

Effect of Yoga Exercise on Stress of Secondary School Students

*Arpitaben Tulsibhai Patel

Research Scholar, P.G.Department of Education

Dr. Maheshkumar R. Solanki

Associate Professor, Anand Education College

Sardar Patel University, V.V.Nagar, Dist- Anand Gujarat

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ABSTRACT

The human being passing through various types of stress in every stage of life. In the words of Hans Selye: "Stress is the non-specific response of the body to any demand"

Behavioural science says that stress is "perception of threat, with resulting anxiety discomfort, emotional tension, and difficulty in adjustment". Its fact that completes freedom from stress can be expected only after death. But reduction in stress has been reported in several yogic studies. The main objective of the study was to assess the effect of yoga on Stress. The study started with 60 adolescent student's randomly. Two groups form on the basis of equivalent of IQ. Randomly one group selected as Experimental group and other was as control group. Experimental group and control group were given pre-test to assess their stress. A yoga treatment consisting of Yoga Asanas, Pranayama, Meditation, Surya Namaskar and a value orientation programme was administered on experimental group for 21 days. The experimental and control groups were post-tested for their performance on stress. The results show that the students, who practiced yoga, had reduced stress.

INTRODUCTION

The usage of word "Stress" in our daily life has increases. Many situations in life are stress-provoking, but our thoughts about situations that determine whether that situations are a problem to us or not. How we observed that and perceive a stress-inducing event and how we react to that determines its impact on our health. If we respond in a negative way than our health and happiness suffer. When we understand ourselves and our reactions to stress-provoking situations, we can learn to handle stress more effectively.

Yoga which is characterized by balance, health, harmony and bliss, has important role to reduced stress and feel relax to us. Yoga is becoming popular in different parts of the world. For the restless mind, it gives solace. For the sick, it is a boon. Some use it for intelligence and creativity and reducing stress. With its multiple advantages, it is becoming a part of education. The practice of yoga creates harmony in the physical, mental, psychological and spiritual aspects of the human personality. The science of yoga is a powerful stream of knowledge, which enables the practitioners to get rid from heavy stress and also gain healthy body. Yoga helps to improve mental stage and bring mental piece with physical health. Hamid Dehghanfar, Maryam Alicheshmealae and Mahvash Noorbakshsh in (2014) found that there was significant reduction in stress and significant increase in self esteem and emotional intelligence. Ramesh R. (2013) found that students who experienced yoga treatment exhibited better self confidence than the ones who were not given yoga treatment and also have less level of stress of teacher educants at secondary level. Study by DR Amit Kauts and Neelam Sharma (2012) has reported that students with low stress performed better than the students with high stress and the results show that the students who practiced yoga module yielded higher concentration levels and exhibited better short term memory. The present study examines whether there is an effect of yoga on stress of adolescent students in relation to Intelligence or not.

OBJECTIVES OF THE STUDY

The objectives of this study were as under.

- (1) To study the effect of Yoga on the stress of secondary school students.
- (2) To study the effect of Yoga on the stress of secondary school students in relation to Intelligence.

HYPOTHESIS OF THE STUDY

The following Major hypotheses were formulated for the present study.

1. There will be no significant difference between mean score of pre test and post test of stress scale of experimental group students.
2. There will be no significant difference between mean score of pre test and post test of stress scale of control group students.
3. There will be no significant difference between mean score of post test of stress scale of boys and girls of experimental group students.

4. There will be no significant difference between mean score of post test of stress scale of high IQ students of controlled group and experimental group.
5. There will be no significant difference between mean score of post test of stress scale of low IQ students of controlled group and experimental group.

DELIMITATIONS OF THE STUDY

The delimitations of the current study were as follows.

1. The study was delimited to Gujarati medium School students only.
2. The study was delimited to Anand District's Secondary School students.
3. The study was delimited to the 9th standard students studying during 2017-18 academic year only.
4. The study was delimited to independent variable yoga (pranayama, meditation, surya namaskar), dependent variable self confidence and moderate variable intelligence.

POPULATION AND SAMPLE SELECTION

The Students who were studying in Secondary School of Anand District (Gujarat) in the year of 2017-18 were the population of present study. The researcher made a sampling frame for Secondary schools students. Then researcher used random sampling technique for selection of students and that's why selected 60 students of std 9th.

METHOD OF THE STUDY

To observe the effect of Yoga exercises on self confidence of the students, this entire study was depended on Experimental Method. Among this Experimental Method, a "complete experimental simple equivalent group pre test-post test experiment design" was applied for data assortments.

RESEARCH TOOLS

The study was based on two tools -

Dr.K.G.Desai's verbal-non verbal group intelligence test: It was readymade and standardized by Dr.K.G.Desai for the students belongs to the 11th and 12th standard Arts, Commerce and Science stream. There are 88 statements in the test. The reliability of the test is 0.88 by split-half method and validity is 0.78 by correlation.

Stress Scale constructed and standardized by Dr. Dipti N.Trivedi was used. This scale consists of 47 items describing the stress (Achievement stress, exam stress and social stress)

in institution/school/personal life/social life from various sources. Each item has four alternatives viz; Always, often, sometimes and never. The level of stress feel for item can be indicated by marking a '✓' mark in the box given against each item. There is no fixed time limit. Ordinarily an individual takes 30 minutes to complete the scale. Total 16 items relating to achievement stress are 1, 3, 7, 9, 10, 11, 16, 17, 20, 25, 29, 31, 33, 37, 42, 43. Total 18 items relating to exam stress and they are 2, 4, 5, 13, 15, 18, 23, 24, 26, 28, 30, 36, 38, 40, 41, 44, 45, 47. Whereas total 13 items relating to social stress and they are numbers 6, 8, 12, 14, 19, 21, 22, 27, 32, 34, 35, 39, 46. So total items of stress scale are 47. Here 23 items fall in positive statement whereas 24 are as negative statements and depend on that there will be score of students. Reliability for the instrument as measured by test retest was 0.8310 and 0.9242 by internal consistency. The validity of the scale find out as content validity and face validity.

DATA COLLECTION AND EXPERIMENT PROCEDURE

Formation of Equal Group:

The study was conducted in vaghasi high school Anand (Gujarat). Dr.K. G. Desai verbal-nonverbal group intelligence test was administered on 60 students of 9th standard with ages ranging from 13 to 14 years. Researcher formulate null hypothesis for form an equivalent groups.

TABLE 1

Table of Hypothesis testing

H ₀	Hypothesis	t-value	df	H ₀ is Rejected or Accepted
H ₀	There will be no significant difference between mean score of IQ of group-I students and group-II students.	0.00	58	Accepted

On the basis of their intelligence scores arranged in ascending order, students above IQ-110 were identified as high intelligent and students below IQ-90 were identified as low intelligent students. Out of these students, 50% of them were kept in experimental group and another 50% in control group.

Collection of Pre-test-values:

After equal group distribution, the researcher applied pre-test for self confidence and collected the initial level score of pre-test.

Implementation of yoga:

Researcher has applied yoga on Experimental group. A yoga treatment [yogasana like padmasana, gaumukhasana, parvatasana, Paschimottanasana, mandukasana, kurmasana, savasana, matsyana, uttanpadasana, pavanmuktasana, vajrasana, sasakana, makarandana, dhanurasana, shalabhasana, vakrasana, ustrasana, tadasana, dhruvasantrikonasana), pranayama, meditation, surya namaskar] was shared daily for an hour in the morning with the experimental group for 21 days through the guidance and suggestions of Yoga experts. Self confidence test was administered on both the groups as a post-test.

TESTING OF HYPOTHESIS

TABLE 2

Table of Hypothesis testing

H0	Hypothesis	t-value	df	H0 is Rejected or Accepted
H01	There will no significant difference between mean score of pre test and post test stress scale of experimental group students.	5.51	29	Rejected
H02	There will no significant difference between mean score of pre test and post test stress scale of control group students.	0.028	29	Accepted
H03	There will no significant difference between mean score of post test of stress scale of boys and girls of experimental group students.	0.034	28	Accepted
H04	There will be no significant difference between mean score of post test of stress scale of high IQ students of controlled group and experimental group.	5.78	12	Rejected
H05	There will be no significant difference between mean score of post test of stress scale of low IQ students of controlled group and experimental group.	0.78	14	Accepted

STATISTICAL ANALYSIS

T-test was employed on the scores of stress scale, where in intelligence is a classificatory variable and studied at two levels, i.e. students with high intelligence quotient and students with low intelligence quotient. Yoga has been taken as a treatment variable, was given to the experimental group.

RESULTS

1. There was a significance difference ($t=5.51$) between mean score of pre test stress scale of experimental group students and post test stress scale of experimental group students which is significant. So there is definitely effect of yoga exercise on stress of experimental group students and so null hypothesis is rejected.
2. There was no significance difference ($t=0.028$) between mean score of pre test self confidence of experimental group students and post test stress scale of experimental group students which is almost equal. So there is definitely no effect on stress scale in controlled group students as null hypothesis is accepted.
3. There was no significance difference ($t=0.034$) between mean score of stress scale of boys of experimental group students and control group students which is almost equal. So there is definitely no effect on stress scale related to gender in experimental group students as null hypothesis is accepted.
4. There was a significant difference ($t=5.78$) between mean score of post test of stress scale of high IQ students of controlled group and experimental group. So there is definitely effect on stress scale related to IQ for experimental group and controlled group students and so null hypothesis is rejected.
5. There was no significant difference ($t=0.78$) between mean score of post test of stress scale of low IQ students of controlled group and experimental group. So there is no effect on stress scale related to low IQ for experimental group and controlled group students and so null hypothesis is accepted.

FINDINGS

Those students, who were exposed to yoga treatment exhibited better results as stress was reduced than those who were not exposed to yoga treatment. Students with high intelligence performed better than the students with low intelligence. So the intelligence is more affect on relation between yoga and stress. Results indicate that students of

experimental group and control group differ on the scores of stress scale so there is interaction between yoga treatment and Intelligence on the scores of stress scale.

DISCUSSION

It is evident from the results that the students who were exposed to yoga had decreased stress level. The results were in tune with the earlier findings as Ramesh R. (2013) found that Yogasana practices leads significant decrease in stress of teacher educands at secondary level. Study by Goldsmith (2012) noted a significant decrease in stress and anxiety symptoms after yoga . Other researchers also found that yoga and meditation decreased stress level. The findings of the present study also revealed that yoga has positive effect on stress level of students. It may be concluded from the findings of the study that after yoga treatment, the stress level decreased which may positively affect performance of the students. It is also observed that stress scale scores tend to be more positive in case of high intelligent students as compared to low intelligent students, which may lead to the conclusion that there is interaction between yoga treatment and Intelligence on the scores of stress scale. It is suggested that yoga module should become a regular feature of the school curriculum.

CONCLUSION

It is evident from the results that the students who were exposed to yoga had decreased stress level. Students with high intelligence performed better than the students with low intelligence so there is interaction between yoga treatment and intelligence on the scores of stress scale. There is no significant effect of yoga on stress in relation to gender. In todays stress full and busy life only yoga and meditation is main way to improve performance and decreased stress level.

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*** Corresponding Author:**

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