



## STRESS AND ACHIEVEMENT IN PHYSICS AMONG HIGHER SECONDARY SCHOOL STUDENTS

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### ABSTRACT :

The present study was explored to find out the relationship between stress and achievement in physics among higher secondary school students. Survey method was conducted on stratified random sample of 177 higher secondary school students in Vellore district. Data was analyzed by t-test and 'r' value. Results found that the stress of higher secondary school students is found to be high whereas academic achievement in physics of higher secondary school students is average. Finding also indicated that there is significant relationship between stress and achievement in physics among higher secondary school students.

**KEYWORDS :** Stress, Achievement in Physics, Higher Secondary School Students.

### INTRODUCTION:

Stress is considered as a state of individuals that result from their interaction with the environment that is perceived as too demanding and a threat to their well-being. The stressors are not only physical, but may also involve emotions. Many people experience stress as they combine busy lives and the demands of study and/or work while trying to save time for friends and family. For some people, stress becomes almost a way of life.

Stress can come in different ways in an individual's daily life. Stress is also viewed as the body's reaction, both neurologically and physiologically, to adapt to a new condition (Franken, 1994). When there is a change in life, we adjust ourselves to fit in the new condition. A sudden change in life may affect a person's life style or even one's physical and mental health. The impact of a stressor leaves on a person depends on how the person takes the tension. If a person takes the event positively by accepting it as a part of challenge in life and find ways to deal with it, the stress will fade away and gone. Conversely, the consequence may leave the person a prolonged emotional disturbance.



### NEED FOR THE STUDY

Education is a process and acts also as an instrument to bring out the innate behaviour of the every individual person. The destiny of a nation lies in its classrooms. The strength of our nation depends on the teacher's ability to rear well educated, responsible, well-adjusted youth who will step forward when the adult generation passes on to retirement. The students of today are the youths of tomorrow and future citizens of the country, therefore it is

the responsibility of teachers, society and government to see that they are physically, mentally, emotionally and educationally healthy. It is believed that the teachers are having a significant role on the student's life. The development of the self-dependence of the teachers is depending on many reasons such as family, socio-economic status, mental health, school environment, emotional state, adjustment with course, students and so on. Hence the investigators wanted to find out the influence of the concept "Stress" on the Achievement in Physics. Therefore the study has been entitled as "Stress and Achievement in Physics among Higher Secondary School Students".

### OBJECTIVES OF THE STUDY

- To find out the level of stress and achievement in physics among higher secondary school students.
- To study the significant difference in stress and achievement in physics among higher secondary school students with respect to gender and locality.
- To examine the significant relationship between stress and achievement in physics among higher secondary school students.

### HYPOTHESES

1. There is no significant difference in stress of higher secondary school students in terms of gender.
2. There is no significant difference in stress of higher secondary school students in terms of locality.
3. There is no significant difference in achievement in physics of higher secondary school students in terms of gender.
4. There is no significant difference in achievement in physics of higher secondary school students in terms of locality.
5. There is no significant relationship between stress and achievement in physics of higher secondary school students.

### METHOD & SAMPLE

The present study belongs to survey method. A sample of 177 higher secondary school students was selected through stratified random sampling technique from Vellore district, Tamil Nadu.

### Tools

- Stress Scale by Dr. (Km.) Abha Rani Bisht (1971).
- Achievement Test in Physics (ATP) was developed by the investigators. The objective type of questions with 4 alternative answers was framed from 2 units of the 11<sup>th</sup> standard physics text book. The drafted objective type of questions was given to two subject experts, one was 11<sup>th</sup> standard teacher who handles physics portion and the other was a teacher educator. They were asked to give their suggestion to fine tune the rough draft. Then the questions were taken for data collection. The students were asked to make a tick mark for the correct answer in a separate answer sheet. It was decided to give one mark for the correct answer and no mark for wrong/unmarked items. The reliability of the tool was established by following split half method. The r-value was found to be 0.82, which revealed that the developed tool of Achievement Test in Physics (ATP) was highly reliable.

**DATA ANALYSIS****Table 1: Mean and SD scores of the Stress and Achievement in Physics among Higher Secondary School Students**

Category	N	Mean	SD	Remark
Stress	177	222.16	31.95	High
Achievement Test in Physics	177	56.77	15.65	Average

Table-1 shows that the level of stress of higher secondary school students is high and the level of achievement in physics of higher secondary school students is average.

**Table 2: Stress among Higher Secondary School Students with respect to Gender**

Gender	N	Mean	SD	t-value
Male	76	221.38	28.96	0.28
Female	101	222.75	34.15	

From Table-2, the t-value 0.28 is not significant at 0.05 level. Thus there is no significant difference in stress among higher secondary school students based on gender. Hence, the hypothesis-1 is accepted.

**Table 3: Stress among Higher Secondary School Students with respect to Locality**

Locality	N	Mean	SD	t-value
Urban	87	236.26	17.52	6.39
Rural	90	208.53	36.6	

Table-3 reveals that the t-value 6.39 is significant at 0.05 level. Thus there is significant difference in stress among higher secondary school students based on locality. Hence, the hypothesis-2 is rejected.

**Table 4: Achievement in Physics among Higher Secondary School Students with respect to Gender**

Gender	N	Mean	SD	t-value
Male	76	56.42	16.08	0.26
Female	101	57.04	15.39	

From Table-4, the t-value 0.28 is not significant at 0.05 level. Thus there is no significant difference in achievement in physics among higher secondary school students based on gender. Hence, the hypothesis-3 is accepted.

**Table 5: Achievement in Physics among Higher Secondary School Students with respect to Locality**

Locality	N	Mean	SD	t-value
Urban	87	53.57	11.38	2.72
Rural	90	59.87	18.42	

From Table-5, the t-value 2.72 is significant at 0.05 level. Thus there is significant difference in achievement in physics among higher secondary school students based on locality. Hence, the hypothesis-4 is rejected.

**Table 6: Relationship between Stress and Achievement in Physics among Higher Secondary School Students**

Stress vs. Achievement in Physics	N	r-value
	177	0.054

From Table-6, the 'r' value is 0.054 which is significant at 0.01 level. Thus there is significant relationship between stress and academic achievement in physics among higher secondary school students. Hence, the hypothesis-5 is rejected.

### FINDINGS

- Stress of higher secondary school students is high.
- Achievement in Physics of higher secondary school students is average.
- Male and female students are having similar level of stress.
- Urban students are having high level of stress than rural students.
- Male and female students are having similar level of achievement in physics.
- Rural students are having high level of achievement in physics than urban students.
- There is significant relationship between stress and achievement in physics among higher secondary school students.

### EDUCATIONAL IMPLICATIONS OF THE STUDY

In the educational scenario, it is found that the teacher education system is a very significant milestone. In order to be a good teacher, it is not only necessary to have a command over the subject matter and the techniques of teaching but it is also imperative for him to understand the students stress. A student with a balanced mental ability can do the learning in the right manner and achieve high. More counseling and guidance training are to be given to the teachers in such a way to act as a real guide (or) counselor to the students. They must entertain the students in friendly manner in the classroom. The students and the teachers should be aware of the examination stress and hygiene of the students in order to have an effective teaching-learning process. The guidance and counseling training are to be given to the students in such a way to keep the stress away by practice while they are studying. Moreover the parents are also must undergo awareness class in order to keep the students stress at the time of schooling. It is to be noted that more trainings have been given to the teachers to teach the concept in a systematic and attractive manner to bring the concentration of the students.

### CONCLUSION

Stress is a serious and prevalent problem in India. It can lead to mental problems and even suicides of adolescent students. Apart from time management, parental and social support and co-curricular activities are also necessary in helping students to avoid and to deal with academic stress. The Govt. of Tamil Nadu as well as India is taking so many regulations to keep the learning in an unthreatening situation.

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