



Role Of Academic Stress And Coping Strategies Among B. Tech. Students

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ABSTRACT

Academic Stress is a pervasive phenomenon experienced by students across educational settings, characterized by the pressures, demands, and challenges inherent in the pursuit of academic goals. This research paper explores the nuanced interplay between Academic Stress and coping strategies, shedding light on the mechanisms through which students navigate the rigours of academia while striving to maintain their well-being and academic performance. The study employed quantitative research where 130 students were chosen randomly from B.Tech and was screened by using The Perceived Stress Scale (PSS) and coping strategy scale by Holahan and Moos. The results indicated that the mean score for Academic Stress was 20.60 (SD = 129), and the mean score for coping strategies was 35.13 (SD = 129). There was a negative correlation between Academic Stress and Coping Strategies. The study also shows that females have higher Copying Strategies than males, the males tend to face higher Academic Stress even because of external factors The study relied on self-reported data, which can be susceptible to bias. The small sample size limits the generalizability of the findings.

Keywords: Academic stress, Coping Strategies, college students

INTRODUCTION

Stress is now regarded as the most significant lifestyle factor in the modern world and is a major contributor to psychological issues that affect people of all ages and genders. Academic stress is one of the major sources of depression and behavioural problems in youngsters. Stress is now understood as a lifestyle crisis (Masih & Gulrez, 2006) affecting any individual regardless of their developmental stage (Banerjee & Chatterjee, 2016). The sole duty assigned to pupils was to study, and it was never thought of as a difficult endeavour. The expectations parents had for their kids turned out to be difficult because they eventually became heavier loads that these kids were unable to bear. Coping Styles are cognitive and behavioural strategies that individuals adapt to perceived internal and external stressors. These are divided into two styles positive and

negative. Positive coping seeks to alleviate stress by generating positive assessments and identifying solutions. Coping strategies encompass an array of cognitive, emotional, and behavioural responses aimed at alleviating the impact of stressors and promoting psychological well-being. They are not only a reflection of individual differences but also a dynamic interplay between personal characteristics, environmental factors, and situational demands.

Academic stress

Stress is a universal phenomenon that affects every human being. It can have a positive meaning – motivating to action – as well as a negative one – in moments when it exceeds the organism's ability to cope. According to Lazarus, stress is a very specific interaction between the body and its surroundings, perceived by people as a situation that threatens their homeostasis and exceeds their remedial abilities

Academic Stress is considered the leading source of stress experienced by students (Dixit, 2020). One of the most common causes of depression, behavioural issues, and suicide among students is academic stress, which is caused by environmental factors, academic factors, and personal factors. Studies (Bruffaerts et al., Citation2018; Lattie et al., Citation2019) have found that mental health problems, such as depression and anxiety, are a common phenomenon among college students and can seriously impact students' functioning, interpersonal relationships, and academic achievement (Karyotaki et al., Citation2022). Lee & Larson (2000) explain this stress as an interaction between environmental stressors, student's appraisal and reactions for the same. It has now become a grave reality that is termed as a "career stopper" (Kadapatti & Vijayalaxmi, 2012).

According to Alsulami et al. (2018), Academic Stress is the body's reaction to demands associated with academics that are greater than the student's capacity for adaptation. Undergraduate B.tech students experience extreme academic stress, owing to the physically and emotionally draining curriculum, which results in burnout and causes various psychosomatic and mental disorders. Although academic stress and anxiety reach their peak during the university stage (Peer et al., 2015). B.tech students experience stress from various sources, such as intense study schedules performance expectations and many more. Academic stress is a significant contributor to various mental and behavioural disorders such as depression and anxiety (Sun et al., 2011).

Sustained academic stress can harm students' learning ability and educational attainment. Stress can burden students and harm them. However, students also will not let these adverse effects last long. Therefore, students will take action to address this. These actions are called coping strategies (Maryam, 2017). Although a few coping strategies, including getting enough sleep, preparing ahead, and listening to music, might help reduce academic stress, students also need to be more self-efficacious to manage stress more effectively.

Coping strategies

At the university stage, a Student's resources are usually insufficient to manage the demands and pressures of the academic context (Fasoro et al., 2019). Therefore, coping strategies are essential to regulate the pressure caused by tasks, meetings, exams, and group work, among other activities (Radu et al., 2016).

Coping styles are cognitive and behavioural strategies that individuals adapt to perceived internal and external stress.

There are two types of Coping Strategies. One is a positive and the other is a negative strategy. Positive coping is the active style that focuses on taking action by changing the situation that fosters stress. By identifying problems and offering constructive criticism, positive coping tries to lessen stress. Negative coping, on the other hand, seeks to deal with stressful situations by thinking negatively and acting badly, including venting and avoiding situations. However, the effectiveness of Coping Strategies is not solely determined by their nature but also by individual factors such as personality traits, cognitive appraisals, social support networks, and cultural influences. What may constitute an adaptive coping strategy for one individual may prove maladaptive for another, underscoring the need for a nuanced understanding of coping processes that account for individual differences and contextual factors.

In contrast, negative coping refers to the passive style centred on negative appraisals and emotional expression, escape from stressful situations, and social isolation (Ding et al., 2015). A coping strategy is a way for students to reduce or eliminate the effects of stress. It could also be an effective way to divert their minds from having unnecessary thoughts like committing suicide, which is rampant among students nowadays (Mamun et al., 2020). Coping strategies are considered like self-regulatory abilities. The ability to distract yourself from stress in different forms.

REVIEW OF LITERATURE

Srivastava et.al. (2014) aimed to assess the nature of stress, and coping styles among rural and urban adolescents. A total sample of 200 students in 10+2 and graduating first year in the age range of 16-19 years were assessed with the Adolescent Stress Scale. A self-report coping scale. The result of the study reveals that in both environmental settings males reported more stress than females, however, to utilise coping strategies female adolescents are higher in number than male adolescents. Research needs to examine how adolescents suffering from typical stressors such as school examination, family conflict and poor peer relations

Aina et.al. (2019) this study is intended to ascertain the students' causes and coping strategies in concerning academic stress. A survey method was chosen for collecting and analysing the data. The results showed that the main source of academic stress is the students' worries about their examinations in 60% of students are agree with this subscale

Chandraprakash et.al. (2020) attempted to understand the correlation of academic stress, coping mechanisms, and student self-efficacy. The study was conducted in a recently opened medical college in South India which consists of only two batches of medical students 150 each, who are currently studying in the 2nd year (2017–2018) and 3rd year (2016–2017). Academic stress was higher among female students. However, neither the coping styles nor students' self-efficacy had any role in reducing the academic stress experienced by medical students. stress indicators. Coping was at a moderate level dominated by active emotional coping.

Vasquez et al. (2022) study determines if academic self-efficacy and perceived social support are predictors for coping with stress in Peruvian university students. 455 university students from Peru participated in the study. A predictive design cross-sectional research study was used. For the analysis, the academic stress coping scale, perceived social support survey, and global academic self-efficacy questionnaire were used. The study's findings showed a statistically significant correlation between perceived social support, academic self-efficacy, and stress management

Vestad et.al. (2021) The intervention aimed at promoting the following five social and emotional competencies (SEC) relationship skills, emotional regulation, mindfulness, growth mindset, and problem-solving. 545 students from 28 classes of eighth-grade Footnote1 students in 11 lower secondary schools in a municipality in Eastern Norway participated in the intervention. Analysis was completed with the assistance of NVivo software. Findings suggest that the students experienced the SEC mindfulness, problem-solving, and growth mindset as supportive in coping with academic stress.

Basith et.al. (2021) The purpose of this study to describe the level of academic stress and coping strategy and to investigate the effect of the differences of gender, age, marital status, years of study and degrees on academic stress and coping The population was 340 Indonesian students in Wuhan, China. The samples of 184 students (73 male and 111 female) were taken with a simple random sampling technique The instruments used in collecting data are the Scale for Assessment Academic Stress and the Stress Coping Style Inventory. The results showed that academic stress was at a moderate level dominated by cognitive

Kawale et.al. (2022) aims to compare the level of stress among students belonging to three different disciplines i.e. Medical, Engineering and MBA. Sample size- 84 students belonging to professional courses such as Medical, Engineering and MBA in Nagpur City were selected for the research through Random sampling method. The results of the study show that the stress level is the highest amongst the medical students, followed by the Engineering and Management students. Similarly, it was found that the stress coping strategies among the students differ in their disciplines.

Eltanahy et.al. (2022) aims to assess the primary coping styles and their association with the levels of perceived stress among medical students. 17.99% more people adopted the emotion-focused coping method when their reported stress levels rose from low to high. 38.80% more of the avoidant-focused coping approach was adopted when perceived stress levels rose from low to high. Higher perceived stress levels are linked to emotional and avoidant-focused coping strategies.

Liu et. al. (2022) aimed to explore the level of stress, types of stressors, types of coping styles, and factors influencing stress levels and coping styles among nursing students during the initial period of the clinical practicum. .. A total of 158 nursing students were sought out, the majority of them were undergrads, female, and from rural backgrounds. Compared to junior college students, nursing undergraduates were more likely to employ constructive coping mechanisms. Negative coping strategies were more common among male nursing students and those who were more stressed out by the "nature and content of the work" and the "environment and equipment of the wards.

Hasanah et.al. (2022) examined coping mechanisms, academic stress, and mental health in students. A technique known as disproportionate random sampling was employed to choose the sample. 675 enrolled students served as the study's sample. The results showed that there were differences in mental health and academic stress between female and male students and differences in coping strategies between students who were only children and middle children. While coping mechanisms have a favourable relationship with mental health, academic stress has a negative relationship with mental health.

Sánchez et.al. (2023) To determine the prevalence of PAS and evaluate possible risk factors, focusing on sex differences, burnout, emotional distress, academic-social support, and coping strategies. Medical students (MS) who agreed to engage anonymously in an online survey were asked to participate in a cross-sectional, retrospective, and comparative study. Every student disclosed having PAS, most to a moderate-to-severe degree. When we compared the incidence of emotional and sexual abuse reported in the academic setting between men and women, we discovered discrepancies.

METHODOLOGY

Aim

The study aims to investigate whether there is an impact of Academic Stress on Coping Strategies

Objective

- To identify the stress level of individuals/ students yearly with Coping Strategies.
- To identify the coping strategies for B. Tech. students for the Academic Stress level
- To identify the gender differences among B.Tech. students regarding Academic Stress and Coping Strategies.

Hypothesis

- **H₁**: There would be a negative impact on academic stress levels for coping strategies of B.Tech. students per year.
- **H₂**: There would be a positive impact of copying strategies on the Academic stress level of B.Tech. students.
- **H₃**: There would be a gender difference between academic stress and copying strategy among B.Tech. students.

Research Design

The study involves the correlational and inferential research design.

Sample

The study involves a sample size of 120 participants who are students of B.Tech. from Gurgaon.

A random sampling technique was used to collect data.

Inclusion criteria

- Students from Sushant University B.tech.
- Both males and females.
- Individuals from 18 year to 22 year

Exclusion criteria

- Students other than B.tech
- Refusal for not giving informed consent.
- People above 22 years of age
- Below the age of 18 years

Tools Used:

The Perceived Stress Scale (Cohen et al. 1983) :

The Perceived Stress Scale (PSS) is a classic stress assessment instrument. The tool, while originally developed in 1983, remains a popular choice for helping us understand how different situations affect our feelings and our perceived stress. The questions in this scale ask about your feelings and thoughts during the last month. In each case, you will be asked to indicate how often you felt or thought a certain way. It is a 10-item scale that helps us to understand how different situations affect our feelings and our perceived stress. The PSS has proven to have strong validity and reliability across a variety of cultures and provides researchers with a reliable standardized tool to check the perceived stress

Coping Scale (Holahan and Moos's 1987) :

This questionnaire assesses cognitive, emotional, and behavioural methods of dealing with problems and helps us to identify how easy or hard it is for you to cope with stressful situations. Some items, focusing on cognitive and emotional approaches, were adapted from Holahan and Moos's (1987) widely-used Coping Strategies Scale (items 2, 3, and 4 below), while other cognitive and emotional items were original (1, 5, 6, and 8). The remainder of the items were adapted from Spitzberg and Copach's (2008) framework for assessing coping in response to stalking. The questionnaire has a strong reliability ($\alpha = 0.70-0.90$, test-retest > 0.70) and validity through various test constructs are ($r = 0.88$ and 0.91) confirming its effectiveness.

PROCEDURE

The study utilised an online survey based on B.tech students from Gurugram, using a random sampling approach. Participants were chosen from the B.tech department who completed the survey, which included Academic stress and Copying Strategies guidelines were followed, including data confidentiality and obtaining informed consent and was there. To investigate correlations between variables, statistical analysis was carried out after data collection. Understanding young adults Academic stress.

STATISTICAL ANALYSIS

Using SPSS software, the statistical analysis was carried out with an emphasis on descriptive statistics, which included calculating means and standard deviations, to describe the collected data. Additionally, correlational analysis was used to investigate the connections between the variables. Descriptive research statistics were also applied to analyse the sample data to conclude the population.

RESULT

The results show a negative correlation between Academic Stress and Coping Strategies. The demographics that were taken are name, age, gender, university and current year of pursuing the B. tech As one variable increases the other decreases. Fig1. Shows the level of academic stress. Fig2 shows the level of Coping Strategies and Fig3. Shows that Males tend to have higher Academic Stress rather than females. Some of the studies even stated that females cope with the situation more easily than males.

Table: Shows the mean and standard deviation of Academic Stress and Coping Strategies

VARIABLE	Mean	SD	Academic stress	Coping strategies
Academic stress	35.130	5.944	1	-.198*
Coping strategies	20.600	6.165		1

*p<.05, **p<.01, ***p<.0001

The table also shows a correlation coefficient of -198 between academic stress and coping strategies. A correlation coefficient is a measure of the strength and direction of the linear relationship between two variables. A correlation coefficient of (-1) indicates a perfect negative correlation, which means that as one variable increases, the other variable decreases perfectly. In the table, the mean academic stress is (35.13) and the mean coping strategies are (20.60).

Table 2: shows the mean standard deviation and t-test of the Academic stress and Coping Strategies

VARIABLE	MEAN	SD	t-ratio
Academic stress	20.600	129	38.097
Coping Strategies	35.130	129	67.380
Gender	1.330	129	32.125

*p<.05, **p<.01, ***p<.0001

In the table, the mean academic stress is 20.60 and the mean coping strategies is (35.13). The standard deviation for academic stress and coping strategies is 129. the t-value for coping strategies is (67.380) and the t-value for academic stress is (38.097). the t-values are both very large (positive) suggesting that there is a statistically significant difference between the means of the two groups for both coping strategies and academic stress.

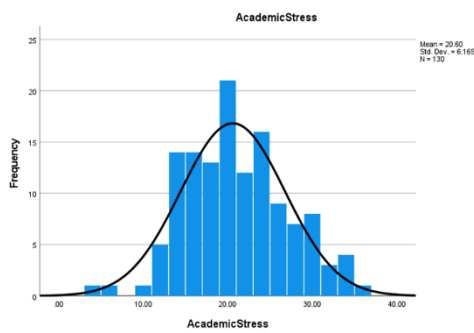


Fig. 1: Academic Stress

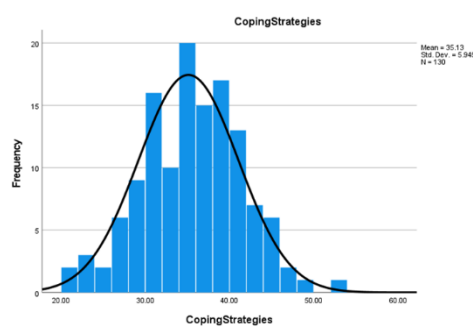


Fig. 2: Coping Strategies

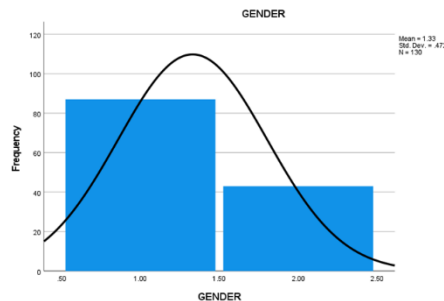


Fig. 3: Gender

DISCUSSION

The results state that there is a negative relationship between academic stress and coping strategies. This means that students who reported higher levels of academic stress also reported using fewer coping strategies. Graph 1 of academic stress suggests that a relatively large proportion of students reported experiencing low to moderate levels of academic stress. The frequency of scores tends to decrease as we move away from the centre of the distribution, both towards lower and higher stress levels. This indicates that fewer students reported very low or very high levels of academic stress. This suggests that on average, students in this study reported experiencing moderate levels of academic stress and using moderate coping strategies. The table mentions a negative correlation between academic stress and coping strategies, but the coefficient is not provided. A negative correlation would suggest that as academic stress increases, coping strategies usage tends to decrease. However, it's important to remember that correlation doesn't imply causation. There could be other factors influencing both stress and coping mechanisms.

LIMITATION

Research on the role of academic stress and coping strategies among B. Tech. students face several limitations, including:

1. The study's findings may not generalize to all B. Tech. students due to potential sampling biases. For instance, if the sample consists only of students from a specific university or region, the findings may not be representative of the broader population of B. Tech. students.
2. Research often focuses on correlations, not causation. Just because stress and coping strategies are linked doesn't mean one causes the other. There could be a third factor influencing both.
3. Students may underreport or overreport their stress levels and coping strategies due to factors such as stigma, social desirability bias, or lack of awareness.
4. The influence of external factors such as family support, financial pressures, or health issues on academic stress and coping may not be adequately addressed or controlled for in some studies.

FUTURE RESEARCH DIRECTIONS

1. Future research could benefit from employing a larger, more diverse sample and incorporating multifaceted approaches to assess both academic stress and coping mechanisms.
2. Additionally, exploring the specific types of coping strategies utilized by students and their influence on academic outcomes would be worthwhile.

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