively significant effect between PrT and PoT performance on flexibility. It means and conclude that better ashtanga yoga training enhance flexibility.
- Regarding flexibility, subject showed in no significant difference between groups control and experimental of ashtanga yoga training on flexibility. Results shows that the effects of training on pre and post data of experimental group but some improvement also seen on control groups.

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