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## RESEARCH ARTICLE

### EFFECTS OF YOGIC INTERVENTION ON ACADEMIC ANXIETY AMONG SCHOOL GOING STUDENTS

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## INTRODUCTION

In this century, everywhere in educational plain, there is a race, a tuff competition. To survive in this competition, pupil always feel some pressing and tension in their academican field as the academic achievement is important for taking decision in time to come aliveness. This type of pressure and tension in academic field create uncontrollable jumpiness, stress, and fear among educatee, called academic anxiousness (Encyclopedia of Children's health). With other type of anxiety, a little quantity of academic anxiety is pattern for the students but when it extreme, adrenal secretor become more active and a biochemical variety starts in body and mind. As a result of academic anxiety in students creates psycho physiological changes such as headache, hypertension, insomnia and other conditions. Academic anxiousness is totally not a bad thing. Academic anxiousness is a common issue that educatee cannot ignore if they want to achieve success in school life. It is true that a high level of anxiousness interferes with concentration and memory which are critical for day to day faculty member performance and success, however, it is also true without any anxiety, majority of us would lack the enthusiasm and motivation to study for exams, do everyday homework. Moderate academic anxiety provides the motivation that students require to complete assigned schoolwork and preparing to take examinations. Academic anxiety only becomes a trouble that needs a solution when the amount experienced grows so excessive that a student is not able to function productively. If academic anxiety is not properly addressed, it

can have many serious, severe and long lasting consequences such as causing a student to first hating a subject or a teacher, procrastinate, tell lie to parent, and perform poorly on school work, absent classes to pursue activities that interest him and withdraw from socializing with peers or friends and may cliff school. They may show aggressive behavior also (Tripathy and Sharma, 2017; Sahu and Khanduri, 2018; Tripathy, 2018). Academic anxiety is a negative factor and academic achievement is positive factor. Therefore, studies conducted related to academic achievement are showing negative relationship between both variables. A group of studies like (Singh and Thukral, 2009; Shakir, 2014; Nadeem *et al.*, 2012; Upadhyaya, 2013; Das, Halder and Mishra, 2014; Pekrun and Stephens, 2015, Seçken and Seyhan, 2015; Gupta, 2016; Hasan, 2016; Okogu, Osah and Umudjere, 2016) reveals significant and negative association between academic anxiety and academic achievement of students.

There are varied yogic exercises like āsana, prāṇāyāma, mudrā, meditation, kriya etc. which can reduce the psychological problem of anyone. Technique like yoga, relaxation, and interpersonal counseling also seem to be highly influential in reducing aggression (Rana, 2007). Rao (1995) discusses the significance of yoga to the well-being of mankind. (Collins, 1998) suggested that regular practice of yoga leads to overall physical and psychological well-being. Clinical studies carry out by (Masteron, Tucker and Berk 1966) has brought to light the disturbing fact that in the normal adolescent population, the mentally complaint and the doubtful cases outnumber the mentally healthy adolescents. Interdisciplinary researches (Yoga and Psychology)

suggest that regular practice of yoga promotes strength, endurance, and flexibility, cultivates a sense of calmness and well-being (Mehta, Mehta and Mehta, 1995), and reduces the psychological stress significantly (Bhagal, 1997; Kocher, 1973; Kocher and Pratap, 1971).

**Operational definition of the key terms used in the study**

**Yogic intervention:-** A yogic intervention [Yogasana, Relaxation, Pranayama and Meditation] was practiced daily except (holiday) for forty five minutes in the morning with the subjects for three months.

	Surya Namaskar	3 Rounds	9 Mints
<b>Asanas</b>	Vrikshyasan	Both side 2 Rounds	2 Mints
	Sasankasan	2 Rounds	2 Mints
	Ustrasan	2 Rounds	2 Mints
	Shavasan	Deep relaxation with awareness	5 Mints
<b>Pranayama</b>	Kapalbhati	40 to 60 strokes per round (3 rounds)	5 Mints
	Nadisuddhi	9 Rounds	5 Mints
	Bhramari	9 Rounds	5 Mints
<b>Meditation</b>	Om Meditation		10 Mints
<b>Total Time Duration for Yoga Package</b>			<b>45 Mints</b>

**Academic anxiety:-** Those who score 13 and above in the Academic anxiety scale are included in the study. Academic anxiety is a kind of state anxiety which relates to the impending danger from the environment of academic institutions including teacher, certain subjects, examinations, punishments, performance anxiety etc.

**School going students:-** Students studying in grade- VIII.

**Objective of the study:** To see the effect of yogic intervention on the level of academic anxiety of school going students before and after the practice.

**Hypothesis**

H<sub>0</sub>: There exist no significant impact of yoga practice before and after on the level of academic anxiety of school going students.

H<sub>a</sub>: Exposure of yogic intervention decreases the level of academic anxiety of school going students.

**Delimitation of the study:**

This study was delimited to 13-15 years of understudies examining grade VIII of Gayatri Vidyapeeth, Haridwar City. Test estimate is restricted to 40. No control group was taken. No randomization of the sample was take. Only Suryanamaskar, Vrikshyasan, Ustrasan, Sasankasan, Savasan, Kapalbhati Kriya, Nadisuddhi, Bhramari Pranayama and Om Meditation were included in the intervention program.

**RESEARCH METHODOLOGY**

**Research Design:** The present study was systematically planned through single group pre-test post-test design, a pre-experimental design. The study is pre experimental in nature.

**Population:** In the present study all the students finding out in grade VIII of Gayatri Vidyapeeth, Haridwar town represent the population. The population of the study will represent all the school-going students of age cluster 13-15 years.

**Sampling and Sample:** Generally Sampling comprises many types but as per the requirement of the research methodology researcher has taken purposive sampling method (a type of non-probability sampling technique) for the current research. Present study was carried out by taking a total of 40 grade VIII subjects as sample of Gayatri Vidyapeeth, Haridwar City.

**Inclusion Criteria:** The students of Grade-VIII of age range between 13-15 years. After pre test, the students having high level of academic anxiety were included for the study.

**Exclusion criteria:** Students other than Grade-VIII, whose age is below 13 or above 15. Whose academic anxiety is below average are excluded from the study. Students, who were not physically fit or not interested to practice the intervention, were excluded.

**Tools used in the study:** To test the effects of yogic intervention on the level of academic anxiety, Academic Anxiety Scale for children (AASC) standardized by A.K. Singh and Alpna Sen Gupta (2005) was administered on the subjects to collect data. Reliability coefficient for AASC is .60 in test retest and .65 in split half method. Validity is .31, .41 and .57 in Neuroticism Scale, Sinha-anxiety scale and CAAT respectively.

**Scoring:** Each item is scored as either +1 or 0. The maximum possible score of the test is 20. There are two types of items-positive and negative. All positive items which were endorsed by subjects as YES and all negative items no. 4,9,16,18 which are endorsed by subjects as NO are given a score of +1. A score of zero is awarded to all other answers. Students scoring low considered as students of low academic anxiety and scoring high were as students of high academic anxiety.

**Statistical techniques used:** Wilcoxon sign rank test, Median, Gain and Reduction percentage, effect size was applied to test hypotheses.

**RESULTS**

The efficacy of Yogic Intervention on academic anxiety of students were analyzed by comparing the pre- intervention and post-intervention assessment scores of the participants. Wilcoxon sign rank test, Median, Gain and Reduction percentage, effect size was applied to test hypotheses. Prior to conducting the major statistical analysis, the homogeneity of the experimental group on various measures was ascertained. Computer software-Environment R (3.4.0) was utilized for analysis of data.

**Efficacy of Yogic Intervention on Academic Anxiety**

H<sub>0</sub>: There exist no significant impact of yoga practice before and after on the level of academic anxiety of school going students.

H<sub>a</sub>: Exposure of yogic intervention decreases the level of academic anxiety of school going students.

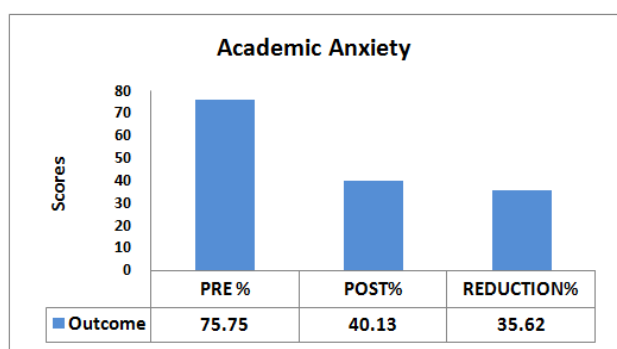
**Wilcoxon sign rank table of academic anxiety**

Outcome	N	Mdn	z	Sig. (2 tailed)
Pre test	40	15	-5.524	.000
Post test	40	8		

A Wilcoxon Signed-Rank Test discovered a statistically vital reduction within the level of educational anxiety of the participants in the yogic interventional program,  $z = -5.524$ ,  $p < 0.001$  (sig. 2-tailed), with a large result size ( $r = .61$ ) using Cohen (1988) criteria of .1 = small result, .3 = medium effect, .5 = large result. The median score on academic anxiety decreased from 15 pre-intervention to 8 post-intervention. The Wilcoxon sign rank test indicated that,  $z \pm 5.5$ ,  $p < 0.001$ , which is less than 0.05 and 0.01 at 0.05 and 0.01 level of significance. In this manner,  $H_0$  that “There is no impact of yogic intervention on the level of academic anxiety of school going students” is rejected,  $H_a$  is acknowledged, inferring that yogic intervention have noteworthy effect and diminish the academic anxiety level of the students.

**Average reduction% level of academic anxiety**

Academic Anxiety	Pre%	Post%	Reduction%
	75.75	40.13	35.62



It is clear from the over table and graph that pre test academic anxiety level of understudies is 75.75% and post test appeared 40.13%. Subsequently there is 35.62% lessening in scholastic uneasiness level.

**Effect Size**

Academic Anxiety	.61	Large effect
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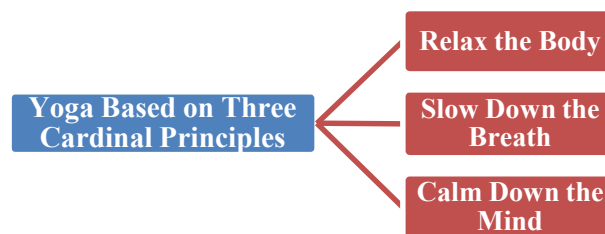
Cohen (1988) criteria of  $r = .1$  = small effect,  $.3$  = medium effect,  $.5$  = large effect. Thus the Intervention has large effect.

**DISCUSSION AND INTERPRETATION**

The findings displayed in table signifies that null hypothesis of no impact of Yoga on reducing the level of Academic Anxiety is rejected,  $z = \pm 5.524$ ,  $p < 0.001$  (sig. two tailed). Median 15 for pre test and 8 for post test is statistically significant. Additionally, Reduction percentage of 35.63%, pre test was 75.75% and post test was 40.13%. The findings of the present study are in agreement with those reported by Kumar & Tiwary (2014), Sahu and Khanduri (2016), Gupta *et al.* (2016) who also reported decrease in academic anxiety level as a result of yoga practice. Pratibha (2016) states practicing relaxation techniques can reduce the level of stress, anxiety and frustration among athletes. The study of Hotkar (2017) showed a significant difference in academic stress ( $p < 0.05$ ) after six week of shahaj yoga meditation program. Similar results was reported by Bhushan (1998) they found significant reduction in the state Trait anxiety of the subjects due to regular practice of yoga. Woolery *et al.* (2004), Michalsen *et al.* (2005) detailed that 3 months Iyengar Yoga program for ladies enduring from mental trouble come about in noteworthy enhancement in seen stretch, state and characteristic uneasiness, subjective well-

being, vigor and diminish in weariness and discouragement. Malathi and Damodaran (1999) considered the impact of yogic hones on uneasiness status amid schedule exercises and earlier to examination in to begin with year MBBS understudies. Khalsa *et al.* (2004) moreover found that two months of yoga and reflection methods can reduce performance anxiety and mood disturbance in young professional musicians.

**How does yoga works?**



(Figure: Basis of Yoga)

In this way, findings related with hypothesis of the present study, appears to be credible in the background of these studies and observations. These seem to be a strong reason to believe that yogic practices are beneficial is reducing high level of academic anxiety of students at school level. By meditation 12 types of hormones secreted from pituitary gland are balanced and controlled, which are helpful to remove psychological disorders. By this peace, happiness, Sattvic thoughts arise in mind. These Alpha waves generally occurs 8 to 13 rounds per second. But by practicing meditation these cycles of Alpha waves increased by which one experience and feel peaceful and blissful state of mind. When one is in deep state of meditation there increase the secretion of Serotonin hormone by which stress reduced. There is balance and control of sympathetic and parasympathetic nervous system. There is proper functioning of neurotransmitter as a result there developed self-confidence and work capacity (Pandey, 2018).

**FINDINGS OF THE STUDY**

1. Yogic practices are found related to the reduction of level of academic anxiety of students. Yoga reduces the high level of academic anxiety.
2. Significant improvement found in reduction level of academic anxiety among the participants of Experimental group pre and post yogic intervention.

**EDUCATIONAL IMPLICATIONS OF THE STUDY**

On the basis of findings investigator suggested to students, teachers, parents, administrators for including the package of yoga in the daily routine of students to reduce and control academic anxiety. The discoveries of this study have suggestions for instructors and experts in tending to the scholarly uneasiness of the understudies at senior auxiliary level. This study also helps students, teachers, parents, school administrators and managers, counselors, psychologist, sociolo-gist, educationist, curriculum developer to understand the problems of pre adolescents and mitigate them. Create awareness about yoga and its benefits. It is more effective if theory based in school curriculum. If the child grows with these problems he/she will not develop a balanced holistic personality. A child with academic anxiety neither good for himself nor contributed significantly for the society at large. So, this study will help to develop a balanced personality of student who in future will be

a good citizen of the country. This study will be important not only in the field of education but also beneficial to society, nation and humanity at large. As high academic anxiety is responsible for low academic achievement. Hence, different measures must be connected by the instructors to oversee scholarly uneasiness among understudies. Teachers should create a low-stress environment that allows students to concentrate on the test rather than being distracted by academic anxiety. The students with higher academic anxiety must be identified and treated to increase their academic achievement. The research will provide an effective technique to reduce and control academic anxiety level of school going students. This will open a new avenue for further researches and researchers.

## Conclusion

In conclusion, the finding of the present study indicate that yogic intervention are effective in the management of academic anxiety of school going students. In the present study there is significant improvement in post test compare to pre test yogic intervention on academic anxiety. Asanas, Pranayama, Savasana, Meditation are also effective in modifying academic anxiety. They understand the root cause of academic anxiety and develop peace and harmony by adopting positive resolve and positive perspective. Although the sample size is small still there is a positive impact of yoga. Further study on a large sample is necessary to confirm these results. It is cleared that yogic intervention can bring an improved sense of wellbeing that can positively affect the physical and mental health and the daily life of the students. Now it is time to do the practices of yoga and adopt a yoga way of life daily in student's life as a remedial measure for various physical and mental concerns. Yoga must be included both practical and theory in school curriculum for stable, better result. Thus, yogic intervention may emerge to be a new paradigm based on a holistic approach for school going students.

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