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## Effectiveness of school based yoga program on high school students

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### Abstract

Adolescence can be defined as the stage of transition from childhood to adulthood. During this phase of development they face rapid physical and mental changes. Adolescents receive education through high school to Intermediate level. Adding to the physical and psychological problems the adolescents have to face academic problems at school and college level. During this process they undergo a lot of stress. The stress for adolescents may be with school related problems, problems with peers, family issues, their own thoughts, feelings, behaviour and sometimes feeling depressed. The present study was conducted to study the stress levels of adolescents before and after yoga training program. The sample of the study included 50 boys and 50 girls studying in 9th and 10th standards were selected randomly from two schools of Tirupati town. Two tools, first was General Information Schedule and the second was Checklist to assess the stress levels of adolescents. It took fifteen minutes to complete the checklist by each student. The entire sample was made to attend an yoga training for one month. A post-test was conducted on the same sample after one month training. Results revealed that there is a significant difference between pre-test and post-test analysis. The training program had a positive impact on the stress score of sample adolescents.

**Keywords:** School yoga, childhood to adulthood, physical and mental changes

### Introduction

Adolescence can be generally defined as the period of life when a child develops into an adult generally seen during 12-19 years. It is a stage of transition of childhood to adulthood. During this phase of development they face rapid physical and mental changes due to which they can sometimes feel incompatible with the changes around their physical and social environment. In our education system adolescents are receiving education through high school to Intermediate level. Adding to this are academic factors which cause further problems. These children face various stressors and which in turn lead to stress when they are not able to cope up with these stressors. Stress is generally defined as the body's nonspecific response or reaction to demands made on it, or to disturbing events in the environment. It is a process by which we perceive and cope with environmental threats and challenges. Personal and environmental events that cause stress are known as stressors. Therefore, stress is simply defined as emotional disturbances or changes caused by stressors. Stress which promotes and facilitates learning is called good stress. An optimal level of stress can enhance learning ability. On the other hand, stress which inhibits and suppresses learning is called bad stress. The bad stress must be prevented and avoided. It is noteworthy that the same stressors may be perceived differently by different students, depending on their cultural background, personality traits, experience and coping skills. Stress can be explained in terms of sadness, worries, tension, frustration which leads to depression which is temporary or may last for long.

Adolescence can be a stressful time not only for adolescents but also for parents and adults who work with the adolescents. Adolescents are dealing with the challenges of growing. They are going through puberty, meeting the changing expectations of others, and coping with feelings they might not have experienced before.

The most common sources of day-to-day stress for adolescents are school-related problems or pressures; problems with peers, family issues or problems with parents; their own thoughts, feelings, or behaviors, for instance feeling depressed or lonely, getting into trouble because of their behavior. These problems are amply routine for most adolescents.

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Yoga, which is a way of life, is characterized by balance, health, harmony, and bliss. Meditation, being part of yoga, By practicing yoga, a person is supposed to reach a state of mental equanimity, where responses to favorable or unfavorable external events are well under the individual’s control, and responses are moderate in intensity. The science of yoga is a powerful stream of knowledge, which enables the practitioners to achieve radiant physical health, serene mind, continues spiritual uplift, and creates the ability for harmonious social living

.The various meditational techniques work at the mental level, all these practices are intended to develop a certain type of awareness within oneself, which in turn brings about a change in emotional and visceral functions, and through them, a change in intellectual and somatic functions of the individual takes place.

Reported studies showed positive impact of yoga on behavior of students that six months of yogic practices (meditation, asanas, and pranayama) brings a feeling of well-being, a reduction in body weight, increased vital capacity, acceleration in endocrinal functions, and improvement in memory. Three months practice of Savasana has demonstrated an improvement in 86 patients, who had problem of headache, insomnia, and nervousness. Udupa *et al.* revealed that yoga has the potential to influence the stress disorder and it helps the sufferer to achieve physical and metabolic stability. Sahasi *et al.* has demonstrated the effectiveness of yogic techniques in the management of anxiety and reported increased attention/concentration.

Yoga through its techniques of meditation, asanas, and pranayama yields a positive effect in the management of stress in adolescents. The processing of sensory information at the thalamic level is facilitated during the practice of pranayama and meditation. These two practices along with physical postures (asanas), cleansing practices, devotional sessions, and lectures on the theory and philosophy of yoga were focused to bring about an improvement in the steadiness of school students following 10 days of practice. This improvement was believed to be due to improved eye-hand coordination, attention, concentration, and relaxation. In one study, it is found that a 4-week program of yogasanas and meditation lowers the aggressive behavior of students. Another study has reported that meditation (a) reduced problems related to maladaptive behaviors, (b) increased emotional and physical health and psychological well-being, (c) reduced the frequency of thought, (d) reduced substance abuse, and (e) generally improved the quality of life. With this background the present study was conducted to examine the impact of yoga on stress coping behavior of adolescents.

**Objectives**

1. To study the stress levels of adolescent according to gender and socio economic status before exposure to yoga training.
2. To assess the impact of training program using pre -test and post-test analysis.
3. To study the impact of yoga training on stress levels of sample according to gender.
4. To study the impact of yoga training on stress levels of sample according to socio economic status.

**Methodology**

A sample of 50 boys and 50 girls studying 9<sup>th</sup> and 10<sup>th</sup> Standards were selected randomly from two high schools of Tirupati town. The sample were administered with two tools. The first tool is General Information schedule which included gender, class, age, socio economic status, academic achievement, parents’ education and occupation. The second tool consisted of 25 questions related to stress levels. The stress scores ranged from 25 to 125. It took 15 minutes to complete the check list by each student. The stress levels were calculated. The entire sample were made to attend an yoga training for one month. A post-test was conducted on the same sample after one month training to assess the pre and post levels of stress among sample adolescents. Statistical analysis was done using SPSS version and the results were analysed.

**Results and Discussion**

Table 1 shows the socio demographic profile of students according to their gender, class, and socio economic status. From the table it is clear that there were 50 Girls and 50 boys studying in 9<sup>th</sup> and 10<sup>th</sup> classes. 43 percent were from low income group, 29 percent were from Middle income group and 28 percent were from High income group. Table-1

**Table 1:** Showing the socio demographic profile of the sample

S. No.	Variable	Frequency	Percent
1.	<b>Gender</b>		
	Girls	50	50
	Boys	50	50
2.	<b>Class</b>		
	IX class	50	50
	X class	50	50
3.	<b>Socio Economic Status</b>		
	LIG	43	43
	MIG	29	29
	HIG	28	28

Table-2 shows the pre- test and post- test stress score distribution of the sample. From the table it is evident that the pre-test scores are identified with high stress levels. The total sample of the students were allowed to train for one month yoga training program and the post-test scores was analysed. Results show that the stress levels have decreased when compared to pre –test scores. Table-2

**Table 2:** Shows the pre- test and post –test scores of stress levels of the sample

S. No		stress pre test	stress post-test
1.	Mean	69.92	50.74
2.	Std. Deviation	9.926	12.555
3.	Range	61	51
4.	Minimum	30	29
5.	Maximum	91	80

The Mean, Standard Deviation and t- value of stress scores before and after training program according to gender. The results reveal that boys had mean value of 72.14 that is high stress levels were noticed compared to girls whose mean value was 67.70 before training program. The stress levels in the sample were found to be decreased from highly stressful level to average and less stress levels when compared to boys.

The Mean value for boys was found to be 53.82 and for girls the mean value was 47.66. The t- value was found to be 2.284 that is p value less than 0.025 this shows that there is

significant. The t- value after training program was found to be 2.519 that is p value is less than 0.013 Table-3

**Table 3:** shows the mean, standard deviation and t- value according to gender in pre-test and post- test of the sample

S. No.	Gender	Number	Mean	Std. Deviation	Std. Error Mean	t- value
1.	Stress pre test					
	Girls	50	67.70	8.920	1.261	2.284
	Boys	50	72.14	10.461	1.479	P<0.025
2.	Stress post- test					
	Girls	50	1.602	11.329	1.602	2.519
	Boys	50	1.848	13.068	1.848	P<0.013

Table – 3 shows the mean, standard deviation and t- value according to gender in pre- test and post- test. The mean value for boys was found to be 53.82 and for girls the mean value was 47.66. The t- value was found to be 2.284 it is significant at 0.05 level. The t- value after training program was found to be 2.519.

**Table 4:** shows the Mean, standard deviation and f- value of stress score of students with regard to their socio economic status before and after training program.

S. No.	Socio Economic Status	Mean	Std. Deviation	F- value
1.	Stress pre- test			
	LIG	73.65	7.263	7.260
	MIG	69.03	10.715	P<0.001
	HIG	65.11	10.633	
2.	Stress Post- test			
	LIG	54	13	4.852
	MIG	52	11	P<0.010
	HIG	45	12	

Table - 4 shows the Mean, standard deviation and f- value of stress score of students with regard to their socio economic status before and after training program. From the table it is clear that among the entire sample, 43 students were from low income group and 29 were from Middle income group and remaining 28 students were from High income group. Among the three income groups the mean values were found to be high in low income groups compared to middle and high income groups. The F –value for pre-test is 7.26 ( $p<0.001$ ) and for post – test is 4.852 ( $p<0.010$ ).

**Conclusions**

1. There is significant difference between pre and post-test analysis. The training program has positive impact on stress score of sample adolescents.
2. Training program has significantly reduced the stress levels for boys and girls from highly stressful level to average and above stress levels.
3. The stress levels were identified high for low income groups when compared with middle and high income groups. The training program has reduced the stress level of students of low income group than middle and high income groups.
4. The training program helped to decrease the stress level to a lesser degree than earlier degree of stress levels.

It may be concluded from the findings of the study that with the intervention of yoga, the stress levels of students have reduced from high stress to less and average stress levels. So it is suggested that yoga module should become a regular

feature in the schools to reduce the stress among adolescents.

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