

**A STUDY OF RELATIONSHIP BETWEEN EXAMINATION STRESS AND
ACADEMIC ACHIEVEMENT AMONG HIGHER SECONDARY SCHOOL
STUDENTS IN KANCHEEPURAM DISTRICT**

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ABSTRACT

This study investigated the relationship between the Examination Stress and Academic Achievement of higher secondary school students. A total of 314 higher secondary school students of 11 standard were randomly selected from five higher secondary schools of Kancheepuram district. Examination Stress Inventory designed and standardized by Dr. K. Saraladevi(2001) was used as a data collection instrument. Students' half-yearly examination total scores were taken as the Academic Achievement. Pearson product moment correlation method was used to correlate Examination Stress and Academic Achievement. Findings of the study indicated that the level of Examination Stress and Academic Achievement was moderate and low respectively. A moderate negative correlation between Examination Stress and Academic Achievement was found. There was a significant difference in the Academic Achievement of higher secondary school students with respect to their Examination Stress level. The students with low Examination Stress level were found to have higher Academic Achievement than students with moderate and high Examination Stress level.

Key Words: Examination Stress, Academic Achievement.

Introduction

In recent decades, education has become regarded as increasingly important for human development, especially for adolescents. School, colleges and universities have no value without student. The students' performance (Academic Achievement)

plays a major role in producing the qualified graduates who are future leader and manpower for the country. Examination Stress is a psychological condition which causes negative impact on students. Academic Achievement which is measured by the examination results is one of the major goals of the students. A large number of studies have been done on this examination stress. Many studies reveal that Examination Stress can be related with the Academic Performance. Much research has also done in correlating Examination Stress with that of the Academic Achievement. In most studies, moderate correlations were found between scores on Examination Stress and Academic Performance. The findings of several studies were consistent with the theory that there is an optimum level of stress necessary for maximum performance. Moderate levels of anxiety, can however actually be beneficial. Examination stress is a common and prevalent phenomenon among teenagers (Ang et al., 2009; Beidel, Turner, & Taylor Ferreira, 1999). Examination Stress has a negative impact which often attributed to the fear of failure. The Examination Stress phenomenon is not only prevalent but also likely to have a negative impact. Experimental studies have also indicated that under stressful evaluation situations, students' scores may be reduced because of anxiety (Worthy, Markman & Maddox, 2009). Meanwhile, past studies have shown that test anxiety and poor test performance are significantly correlated (Hembree, 1988; Seipp, 1991). Academic Achievement is the learning outcome of an individual which is expressed and measured in his / her performance in a given skill or body of knowledge. Academic Achievement which is measured by the examination results is one of the major goals of a school. Onwukeme (1986) opinioned that students with high academic ability, even if from unfavourable home background tend to perform better in subjects with low anxiety tasks than students with low academic ability perform better than those who score very low in subjects.

Moreover, senior secondary level is a landmark in the school life of any students which requires superior academic record to gain success. Examination Stress will become a barrier to achieve this. Hence, the researcher has made an attempt to investigate the Examination Stress level and its relation with the Academic

Achievement. Meanwhile the recommendations in this research will also assist the students to improve their performance and also the policy makers to come up with policies and strategies that improve the academic performance.

Spielberger and Sarason (1989) define Examination Stress as “a situation -specific trait that refers to the stress state and worry conditions that are experienced during examinations”.

Relationship between Examination Stress and Academic Achievement

The success of the student is decided by their examination score rather than the knowledge or skill they acquire. A superior academic record is required to gain success in future life. So the students generally develop stress and strain during the higher secondary years and remain anxious. Academic Achievement is highly related with the Examination Stress. Studies show that a well prepared student will also have low Academic Achievement due to high level of Examination Stress.

Review of Related Literature:

Rana & Mahmood (2010) showed that a cognitive factor worry contributes more in test anxiety than affective factors (emotional). Therefore, it was concluded that test anxiety is one of the factors which are responsible for students' underachievement and low performance but it can be managed by appropriate training of students in dealing with factors causing test anxiety.

Faqih (2011) indicated that there was positive correlation between stress and academic achievement among students of Pondok Modern Darussalam Gontor. The highest correlation was obtained by cognitive factor and academic achievement. Furthermore, the level of stress among students of Pondok Modern Darussalam Gontor is at a moderate level. Finally, the study provided recommendations for the Head of the Pondok, teachers on how to help and manage the students in order to improve their academic achievement.

Kumari and Gartia (2012) investigated and showed a positive correlation between stress and academic achievement. Significant difference exists in the academic achievement of students having high, moderate and less stress. Students with high and moderate stress performed better than the students having less stress. Further it

was also found that stress and academic achievement are not mediated by gender.

Sohail (2013) conducted a study of determining the relationship of stress and academic performance. A low level of stress was found in 7.5%, moderate level of stress was present in 71.67% and high level of stress was observed in 20.83% of the students. A moderate negative and significant correlation was found between academic performance and sources of stress. Similarly, a moderate negative and significant correlation between academic performance and levels of stress was also indicated. There was strong positive and significant correlation between stress level and number of stress sources. The study showed a diversity of stress sources and a high level of stress in the medical students. The results also show that higher level of stress is associated with poor academic performance.

Baijal (2016) found no relationship between examination stress and creativity; and examination stress and academic achievement. Examination Stress of students did not differ with their creativity level. Significant difference was found between the examination stress of students with respect to their academic achievement level.

Veena & Shastri (2016) indicated that High and low academic performing students differed significantly on educational, family, miscellaneous and overall sources of stress. The findings also showed that majority of the students' perceived education as more stressful. High and low academic performing students and pure and applied science course students differ significantly on health and overall sources of stress. High stress levels are associated with low academic achievement. It can be inferred that applied science course students experience more stress compared to pure science course students.

OPERATIONAL DEFINITIONS

Examination Stress

Examination Stress is the set of phenomenological, psychological, physiological and behavioural responses that accompany concern about possible negative consequences (or) failure on an exam (or) similar evaluative situation (Zeidnum).

Academic Achievement

Academic Achievement as the name signifies is employed for measuring the amount

of success of an individual in the specific field. In the present study, the total mark obtained by the student in the half-yearly examination is considered as academic achievement of the respective student.

Higher Secondary School Students

In the present study, the students studying in the higher secondary level (ie) XI standard students are considered as the higher secondary school students.

PURPOSE OF THE STUDY

Examination leads to large stress which shows physiological and psychological issues like sleepless nights, troubled thoughts, and loss of appetite, rapid pulse, negative thoughts, affect in the nervous, cardiovascular and immune system. It may affect the performance of the student whose future career is great struggling.

Students perceive the exams as a ‘severe torture’ and ‘intellectual and emotional overload’. It is also found that the cognitive development of the higher secondary students result in failure. Without proper guidance and support, the students may face some cognitive failures which create some stress in facing the examination. Knowledge is the important tool which is used to face the critical situation in the public examination. Hence the researcher investigated the present study to explore the relation between the two variables, Examination Stress and Academic Achievement.

OBJECTIVES OF THE STUDY

Keeping in view the significance of the study following objectives were framed;

- To find out the Examination Stress level of the higher secondary students.
- To find out the Academic Achievement level of the higher secondary students.
- To assess the Academic Achievement of the higher secondary school students based on their Examination Stress level.
- To explore the relationship between the Examination Stress and Academic Achievement among the higher secondary students.

HYPOTHESES OF THE STUDY

Keeping in view the objectives of the study the following hypotheses were

formulated:

H₀1: There is no significant difference in the Academic Achievement of the higher secondary students with respect to their Examination Stress level.

H₀2: There is no significant relation between the Examination Stress and Academic Achievement of the higher secondary students.

METHODOLOGY

Method of Study:

Descriptive survey method was employed for the present study.

Sample and Sampling Technique:

A sample of 314 higher secondary students of XI standard was chosen from Government, Government-aided and Private schools using simple random sampling.

TOOLS USED FOR THE STUDY:

To collect the data following tools were used:

1. Personal Data Sheet:

The investigator designed personal data sheet about the personal and institutional related items of the students containing the following items:

- Gender
- Medium of Instruction
- Type of stream
- Type of family
- Locality
- Type of management
- Father's qualification
- Mother's qualification

2. Examination Stress Inventory:

Description:

Though many tests are available to assess the stress of individual the standardized questionnaire of examination stress, constructed by D.K.Saraladevi was chosen for measuring examination stress of students. The reason for selecting this tool is that

this tool was standardized on the southern state population, student's study habits and their self-esteem. All the items in the questionnaire were thoroughly analyzed and framed on the basis of analyzing individuals' self-concept, parental nature, study habits, emotional and physical health. There were 65 items out of the 65 items 52 questions are positive questions and 13 questions are negative questions.

Each item of the tool in the Examination Stress Inventory Scale was responded on a four point scale i.e., Always, Frequently, Rarely and Never. The statements were scored as 3, 2, 1 and 0 for positive items and in reverse order for negative items. The total score of the respondent is obtained by adding the scores on all the individual statements in the ESI. The maximum score is 195 and the minimum score is 0.

Norms:

The minimum and maximum score of the ESI is 0 and 195. Hence, three levels are mentioned in the questionnaire.

Table: 1.1
Norms of the ESI scale

S.No.	Score range	Level of stress
1.	0 – 65	Low
2.	66 – 130	Moderate
3.	131 – 195	High

STATISTICAL TECHNIQUES USED TO ANALYZE THE DATA:

After collecting the data, the scoring is done and entered in the MS-Excel sheet which is further used for the statistical analysis using SPSS software. t-test and ANOVA, Pearson's Correlation Coefficient were used to find out the significance of means between the samples.

ANALYSIS AND INTERPRETATION

Examination Stress Level

The Examination Stress level of the higher secondary school students for the present study was classified into three categories: low, moderate and high. The Examination

Stress level of the higher secondary school students is given in table 1.2 and represented in figure 1.1

Table 1.2

Percentage analysis of Examination Stress level of the higher secondary school students.

Range	Level of stress	N	%
0 – 65	Low	135	43
66 – 130	Moderate	173	55.1
131 – 195	High	6	1.9

Results in table 1.2 reveals that majority of the higher secondary m school students has moderate (173, 55.1%) and low Examination Stress (135, 43%). A small percentage of students (6, 1.9%) fall under the category of high Examination Stress level.

Academic Achievement Level

In the present study, a sample of 314 students was classified into four groups: very low, low, average and high with respect to their academic achievement. Academic achievement level of the higher secondary school students is given in table 1.3 and graphically represented in figure 1.2.

Table 1.3

Percentage analysis of Academic Achievement level of the higher secondary school students.

Range (%)	Level of Achievement	N	%
below 40	very low	60	19.1
40 to 60	Low	165	52.5
60 to 80	Average	71	22.6
80 to 100	High	18	5.8

Table 1.3 indicates that, 60(19.1%) of the students has very low academic level, 165 (52.5%) has a low level of academic achievement, while 71 (22.6%) has a average

level of academic achievement; however, only 5.8% has a high level of academic achievement. In essence, majority of the higher secondary school students has a low level of academic achievement.

Academic Achievement with respect to Examination Stress Level

H₀₁: There is no significant difference in the Academic Achievement of the higher secondary school students with respect to their Examination Stress Level.

TABLE 1.4(a)

Summary of ANOVA- test results of mean Academic Achievement scores of higher secondary school students with respect to their Examination Stress level.

<i>Variable</i>	<i>Source of Variance</i>	<i>Sum of Squares (SS)</i>	<i>df</i>	<i>Mean Square (MS)</i>	<i>F - ratio</i>	<i>p-value</i>
Academic Achievement	Between Groups	707.41	2	592064.42	23.529	<0.05*
	Within Groups	583.46	311	25163.127		
	Total	580.83	313			

*** significant at 0.05 level**

The mean academic achievement scores of higher secondary school students with respect to their examination stress level was found to be significant; $F(2,311) = 23.529$, $p < 0.05$ at 0.05 level (Table- 1.4 a). It concludes that there is a significant difference in the academic achievement of higher secondary school students with respect to their examination stress level. Hence, ***the null hypothesis H₀₁ is rejected and the alternative hypothesis is accepted.*** The mean academic achievement score for low, moderate and high examination stress level are 707.41, 583.46 and 580.83 respectively. To find out which of these paired mean score has a significant difference, Tukey's post hoc test was applied and the results are represented in table

1.4(b).

TABLE 1.4(b)

Summary of results of Tukey's Post-Hoc Test for significant difference of the mean Academic Achievement scores of higher secondary school students with respect to their Examination Stress level.

Variable	Source of variance (Examination Stress level)			Mean difference	Standard error	p value
	Low (N = 135)	Moderate (N = 173)	High (N = 6)			
Academic Achievement	707.41	583.46		123.95	18.217	<0.05*
		583.46	580.83	2.629	65.873	.999 ^{NS}
	707.41		580.83	126.581	66.183	.137 ^{NS}

NS – not significant, * significant at 0.05 level.

From the table 1.4 (b), it is evident that the significant paired mean differences in the Academic achievement between low and moderate level examination stress is 123.95, which is statistically significant as the p-value (<0.05) at 0.05 level. It is also found that the significant paired mean differences in the academic achievement between moderate and high level examination stress (2.629) ; low and high level examination stress (126.581) are statistically not significant which is also evident from the p-value (.999,.137) at 0.05 level.

This indicates that the academic achievement of low stressed students was better than those having moderate stress. On the other hand there is no significant difference in the academic achievement between moderate and high examination stressed students.

The comparison of Academic Achievement means scores of higher secondary school students with respect to their examination stress level are graphically represented in fig. 1.3.

CORRELATION ANALYSIS

H₀₂: There is no significant relation between the Examination Stress and Academic Achievement of the higher secondary school students.

Table –1.5

Correlation Coefficient between Examination Stress and Academic Achievement

<i>Variables</i>	<i>Correlation coefficient</i>	<i>P – value</i>
Examination stress Vs Academic achievement	-0.350	<0.05*

****= significant at 0.05 level.***

From the correlation result given in table 1.5, it can be seen that there is a significant negative correlation ($r=-0.350$, $p<0.05$) between Examination Stress and Academic Achievement at 0.05 level of significance. Hence, ***the H₀₂ is rejected and the alternative hypothesis is accepted.*** The value of r is 0.350 which shows a moderate level of correlation between Examination Stress and Academic Achievement. It means that the Academic Achievement of secondary students decreases with increases in their Examination Stress.

MAIN FINDINGS:

- The Examination Stress level of higher secondary school students was found to be moderate. Only 1.9% had high Examination Stress level, 55.1% had moderate Examination Stress level and 43% had low Examination Stress level.
- It was also found that majority of the higher secondary school students' Academic Achievement fall under low level (52.5%).
- Academic Achievement of higher secondary school students has a significant difference with respect to Examination Stress level. The students with low Examination Stress level were found to have higher Academic Achievement than students with moderate and high Examination Stress level.
- There was a moderate negative significant relationship between the Examination Stress and the Academic Achievement of the higher secondary school students.

It means that the Academic Achievement of the higher secondary students decrease with increase in their Examination Stress.

DISCUSSION:

The main purpose of this present study was to explore the relationship between Examination Stress and Academic Achievement among higher secondary school students.

The results indicated that majority of the students were identified in the moderate Examination Stress category. Only 1.9% had high Examination Stress level, 55.1% had moderate Examination Stress level and 43% had low Examination Stress level. This result was much allied with the studies done by Prabu (2015), Malhotra (2014), Akande, Olowonirejuaro & Olware-kalu (2014), Nikitha, Jose & Valsaraj (2014), Faqih (2011).

The result also revealed that the Academic Achievement of majority of the higher secondary students fall under low level (52%) and moderate level (23%) category. Only 6% of students had high achievement level and 19% had very low achievement level. There exists a significant difference in the Academic Achievement of students having high, moderate and low Examination Stress. Students with low Examination Stress performed high compared to students with moderate and high Examination Stress. This finding was contrast to the study done by Kumari & Gartia (2012) observed that students with high and moderate stress performed better than the students having less stress.

Generally many researchers had found significant relationship between Examination Stress and Academic Performance. Literature had shown that there was a strong relationship between Examination Stress and higher secondary students' Academic Performance (Ross, Neibling, Heckert, 1999). The present study found moderate negative relationship between the Examination Stress and Academic Achievement of the higher secondary school students. As the Examination Stress increased, the Academic Achievement decreased. Conversely, as the Examination Stress decreased, the Academic Achievement increased. This finding was supported by the study done by Sohail (2010), Mahmood (2010), Xiao (2013), Asakhulu Newton

(2015), Dawood (2016). Also this result was in contrary with the study of Baijal (2016), Gbettor (2015), Emmanuel (2014), Gartia (2012) and Faqih (2011). Academic achievement had a significant influence on the Examination Stress level of the higher secondary students.

EDUCATIONAL IMPLICATIONS:

These findings have practical implications for parents, teachers, and educational planners and of course for students. Teachers can understand the negative impact of stress on students' Academic Achievement and should give proper guidance for the students to cope with their stress and improve their Academic Achievement. Teachers should arouse curiosity and interesting among students. Achievement of stressed students in the examination depends on the teacher's efficiency of handling the stressed students. Teachers should provide a support for the students to remain concerned on their academic matter seriously. Parents should aware of the fact that few related areas of stress which they can support are essential for the better performance of their children. Parents should identify their children level of stress and should treat them accordingly. Parents should motivate their children in such a way to read newspapers, magazines etc in order to give them a positive direction in relation to academics. Parents should inspire their children to develop self-discipline and balance state of mind. Students should be provided with proper guidance services in order to develop their confidence for better adjustment in classroom, family and society, to use their potential and talents which would help to achieve success in life. Academic work should have an adequate planning such that there would be enough intervals between the periods of examinations and continuous assessment tests. In addition, parents and academic advisers can work to have more conversations with the students in order to make sure that students can be referred to the academic help if needed, such as to the counseling center.

RECOMMENDATIONS FOR FUTURE STUDY:

- The present study had small sample size, hence it can be replicated with larger sample size which would help in drawing more valid and reliable conclusions.

- This study was conducted in limited number of schools within Kancheepuram district. This study can be done in other districts as well as other states too.
- In the present study only the level of Examination Stress and Academic Achievement was considered. Further research can be done on the level of Examination Stress and Academic Achievement with relation to the different demographic and institutional variables.

In short we can conclude that this study can be replicated by using a larger sample size, different variables and more correlations. This study was not considered the coping strategies this can also be included for future study.

CONCLUSION:

Based on the findings of the present study, it is concluded that the Examination Stress has a significant negative effect on higher secondary student's Academic Achievement. This finding is consistent that high level of Exam Anxiety lead to low level of Academic Achievement in students and vice versa. It means that the Academic Achievement of secondary students decreases with increases in their Examination Stress. Most of the students have low and moderate level of Examination Stress. Only few students have higher Examination Stress. Regarding the Academic Achievement many students fall under low level of Academic Achievement.

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