

THE YOGIC INSIGHT

Vol.: 1
Pp: 108-119

EFFECT OF HATHA YOGA PRACTICES ON THE PERSONAL STRESS LEVEL OF THE ADULTS

ROSHAN LAL*
SUMANT BATISH**

ABSTRACT

The present study was undertaken to investigate the effect of hatha yoga practices on the personal stress level of the adults. Personal stress is defined as forces from the outside world impinging on the individual. Stress is a normal part of life that can help us learn and grow if channeled effectively. Conversely, stress can cause us significant short and long term problems. Stress releases powerful neuro-chemicals and hormones that prepare us for action (to fight or flight). The sample of the study comprised of 40 adults 20 each from government college of Yoga Education and Health, Sector 23 A, Chandigarh and Government College of Education, Sector 20, Chandigarh. The tool used to measure stress among the adults was personal stress source inventory by A. Singh. The experimental group was given one month training of hatha yoga practices and were significantly modulated and were analyzed statistically using Singh's Personal stress source inventory, the findings of the study reveals that there was a significant improvement in the in relieving the stress levels of the adults.

*Yoga Instructor, Government College of Yoga Education and Health, Chandigarh**
*Yoga Instructor cum Research Scholar, Government College of Yoga Education and Health, Chandigarh***

INTRODUCTION

Life in modern times is full of stress, strain and complexities. It has deprived the human mind of peace and tranquility. The negative impact of modern developments upon the mind has led to many mental and physical disorders among people.

Yoga is recognized as one of the most important and valuable heritage of India. Today, the whole world is looking towards yoga for the answer of various such problems as it has proved to be useful for all persons, and for the good of humanity.

Stress according to *yoga* is imbalance. Imbalance is misery. At the mental and physical levels, it is excessive speed and thus a demanding situation, which causes pain and leads to ailments and diseases. Imbalances at the emotional level manifest as upsurges which are caused by strong likes and dislikes. At the psychological level the imbalances lead to conflicts and often manifest as petty and narrow ego-centric behavior.

Yoga is a physical, mental, and spiritual discipline, originating in ancient India. The Sanskrit word Yoga has the literal meaning of "yoke" from a root yuj meaning to unite, or to attach. As term for a system of abstract meditation or mental abstraction it was introduced by Patanjali in the 2nd century B.C. someone who Yoga is true union of our will with the God. Some definitions are given below:

Maharishi Patanjali is known as father of Yoga and has defined clearly in his Yoga Sutra.

"Yogashaya Chittvritti Nirodhah".

translated as "Yoga is the inhibition (nirodhah) of the modifications (vritti) of the mind (chitta)" here Nirodhah has been employed in the sense of a verb, doing and acting. Through Yoga one can attain control on thoughts of mind. Only the Yoga can explain the way to control the mind.

HATHA YOGA

Hatha Yoga was first propagated by Swami Swatamarama, a yogic sage of the 15th century in India. Hatha (pronounced "ha-tha") yoga is also known as hatha vidya or the "science of hatha" yoga; this word comes from combining the two sanskrit terms

ha meaning "sun" and the meaning "moon". The former refers to the solar nadi (pingala) in the subtle body and the latter to the lunar channel (ida).

Hatha yoga attempts to balance mind and body via physical postures and exercises (asanas), controlled breathing, and the calming of the mind through relaxation and meditation. Asanas teach poise, balance & strength and were originally (and still) practiced to improve the body's physical health and clear the mind in preparation for meditation in the pursuit of enlightenment.

By balancing two streams, a human being is able to get the balanced operation of the nostril breathing as per the standardized breathing with respect to the dates of dark and light fortnights which is a concept of health. Shatkriyas the ideal techniques for purification and asanas for stability.

Swatmarama introduces his system as preparatory stage of Physical purification that the body practices for higher Meditation or Yoga. Traditional Hatha Yoga is a holistic Yoga path, including disciplines, Physical postures (Asanas), Purification procedures (Shatkriyas) Poses (Mudras) breathing techniques (Pranayama) & Meditation.

According to Hatha Yoga Pradipika, The word Hatha is composed of 2 words 'ha' meaning sun and 'tha' meaning moon. Hatha Yoga is commonly translated as Yoga that brings union of the pairs of opposites.

According to Swami Vishnu Devananda (1987) The purpose of Hatha Yoga is to give you the knowledge of controlling two energies 'Ha' & 'th' i.e. Prana and Apana. Without this knowledge it is difficult to control the mind.

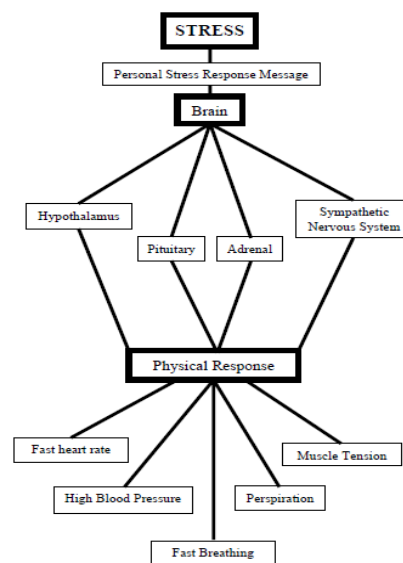
Hatha yoga, or hatha vidya (the science of hatha yoga) is commonly misunderstood and misrepresented as being simply a physical culture, divorced from spiritual goals. Hans-Ulrich Rieker shows the error of this idea by explaining the changes which take place, through the practice of hatha yoga, in the practitioner's body, mind and self. He makes the reader aware of the subjective transformation that occurs as the consciousness penetrates inwards towards the Self, and as the Self

diffuses outwards. He shows that hatha yoga is not just physical exercise, but an integrated science leading towards spiritual evolution.

STRESS

With increasing complexity of life Style, the level of stress has been increasing at a phenomenal rate. But its scientific meaning was, in fact, given in early 20th century. Stress is the process that occurs in response to the situation or events (called stressors that disrupt or threaten to disrupt our physical or psychological functioning (Lazarus and Folk man, 1984; Taylor 1995; Peptone, 1992; Baron, 2002). In fact stress is a many faceted process that occurs in reaction to event or situation in the environment called stressors.

The yogic concept of stress is that the physical, mental social, environmental and emotional or any other source of stress is related to the factors of the standardized ideal breathing in an individual prana and universal prana should be almost the same and if the standardized breathing is near to the offending factor then we say that there is stress in the individual otherwise not. The automatic adjustment power of coming back to the natural breathing pattern factor is known as immunity.



MODEL OF STRESS

Baron (2002) has explained that stress is the process that occurs in response to the situations or events called stressors that disrupt or threaten to disrupt our physical or psychological functioning.

REVIEW OF LITERATURE

Grossman (1967) opined that with help of yogic exercises the release of muscle tension plays a significant role in altering the physiological responsiveness to stress by altering the level of general arousal. Sikand (1971) concluded that breathing exercises are beneficial to the patients of asthma, tuberculosis or other type of lungs infections in helping to increase the total voluminous capacity i.e. the vital capacity by improving the breathing habits. Karamabelkar (1969); Udupa and Singh (1972); Udupa (1979) concluded that Yoga might make an individual psychologically more stable and mentally more competent.

Kochar (1976) found significant positive effects of yogic practices in reducing mental fatigue, postponing the onset mental fatigue and a significant improvement in performance an mental work. Udupa (1985) suggested a combined practice of physical postures, breathing exercises and meditation in a sequence were the best compromise to meet the present day needs of the society. Indrani (1993) suggested that asanas effect was observed to be significant on flexibility and agility. Pranayama significantly improved breath holding capacity, vital capacity and resting pulse rate.

Yadav (1994) concluded that Hathayoga provides a regular improved functioning of the main bodily system thereby fastening a Psycho-Physical balance. Sharma (1994) explored that some selected breathing and concentrating exercises have highly positive effects on the maintenance of a sound mental health.

Sonia (2001) found that Yogic practices have positive effect on the mental and emotional state and that its physical therapeutic effects can be seen in comparatively shorter time. Yoga exercises help to reduce the level of anxiety & facilitate higher level of mental health. Giri and Prakash (2007) noted positive effect of Yoga on stress management.

OBJECTIVES OF THE STUDY

1. To identify, select, standardize a schedule of systematic training of hatha yoga practices.

2. To study and compare the personal stress among adults who are practicing and not practicing hatha yoga.

HYPOTHESES:

There exists no significant difference in personal stress levels of adults who are practicing and not practicing hatha yoga.

METHODOLOGY:

SAMPLE

A sample of 40 Adults was selected for present study from the selected college i.e. Govt. College of Education, Sector 20-D Chandigarh and Govt. College of Yoga Education and Health, Sector 23-A Chandigarh, The selected sample represents two groups consisting of 20 adults each. First group i.e. Group A is known as Hatha Yoga practicing Group (experimental group) and the Second Group i.e. Group B is known as Non Hatha Yoga practicing Group (control group).

TOOLS USED

1. Singh's Personal Stress source Inventory by Singh (1985)
2. Hatha Yoga exercise schedule was prepared with the help of a expert

HATHA YOGA SCHEDULE

Yoga is a way of life and attributes to holistic approach where shatkriyas contribute to the cleanliness, asanas takes care of the physical aspect, pranayama promotes the mental wellbeing and meditation promotes emotional and social health. So in that case due to the unavailability of the tool, the researchers themselves designed a 30 days schedule. The schedule was divided into 3 sets of 10-10days. It covers different type of practices according to hatha yoga. The duration of the course was 1 hour daily.

0-10 DAY SCHEDULE

1.	Neti	3.5 minutes from each side
2.	Kapalbhati	5 minutes
3.	Vajrasana	5 minutes
4.	Gomukhasana	1 minute each side repeated twice
5.	Veerasana	1 minute repeated twice
6.	Jalandhara bandha	30 seconds repeated twice
7.	Vipreetkarni Mudra	30 seconds repeated twice
8.	Nadi Shodhan Pranayama	15 minutes
9.	Sheetali Pranyama	10 minutes
10.	Bhramari Pranayama	10 minutes

10-20 DAY SCHEDULE:

1.	Neti	2.5 minutes from each side
2.	Kapalbhati	5 minutes
3.	Tratak	3 minutes
4.	Vajrasana	3 minutes
5.	Gomukhasana	30 seconds each side
6.	Veerasana	1 minute
7.	Padmaasana	1 minute
8.	Simhasana	1 minute
9.	Paschimottanasana	30 seconds repeated twice
10.	Shavasana	5 minutes
11.	Nadi Shodhan Pranayama	15 minutes
12.	Sheetali Pranyama	5 minutes
13.	Bhramari Pranayama	6 minutes
14.	Surya Bhedan Pranayama	5 minutes
15.	Jalandhara bandha	30 seconds repeated twice
16.	Vipreetkarni Mudra	30 seconds repeated twice
17.	Uddiyana bandha	30 seconds repeated twice

20-30 DAY SCHEDULE

1.	Neti	2.5minutes from each side
2.	Kapalbhati	3minutes
3.	Tratak	3 minutes
4.	Vajrasana	3 minutes
5.	Gomukhasana	30 seconds each side
6.	Veerasana	1 minute
7.	Padmasana	1 minute
8.	Simhasana	1 minute
9.	Paschimottanasana	30 seconds repeated twice
10.	Dhanurasana	30 seconds repeated twice
11.	Ardh-Matsyendrasana	30 seconds each side
12.	Shavasana	5 minutes
13.	Nadi Shodhan Pranayama	10 minutes
14.	Sheetali Pranayama	3 minutes
15.	Bhramari Pranayama	6 minutes
16.	Surya Bhedan Pranayama	3 minutes
17.	Bhastrika Pranayama	3 minutes with a round of 60 strokes
18.	Ujjai Pranayama	5 minutes
19.	Jalandhara bandha	30 seconds repeated twice
20.	Vipreetkarni Mudra	30 seconds repeated twice
21.	Uddiyana bandha	30 seconds repeated twice
22.	Shambhavi Mudra	30 seconds repeated twice

DESIGN OF THE STUDY

The study was conducted with the help of pre-tests, post tests control group design. The design of the experimental study consisted of two groups namely experimental and controlled. Each group had 20 subjects. Before the

treatment, both the groups were given pre test of Singh's Personal Stress Source Inventory by Singh (1985) constructed by A. Singh. The experimental group was given a training of 30 days. Controlled group was not given any training. At the end of the period, the post-test on Singh's Personal Stress Source Inventory constructed by A. Singh(1985) was again administered. These scores (post-test minus pre-test) of both group were compared on the basis of Mean, Median, Standard Deviation, Skewness, Kurtosis and t-test. Data was analyzed and interpreted. Conclusions were drawn based on the results.

ANALYSIS AND INTERPRETATION

TABLE 1: VALUE OF MEAN, MEDIAN, MODE, S.D. SKEWNESS AND KURTOSIS OF PRE AND POST

	Pre-test	Post-test
N	40	40
Mean	79.17	84.65
Median	79.00	81.00
Mode	67	78.00
Std. Deviation	10.55	8.16
Skewness	.232	.643
Std. Error of Skewness	.374	.374
Kurtosis	-1.013	-1.026
Minimum	60.00	75.00
Maximum	97.00	100.00

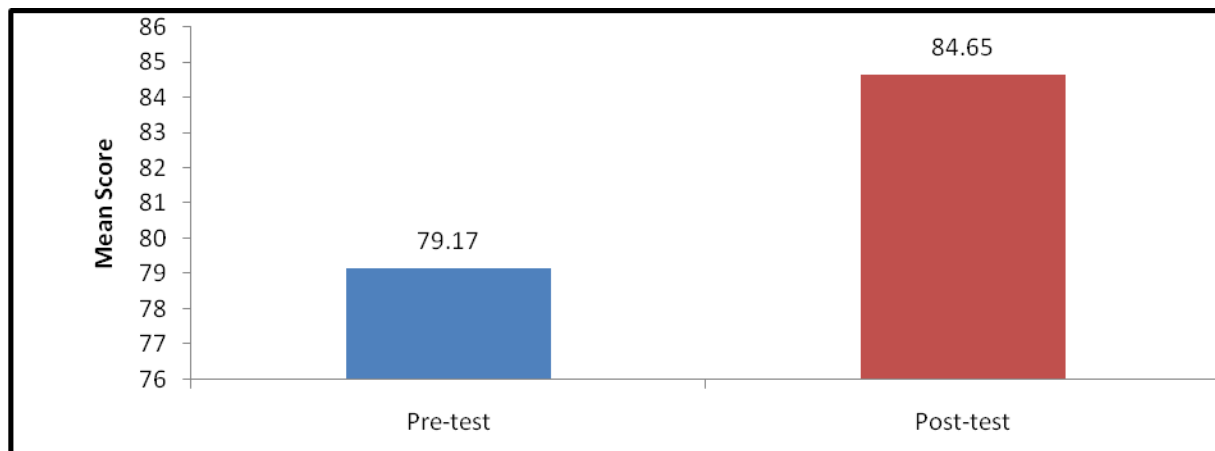


FIGURE 1

Results given in table 1 are showing the value of Mean, Median and Mode for the variable of Pre-test of Adults who are practicing and not practicing Hatha Yoga which are 79.17, 79.00 and 67.00 respectively that can be considered approximately

equal. The value of skewness is 0.232, which is ± 1 that shows it is positively skewed. The value of kurtosis is -1.013. So, it is Leptokurtic and can be considered as normally distributed. The results show that the distribution for this variable is approximately normal.

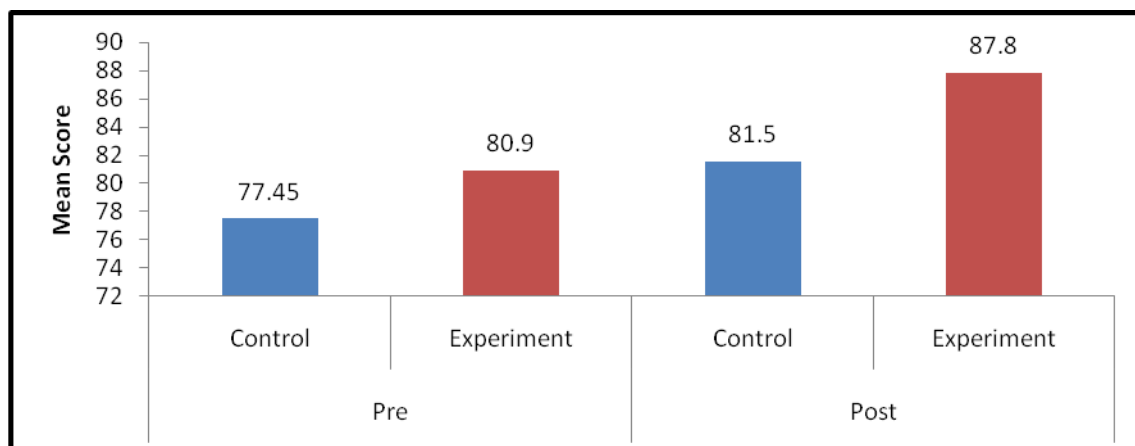
Results given in table are also showing the value of Mean, Median and Mode for the variable of Post-test of Adults who are practicing and not practicing Hatha Yoga which are 84.65, 81.00 and 78.00 respectively that can be considered approximately equal. The value of skewness is 0.643, which is ± 1 that shows it is positively skewed. The value of kurtosis is -1.026. So, it is Leptokurtic and can be considered as normally distributed. The results show that the distribution for this variable is approximately normal.

TABLE 2: DIFFERENCE BETWEEN PRE-TEST AND POST-TEST OF CONTROL AND EXPERIMENTAL GROUP OF ADULTS TO CHECK THE EFFECTS OF HATHA YOGA ON THE PERSONAL STRESS LEVEL OF ADULTS

Group		N	Mean	Std. Deviation	t-value
Pre	Control	20	77.4500	7.80334	1.034
	Experiment	20	80.9000	12.71510	
Post	Control	20	81.5000	6.27862	2.617**
	Experiment	20	87.8000	8.74553	

** Significant at 0.01 level

Result of table 2 revealed that insignificant difference in the Pre-test of Control and Experimental Group of Adults to check the effects of Hatha Yoga on the stress level of Adults as t-ratio ($t=1.034$) was found insignificant. In other words Adults of Control and Experimental Groups are almost same in their Personal stress level, when they were pre-tested before practicing of Hatha Yoga.



Result of table 2 revealed that significant difference in the Post-test of Control and Experimental Group of Adults to check the effects of Hatha Yoga on the personal stress level of Adults as t-ratio ($t=2.617$) was found significant at 0.01 level, which means adults of Control group or Non-Practicing Hatha Yoga are highly different from adults of Experimental group or Practicing Hatha Yoga at their stress levels. When mean scores were compared it was found that Adults from experimental group or practicing Hatha Yoga are much better in relieving their stress level.

DISCUSSION

From the results it can be inferred that the adults undergoing the training of hatha yoga have a positive effect on their physical, mental, environmental, emotional and social well being which in turn is helping them in alleviating their personal stress levels.

CONCLUSION

Hatha yoga practices have a significant effect on the reduction of the personal stress level of the adults who practice it.

SIGNIFICANCE OF THE STUDY

The present study reveals that there is a significant improvement in relieving the personal stress levels of the adults as a result of 30 days hatha yoga training programme.

SUGGESTIONS FOR FURTHER RESEARCH

This study can be more effective by aiding the following:

1. Effective study can be done by taking in to consideration other variables such as rural or urban areas, age of student etc.
2. The present investigation may be repeated on a large sample to get more reliable results.
3. The present study was limited to Government colleges only, similar work can be done on private colleges also.
4. The conclusion derived from the present investigation is based on the study of 40 students. There is a need to take wide sample from other cities and states to generalize the results.

REFERENCES

1. Ghosh S.K., 'Effect of Physical Exercises, Yogic Practices and their Combined Training on Selected Physiological Variables among High School Boys', Yoga-Mimamsa, Vol. XXXV, No. 1 & 2, 15.
2. Grossman, B.P. (1967) Text book of Physiological Psychology. London; Johan Witey & Sons inc. 123-129.
3. Indrani, L. (1993) Effect of Yogic Practices on Selected Physical, Physiological and Psychological Variables among School Boys. India; Alagappa University Unpublished M. Phil. thesis.
4. Karmabelkar, P.V. (1969) Effect of Yogic Asana on Uropepsis Excretion. Indian Journal of Medical Research. 57, 5, 944.
5. Kocher, H.C. (1976) Influence of Yogic Practices on Mental Fatigue. New Delhi; Yoga Mimamsa. 28, 2, 3.
6. Kocher, H.C. (1976) Yoga practices as a variable in neuroticism anxiety and hostility. Yoga Mimamsa. 15, 2, 37-46.
7. Selye, H. (1950) Stress and Disease. Science Journal. 122, 3171, 625-631.
8. Serber, E. (2000) Stress Management through Yoga. International Journal of Yoga Therapy. 10.
9. Sharma & Sharma, "A Study of Effect of Yogic Training on Attitude of Secondary School Level Boys", Vyayam Vigyan, 37:3
10. Sharma, C. (1994) Effect of Selected Yogic Practices on Mental Health. Chandigarh, Panjab University; Unpublished Ph.D. thesis. 3042.
11. Sikand, A. (1971) Effect of breathing exercise on the vital capacity. Chandigarh; Panjab University; Unpublished M.A. Dissertation. 20-28.
12. Singh, A. (1985) Manual for Personal Stress Source Inventory. India, Agra; National Psychological Corporation 4/230, Kacheri Ghat. 1-5.
13. Singh, P. (1975) Hatha Yoga Pradipika. New Delhi; Oriental books Reprint Corporation. 29-36.
14. Sonia, S.(2000) Effect of Yoga Exercises on Mental Health and Anxiety at B.Ed. Level. Chandigarh; Panjab University M.Ed. Dissertation. 15-20.
15. Swatmarama, S. (1979) Hatha Yoga Pradipika. Pune; Y.M Samiti. 32-44.

- 16.** Udupa, K.N. (1979) Disorders of Stress and their Management by Yoga. Varanasi; B.H.O Press.112-118.
- 17.** Udupa, K.N. (1985) Stress and its Management by Yoga. India, Delhi; Motilal Banarasidas. 95-101.
- 18.** Udupa, K.N. and Singh, R.H. (1972) Scientific Basis of Yoga. Journal of Medical Association. 220, 1369.
- 19.** Yadav, H.S. (1994) A Study of Hatha Yoga Practices in Treatment of Anxiety and Pain in Cancer Patients. Chandigarh, PGIMER; Unpublished Ph.D. thesis. 616, 994.

[illegible]