



# Effect of Academic Stress on the Academic Achievement of Undergraduate Students

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## Abstract

*Stress is a natural human response to challenging and threatening situations. It results whenever there is inconsistency between the pressures in the environment and an individual's ability to meet those demands. Stress faced by students in response to fulfilling the demands of academic and curricular aspects is termed as academic stress. Colleges with their curriculum overload, faulty teaching methods, improper planning, exam pressure etc. contribute greatly to student stress. Research reveals that stress leads to changes in every system of the body and can contribute to psychological and physiological disorders. The present study explores the impact of academic stress on academic achievement of male and female undergraduate students of various colleges. The tool administered for the study was the Academic stress scale by Sreenivas and kumar (1999). The study resulted in concluding that males experienced greater academic stress than females and that the relation between academic stress and academic achievement was negatively correlated.*

**Keywords:** Academic stress, academic achievement

## Introduction

### Academic stress

Stress has become an inseparable component of everyone's life in the present times. Stress that is experienced by students with regard to academic aspects is called academic stress. Academic stress leads to discomfort at physical and mental levels. It results due to the internal and external pressure upon students to accomplish and achieve better. Expectations of parents and society, demands of the community, anxiety regarding future are stressors for modern students. It is found out from research that low levels of stress promote learning and enhances one's performance. High levels of academic stress can results into depression, anxiety, behavioural problems, irritability, etc. which in turn lead to poor academic performance of students. When stress is not managed properly, it can develop undesirable consequences for both the students as well as for the institution.

### Need for the current study

Adolescence and beginning of adulthood are the transitional periods of one's life. These periods are marked by a number of physiological, emotional, social changes etc which lead to intense stress among the students. A 2015 American College Health Association survey revealed that three out of four college students reported feeling stressed. Research showed that due to stress one out of five students is experiencing suicidal attempts. In the current times, college students are experiencing more stress than before because the educational system with its demands, huge syllabus, long hours and expectations contribute to academic stress. In a way parents also contribute to student academic stress. They implant among the students the fear of failure, the need to excel etc which affects the students' confidence and self esteem levels. Due to academic stress students are facing physical and mental health issues which are leading to poor performance of students. By intensive literature search it is seen that there is a mixed opinion regarding the effects of academic stress. Hence the study is carried out to gain more clarity on the role of academic stress on the academic achievement of students.

### Review of related literature:

A number of studies were carried out with regard to academic stress of students. To quote few are the studies conducted by Taruna Malhotra and Mahashevta (2019) which showed that girls experienced more academic stress than boys and that academic stress influenced the academic performance of the students. Another study by Graves, B. S., (2021) showed the same result indicating girls are more stressed With regard to coping with stress, boys and girls showed variations.

Kaumi Alkali Kalli and Ali Baba Shehu (2018) study on the causes of stress show that economic hardship and a lack of security seem to be the most significant variables affecting students and contributing to stress-related diseases. The academic workload, being away from school, and having contagious fear all had a negative impact on college students' health via perceived stress, according to a study by Yang, Chen, A., & Chen, Y. (2021).

In their study, Habibah Elias et al. (2018) found that students pursuing medicine had the highest stress levels among the students. Additionally, it was shown that the relation between academic success and stress levels are negatively correlated.

Students' mental health has been linked to academic stress in studies by Subramani and Kadhiravan (2017) and Kaur (2014). Through their research, Harajyoti Mazumdar et al. (2012) found that graduate and post-graduate students displayed different levels of academic stress. The stress symptoms shown by male and female students were markedly different.

It is evident from the literature review that academic stress influences behaviours, health and life style of students in many ways. With regard to academic achievement, academic stress showed mixed results. To gain more clarity regarding the effects of academic stress with respect to academic achievement of students, following study is carried out.

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### **Objectives of the study**

- To investigate whether academic stress affects the academic achievement of students
- To explore whether there are differences in the stress levels of male and female students

In order to realise the above objectives, following null hypotheses are formulated to be tested in the present investigation.

### **Hypotheses**

H01: There is no significant relationship between academic stress and academic achievement of college students.

H02: There is no significant difference between the academic stress levels of male and female students.

## Methodology of study

A quantitative research design involving survey method was used. A questionnaire on academic stress was administered from undergraduate students of various colleges for assess the relationship among the variables under the study.

## Sample of the study

A sample of 200 undergraduate students from different degree colleges of Anantapur town is randomly selected. The participants of the study included undergraduate students from various academic streams.

## Variables of the study

The variables in the study are:

- i. Independent variables: Academic stress, Gender
- ii. Dependent variable: Academic achievement of students

## Tool administered

Sreenivas and kumar (1999) Academic stress scale was used for the current study. The tool is a 5 point rating scale consisting of 40 items divided into 5 components of stress namely personal inadequacy, fear of failure, interpersonal difficulties with teachers, teacher – pupil relationship, inadequate study facilities. The reliability of the tool was established by test-retest method and it was found to be 0.84. The validity of the tool was found to 0.92.

## Analysis

- Statistical tools namely mean, median, standard deviation, skewness, kurtosis, sample variance were used to assess the relationship among the variables.
- t- test was used to study the variation in the samples.
- To study the relationship between the variables under the study correlation by Karl Pearson was used.

## Results and Interpretation

### Results based on descriptive analysis

**Table 1**

**Results of descriptive statistics with regard to Academic Stress and Academic Achievement of Male students in the study**

Academic Stress		Academic Achievement	
Mean	73.83	Mean	66.24
Standard Error	1.150587	Standard Error	1.375406
Median	74	Median	70
Standard Deviation	11.50587	Standard Deviation	13.75406
Sample Variance	132.3849	Sample Variance	189.1741
Kurtosis	-0.74527	Kurtosis	-0.18866
Skewness	0.02088	Skewness	-0.73222

**Table 2**  
**Results of descriptive statistics Academic Stress and Academic Achievement of Female Students in the study**

Academic stress		Academic Achievement	
Mean	72.12	Mean	69.58
Standard Error	1.279858	Standard Error	1.263167
Median	71	Median	73
Standard Deviation	12.79858	Standard Deviation	12.63167
Kurtosis	0.43357	Kurtosis	0.857143
Sample Variance	163.8036	Sample Variance	159.5592
Skewness	0.167081	Skewness	-0.98579

The results of Table 1 and 2 indicate that the academic stress mean values of male students is greater (73.83) than that of female students (72.12) which indicates that male students are subject to slightly more academic stress compared to their female counterparts. Therefore gender differences are observed with regard to the stress levels experienced by students.

**Table 3**  
**Means and SDs of Male and Female students for various Stress Components**

Stress components		Personal Inadequacy	Fear of failure	Interpersonal difficulties with teachers	Teacher-pupil relationship/teaching methods	Inadequate study facility	Total stress
Gender							
Females	Mean	14.404	14.84	14.62	14.53	13.79	72.12
	SD	8.2708	8.6628	9.5386	7.8604	8.8091	12.79
Males	Mean	15.07	14.34	14.55	15.55	14.32	73.83
	SD	8.5010	8.2538	8.9424	7.7098	8.5998	11.50

To find stress components in which girls and boys differed, their means, standard deviation values for all the components of stress were calculated.

The results of Table 3 indicate that males experience slightly more stress with regard to the stress components namely Personal inadequacy, Teacher-pupil relationship and inadequate study facilities. The mean values of males (15.07, 15.55, 14.32) are found to be slightly higher compared to the respective mean values of females (14.40, 14.53, 13.79). With regard to the components Fear of failure, Interpersonal difficulties the stress values of females is slightly higher (14.82, 14.62) than the stress values of males (14.34, 14.55).

Boys experience more stress than females. This could be due to the genetic and hormonal composition in them. Also by nature, boys react more aggressively than girls for stressful and conflicting situations which result in adverse effects of stress among them.

**Results based on Karl Pearson Product-Moment co-efficient of correlation analysis**

**Table 4**  
**Pearson Product-Moment correlation values for Academic Stress and Academic Achievement**

Gender	Sample size	Correlation values
Males	100	-0.42
Females	100	-0.58

The results of the Table 4 shows that the correlation between the variables academic stress and academic achievement was negative. Hence the results indicate that as stress levels increase, academic achievement of students decrease.

Therefore the null hypothesis H01 is rejected indicating that as the academic stress increases, the academic achievement of students decreases.

**Table 5**  
**Results of t test for academic stress of males and females students**

<b>t-Test: Paired Two Sample for Means</b>		
	<i>Females Academic Stress</i>	<i>Males Academic Stress</i>
Mean	72.12	73.83
Variance	163.8036	132.3849
Observations	100	100
Pearson Correlation	0.638472	
Hypothesized Mean Difference	0	
Df	99	
t Stat	-1.64433	
P(T<=t) two-tail	<b>0.32163</b>	
t Critical two-tail	1.984217	

Table 5 shows that males stress values are slightly higher than that of the stress values of females. To find out whether the difference is significant, t- Test was done. A p value of 0.32163 ( $p > 0.05$ ) was obtained which indicates that the samples under study had no significant difference.

Hence, the null hypothesis H02 is therefore accepted.

## **Conclusions and discussions**

The present study revealed that the relation between the academic stress and academic achievement of college students was negatively correlated. As stress levels increase, the academic achievement of students was found to decrease. This is because at greater stress levels motivation to achieve decreases resulting in poor performance. The study also revealed that the stress levels of boys and girls students were not significantly different. Higher stress levels among males could be due to their physiological, hormonal composition which



makes them aggressive and inability to manage conflicting situations compared to female students who are more balanced. Also the pressure from parents, society to settle in life, earn a good job etc contributes to the more stress levels among male students. It can be concluded that high levels of academic stress should not be imposed on students as it has detrimental effects on the academic performance of students which in turn may lead to other associated problems such as decline in self esteem, development of poor self image, anxiety, depression etc. Therefore, necessary steps and actions need to be taken for effective handling and management of stress in the educational institutions. Parents should also provide necessary support and assistance at home to their children so that they can effectively manage stress. Together parents and college management can work in collaboration for prevention, management and treatment of student academic stress.

## Implications of the study

Stress at low levels is necessary to enhance student learning. But when it is high, it shows negative effects hindering the progress and achievement of students. To cope up with the academic stress among students, there can be a systematic academic planning in colleges.. Students need to be clarified about what to expect and regular feedback regarding what can be done to improve their academic performance. There are many interventions that colleges need to provide for students to efficiently manage stress. Colleges can provides students with yoga, meditation and mindfulness sessions, counselling sessions, mentoring programmes etc that can effectively aid in coping up with stress. Parents also need to ensure that proper nourishment, sleep patterns are developed which in turn decrease stress among students. Together parents and college management in collaboration can work to aid in prevention, effective management of academic stress.

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