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ACADEMIC STRESS AND GROWTH MINDSET: A CORRELATIONAL INVESTIGATION AMONG UNDERGRADUATE STUDENTS IN KERALA

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ABSTRACT

The transition to higher education represents a critical developmental period characterized by increased academic demands, evolving social roles, and heightened expectations for personal and professional success. For undergraduate students, this phase often coincides with significant psychological adjustments, making them particularly susceptible to academic stress. Academic stress refers to the psychological strain and discomfort experienced when academic demands exceed an individual's perceived ability to cope (Lazarus & Folkman, 1984). It is widely recognized as one of the most prevalent stressors affecting university students globally and has become an area of growing concern within the field of educational and health psychology.

KEYWORDS: *academic demands, evolving social roles, and heightened expectations.*

INTRODUCTION

In contemporary academic environments, students are exposed to multiple sources of stress, including rigorous curricula, frequent evaluations, competitive grading systems, time management challenges, and uncertainty regarding career trajectories (Misra & McKean, 2000). In the Indian higher education context, these stressors are often compounded by sociocultural pressures such as high parental expectations, societal emphasis on academic excellence, and limited opportunities in competitive job markets (Deb et al., 2015). Kerala, a state known for its high literacy rate and strong educational orientation, presents a unique context where academic achievement is highly valued, potentially intensifying stress experiences among students.

The consequences of sustained academic stress are multifaceted and extend beyond academic performance. Research has consistently demonstrated that high levels of academic stress are associated with increased risk of psychological disorders such as anxiety, depression, and burnout, as well as diminished subjective well-being (Beiter et al., 2015; Pascoe et al., 2020). Chronic stress may impair cognitive processes such as attention, memory, and problem-solving, thereby negatively affecting academic outcomes (Putwain, 2007). Furthermore, students experiencing high stress are more likely to engage in maladaptive coping behaviors, including procrastination, avoidance, and substance use, which further exacerbate academic and psychological difficulties. Given these adverse implications, there is a pressing need to identify psychological resources that can buffer students against academic stress and promote adaptive functioning.

One such promising psychological construct is growth mindset, derived from Dweck's (2006) implicit theories of intelligence. Growth mindset refers to the belief that intellectual abilities and

personal qualities are not fixed traits but can be developed through effort, persistence, and effective learning strategies. In contrast, a fixed mindset reflects the belief that intelligence is static and unchangeable. These implicit beliefs significantly influence how individuals interpret challenges, respond to failure, and regulate their motivation and emotions. Individuals with a growth mindset are more likely to perceive challenges as opportunities for learning and self-improvement rather than as threats to their competence. They tend to demonstrate greater perseverance, resilience, and intrinsic motivation, even in the face of setbacks (Dweck, 2006). Conversely, individuals with a fixed mindset are more prone to avoid challenges, experience helplessness in response to failure, and exhibit heightened anxiety when confronted with difficult tasks (Blackwell et al., 2007). These contrasting patterns suggest that mindset plays a crucial role in shaping students' academic experiences and psychological well-being.

The relationship between growth mindset and academic stress can be understood within the framework of the transactional model of stress proposed by Lazarus and Folkman (1984). According to this model, stress is not solely determined by external demands but is mediated by individuals' cognitive appraisal of those demands and their perceived coping resources. Growth mindset influences this appraisal process by encouraging students to interpret academic challenges as manageable and controllable, thereby reducing perceived stress. In contrast, a fixed mindset may lead students to appraise the same challenges as overwhelming and threatening, increasing stress levels.

Empirical evidence increasingly supports the protective role of growth mindset in academic settings. Studies have shown that students with a growth mindset report lower levels of academic stress, higher academic engagement, and better psychological adjustment (Zeng et al., 2016). Yeager and Dweck (2012) highlighted that growth mindset fosters adaptive coping strategies, such as problem-solving and persistence, which mitigate the negative impact of stress. Furthermore, intervention studies have demonstrated that cultivating a growth mindset can lead to improvements in academic performance and reductions in stress-related maladjustment (Yeager et al., 2019). These findings suggest that growth mindset is not only a cognitive belief system but also a malleable psychological resource with significant implications for student well-being.

In addition to its direct effects, growth mindset may also interact with other psychological processes, such as self-efficacy, emotional regulation, and motivation, to influence stress experiences. For instance, students with a growth mindset are more likely to believe in their capacity to improve through effort, which enhances self-efficacy and reduces stress appraisal. They are also more likely to adopt mastery-oriented goals, focusing on learning and improvement rather than solely on performance outcomes, thereby reducing performance-related anxiety (Burnette et al., 2013). These interconnected mechanisms highlight the multifaceted role of growth mindset in shaping students' responses to academic demands.

Despite the growing body of research on growth mindset and academic stress, several gaps remain. A significant proportion of existing studies have been conducted in Western contexts, raising questions about the cultural generalizability of findings. Cultural values, educational systems, and societal expectations may influence both stress experiences and mindset beliefs, necessitating context-specific investigations. In the Indian context, research on growth mindset is still emerging, and studies focusing specifically on undergraduate populations are limited. Kerala provides a particularly relevant context for such investigation due to its distinctive educational landscape. While the state boasts high literacy rates and educational attainment, it also places considerable emphasis on academic success, which may contribute to increased stress among students. Exploring how growth mindset relates to academic stress in this context can provide valuable insights into culturally embedded psychological processes. The undergraduate phase is also a critical period for the development of cognitive and emotional competencies that influence long-term academic and career outcomes. Understanding the role of growth mindset during this stage can inform interventions aimed at fostering resilience, enhancing coping strategies, and promoting overall well-being among students. Given that growth mindset is a malleable construct, it holds significant potential for application in educational and counseling settings.

NEED AND SIGNIFICANCE OF THE STUDY

The present study addresses a critical gap in the literature by examining the relationship between academic stress and growth mindset among undergraduate students in Kerala. Understanding this relationship is essential for several reasons. First, it contributes to the existing body of knowledge by providing culturally relevant insights into psychological processes affecting Indian students. Second, identifying growth mindset as a potential protective factor can inform the development of targeted interventions aimed at reducing academic stress and promoting resilience. Third, the findings may have practical implications for educators, counselors, and policymakers in designing student support programs that foster adaptive beliefs and coping strategies.

RATIONALE OF THE STUDY

The rationale for the present study is grounded in the need to explore psychological determinants that can alleviate academic stress in undergraduate populations. While academic stress is widely recognized as a significant concern, less attention has been given to internal belief systems such as growth mindset that may influence students' stress experiences. By adopting a correlational research design, this study seeks to examine the nature and direction of the relationship between these variables without manipulation. Investigating this relationship within the specific sociocultural context of Kerala provides a nuanced understanding of how mindset influences stress appraisal and coping. Ultimately, the study aims to contribute to evidence-based practices that enhance student well-being and academic success.

REVIEW OF LITERATURE

Academic stress has been extensively studied as a major psychological concern among undergraduate students, with consistent evidence indicating its detrimental impact on both mental health and academic outcomes. Academic stress is conceptualized as the psychological strain resulting from academic demands that exceed an individual's coping resources (Lazarus & Folkman, 1984). Studies have shown that university students frequently experience high levels of stress due to examinations, academic workload, time pressures, and performance expectations (Misra & McKean, 2000). In recent years, research has further highlighted that academic stress is associated with negative emotional states such as anxiety and depression, as well as reduced academic performance and well-being (Beiter et al., 2015; Pascoe et al., 2020). Chronic exposure to academic stress can impair cognitive functioning, including attention and memory, and may lead to maladaptive coping strategies such as procrastination and avoidance (Putwain, 2007). These findings underscore the importance of identifying psychological factors that can mitigate the adverse effects of academic stress.

In this context, the construct of growth mindset has gained significant attention as a potential protective factor. Growth mindset, derived from Dweck's (2006) implicit theories of intelligence, refers to the belief that abilities can be developed through effort, learning, and persistence. In contrast, a fixed mindset reflects the belief that intelligence is static and unchangeable. Research has consistently demonstrated that individuals with a growth mindset exhibit higher levels of motivation, persistence, and academic engagement (Dweck, 2006). Blackwell et al. (2007) found that students who endorsed a growth mindset were more likely to demonstrate resilience in the face of academic challenges and showed improved academic performance over time. Furthermore, growth mindset has been linked to increased self-efficacy and adaptive learning strategies, suggesting that students who believe in the malleability of intelligence are better equipped to academic demands.

Recent research has expanded the scope of growth mindset by examining its role in psychological adjustment and well-being. Studies indicate that growth mindset is positively associated with psychological resilience, emotional well-being, and adaptive coping mechanisms (Burnette et al., 2013). Individuals with a growth mindset tend to interpret challenges as opportunities for growth rather than as threats, which reduces the likelihood of experiencing stress and anxiety. Moreover, growth mindset has been shown to foster mastery-oriented goals, where students focus on learning and improvement rather than solely on performance outcomes, thereby reducing performance-related stress (Yeager & Dweck, 2012). Intervention-based studies further support the malleability of mindset,

demonstrating that growth mindset interventions can lead to improvements in academic achievement and psychological adjustment (Yeager et al., 2019).

The relationship between growth mindset and academic stress can be understood through the transactional model of stress proposed by Lazarus and Folkman (1984), which emphasizes the role of cognitive appraisal in determining stress responses. According to this model, stress arises not merely from external demands but from individuals' perceptions of those demands and their ability to cope with them. Growth mindset influences this appraisal process by encouraging students to view academic challenges as manageable and controllable. Empirical studies have provided evidence for this relationship. For example, Zeng et al. (2016) found that students with a growth mindset reported lower levels of academic stress and higher academic engagement. Similarly, research by Yeager and Dweck (2012) suggests that growth mindset promotes adaptive coping strategies, such as persistence and problem-solving, which help reduce the negative impact of stress. These findings indicate that growth mindset may function as a psychological buffer against academic stress.

In addition to its direct effects, growth mindset has been found to interact with other psychological variables that influence academic outcomes. For instance, growth mindset is closely associated with self-efficacy, which refers to an individual's belief in their ability to succeed in specific tasks. Students with a growth mindset are more likely to develop higher self-efficacy, which in turn enhances their ability to cope with academic challenges and reduces perceived stress (Burnette et al., 2013). Furthermore, growth mindset has been linked to self-regulation and intrinsic motivation, both of which play crucial roles in managing academic demands. These interconnected relationships suggest that growth mindset operates within a broader network of psychological processes that collectively influence students' academic experiences and well-being.

Despite the growing body of literature on academic stress and growth mindset, several gaps remain. A significant proportion of existing research has been conducted in Western contexts, limiting the generalizability of findings to non-Western populations. Cultural factors such as societal expectations, educational systems, and family influences may shape both academic stress and mindset beliefs, necessitating context-specific investigations. In the Indian context, research on growth mindset is still emerging, and studies focusing specifically on undergraduate students are limited. Furthermore, many studies have examined academic stress and growth mindset independently, with relatively fewer studies directly investigating the relationship between these variables. There is also a lack of research focusing on specific regional contexts such as Kerala, where high educational aspirations and academic competitiveness may contribute to unique stress experiences among students.

OBJECTIVES OF THE STUDY

The present study aims to examine the relationship between academic stress and growth mindset among undergraduate students in Kerala using a correlational research framework. Specifically, the study seeks to assess the levels of academic stress and growth mindset within the sample and to determine the nature and direction of the association between these two variables. In addition, the study aims to explore whether significant gender differences exist in academic stress and growth mindset, thereby identifying potential variations in how male and female students experience academic demands and perceive their abilities. Through these objectives, the study intends to provide a comprehensive understanding of both the relational dynamics between academic stress and growth mindset and the role of gender in influencing these psychological constructs.

HYPOTHESES OF THE STUDY

Based on the objectives of the study and in accordance with a correlational research design, the following null hypotheses are formulated. It is hypothesized that there will be no significant relationship between academic stress and growth mindset among undergraduate students **(H01)**. Further, it is hypothesized that there will be no significant gender difference in academic stress among undergraduate students **(H02)**. Additionally, it is hypothesized that there will be no significant gender difference in growth mindset among undergraduate students **(H03)**. These null hypotheses will be

tested to determine whether any statistically significant relationships or differences exist between the variables under study.

METHODOLOGY

Research Design

The present study employed a quantitative, cross-sectional correlational research design to examine the relationship between academic stress and growth mindset among undergraduate students. A correlational design was considered appropriate as the primary objective was to assess the direction and strength of association between the variables without manipulating them. The cross-sectional approach involved collecting data at a single point in time, enabling the investigation of naturally occurring variations in academic stress and growth mindset within the target population. This design aligns with established methodological practices in educational and psychological research where ethical and practical constraints limit experimental manipulation.

Participants

The sample consisted of undergraduate students enrolled in various colleges and universities across Kerala, India. Participants were selected using a non-probability sampling technique, specifically convenience sampling, due to accessibility and feasibility considerations. Efforts were made to include students from diverse academic disciplines such as arts, science, and commerce to enhance variability within the sample. A total of N = 120 undergraduate students participated in the study. The age of participants ranged from 18years to 25 years(M = 21.57 , SD = 1.75). Both male (60) and female (60) students were included, and gender distribution was recorded for descriptive and analytical purposes. Inclusion criteria required participants to be currently enrolled in an undergraduate program and willing to provide informed consent. Students with incomplete responses or those who did not meet the inclusion criteria were excluded from the final analysis.

MEASURES

1. Academic Stress

Academic stress was assessed using the Academic Stress Scale developed by Hsiu-Bin Sheu, S. S. Chong, H.-F. Chen, and W.-C. Lin (2014). This scale is adapted from the widely used Perceived Stress Scale originally developed by Sheldon Cohen and Gail Williamson (1988), with modifications to specifically assess stress in the academic context. The instrument consists of 10 items designed to measure the extent to which individuals appraise their academic experiences as stressful. Sample items include statements such as, “How often have you felt nervous or stressed because of schoolwork?” Responses are recorded on a 5-point Likert scale ranging from 0 (never) to 4 (very often). The scale includes four positively worded items that are reverse scored prior to computing the total score. Higher total scores indicate greater levels of perceived academic stress. The scale has demonstrated satisfactory internal consistency, with a reported Cronbach’s alpha of .81 among college student samples from Taiwan and Singapore, indicating good reliability. In the present study, internal consistency reliability was re-evaluated to ensure suitability within the sample.

2. Growth Mindset

Growth mindset was measured using the Growth Mindset Scale developed by Carol Dweck (1999, 2006). This is a brief 3-item self-report measure designed to assess individuals’ beliefs about the malleability of intelligence. The scale captures the extent to which individuals endorse the idea that intelligence can be developed through effort and learning. A sample item includes: “You can learn new things, but you can’t really change your basic intelligence.” Participants respond to each item using a 6-point Likert scale ranging from 1 (strongly agree) to 6 (strongly disagree). Items reflecting a fixed mindset are reverse scored so that higher scores represent a stronger growth mindset orientation. The scale is concise and has been widely used across different populations, including adolescents, college students, and adults (Claro et al., 2016; Thompson et al., 2013). Despite its brevity, the Growth Mindset Scale has demonstrated adequate reliability and validity in prior research, and its simplicity makes it

particularly suitable for large-scale survey-based studies. In the present study, internal consistency reliability was assessed to confirm its appropriateness for the sample of undergraduate students.

Procedure

Data were collected through an online survey platform (e.g., Google Forms) as well as offline paper-based administration, depending on participant accessibility. Prior to data collection, institutional permission was obtained from relevant authorities where required. Participants were approached through academic networks, classrooms, and social media platforms. Each participant was provided with an informed consent form outlining the purpose of the study, confidentiality of responses, voluntary nature of participation, and the right to withdraw at any time without penalty. Upon providing consent, participants completed the questionnaire, which included demographic details followed by the academic stress and growth mindset scales. The average time taken to complete the questionnaire was approximately 10–15 minutes. Data collection was conducted over a period of *[insert duration]*. All responses were anonymized, and no personally identifiable information was collected.

Ethical Considerations

The study adhered to standard ethical guidelines for psychological research. Participation was voluntary, and informed consent was obtained from all participants. Confidentiality and anonymity of responses were strictly maintained. Participants were informed that the data would be used solely for research purposes. Additionally, care was taken to ensure that the questionnaire did not contain any items that could cause psychological discomfort or harm.

Data Analysis

Data were analyzed using statistical software such as IBM SPSS Statistics (Version 25). Prior to analysis, data were screened for missing values, outliers, and normality. Descriptive statistics, including mean, standard deviation, and range, were computed to summarize the levels of academic stress and growth mindset. To examine the relationship between academic stress and growth mindset, Pearson's product-moment correlation coefficient (r) was calculated. This test was chosen as both variables were continuous and met the assumptions of normality and linearity. Additionally, inferential analyses such as independent samples *t*-tests or ANOVA may be conducted to explore differences based on demographic variables (e.g., gender, stream of study), if relevant. Statistical significance was determined at the conventional alpha level of .05. Effect sizes were interpreted to understand the practical significance of the findings.

RESULTS

The present study aimed to examine the relationship between academic stress and growth mindset among undergraduate students in Kerala, along with exploring potential gender differences in these variables. Prior to conducting inferential statistical analyses, descriptive statistics were computed to understand the basic characteristics, distribution, and variability of the study variables. These statistics provide an essential foundation for interpreting subsequent analyses by offering insight into the general trends within the data. The total sample consisted of 120 undergraduate students. All participants provided complete responses on the measures of academic stress and growth mindset; therefore, the valid sample size (N) for both variables was 120, with no missing data reported. This ensures consistency and reliability in the descriptive analysis.

The scores for academic stress ranged from a minimum of 5 to a maximum of 40. The mean score for academic stress was found to be 23.79, with a standard deviation of 12.37. The relatively high mean score indicates that, on average, undergraduate students in the sample experience a moderate level of academic stress. The wide range of scores (35 points) suggests considerable diversity in the levels of stress reported by participants. Some students appear to experience minimal academic stress, while others report very high levels. This variability is further reflected in the high standard deviation (12.37), indicating that individual differences in academic stress are substantial within the sample. Such dispersion may be attributed to various academic, personal, and environmental factors, including

differences in academic workload, coping strategies, social support, and individual resilience. The findings suggest that academic stress is not uniformly experienced but varies significantly across students, highlighting the importance of identifying factors that may buffer or exacerbate stress levels.

The growth mindset scores ranged from a minimum of 3 to a maximum of 18. The mean score was 10.58, with a standard deviation of 5.23. The mean score lies approximately at the midpoint of the possible range, indicating that, on average, students demonstrate a moderate level of growth mindset. The range of 15 points reflects variability in students' beliefs about the malleability of intelligence and abilities. While some students strongly endorse the idea that abilities can be developed through effort and learning, others may hold more fixed beliefs. The standard deviation of 5.23, although lower than that of academic stress, still indicates a moderate level of variability in growth mindset among participants. This suggests that students differ in how they perceive challenges, effort, and learning, which may have implications for their academic behaviors and stress experiences. When comparing the two variables, it is evident that academic stress exhibits greater variability than growth mindset, as indicated by its higher standard deviation. This suggests that stress levels fluctuate more widely among students than their mindset orientations. The moderate mean scores for both academic stress and growth mindset indicate that the sample, on average, is positioned at an intermediate level for both constructs. However, the considerable spread of scores in both variables underscores the heterogeneity within the student population.

Table 1

Descriptive Statistics of Academic Stress and Growth Mindset Among Undergraduate Students (N = 120)

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Academic stress	120	5	40	23.79	12.370
Growth mindset	120	3	18	10.58	5.227
Valid N (listwise)	120				

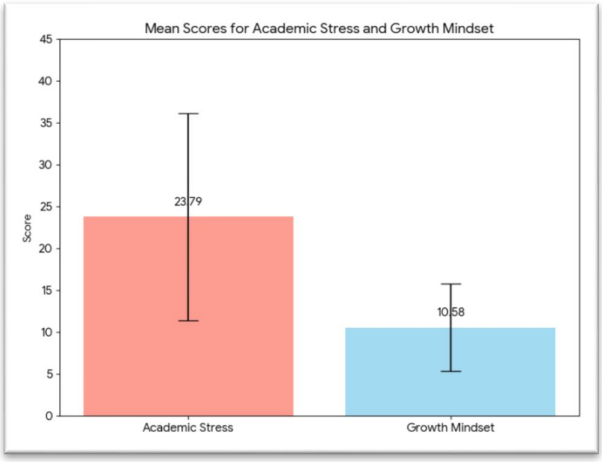

Figure 1: Mean Scores and Standard Deviations for Academic Stress and Growth Mindset (N=120)

To test the first null hypothesis (H01), which stated that *there will be no significant relationship between academic stress and growth mindset among undergraduate students*, a Pearson product–moment correlation analysis was conducted. The results revealed a **very strong negative correlation** between academic stress and growth mindset, with a correlation coefficient of **r = -0.971** and a significance level of **p = .000 (p < .01).** This indicates that the relationship between the two variables is

statistically significant at the 0.01 level (2-tailed). The negative direction of the correlation suggests that as **growth mindset increases, academic stress decreases,** and conversely, students with lower levels of growth mindset tend to experience higher academic stress. The magnitude of the correlation coefficient (close to -1) indicates an exceptionally strong inverse relationship between the variables. Since the obtained p-value is less than the significance level of 0.01, the null hypothesis (H01) is **rejected**. Therefore, it can be concluded that there is a **statistically significant relationship between academic stress and growth mindset among undergraduate students.**

The findings imply that students who possess a stronger growth mindset—characterized by the belief that abilities can be developed through effort and learning—are less likely to experience high levels of academic stress. In contrast, students with a weaker growth mindset (or a more fixed mindset) may perceive academic challenges as threatening, thereby experiencing greater stress. The exceptionally high negative correlation observed in this study highlights the potential importance of fostering a growth mindset in educational settings as a means of reducing academic stress among students. These results contribute to a deeper understanding of the psychological factors associated with academic stress and underscore the role of cognitive beliefs in shaping students' academic experiences.

Table 2

Pearson Correlation Between Academic Stress and Growth Mindset Among Undergraduate Students (N = 120)

Correlations			
		Academic stress	**Growth mindset**
Academic stress	Pearson Correlation	1	-.971**
	Sig. (2-tailed)		.000
	N	120	120
Growth mindset	Pearson Correlation	-.971**	1
	Sig. (2-tailed)	.000	
	N	120	120
****. Correlation is significant at the 0.01 level (2-tailed).**			

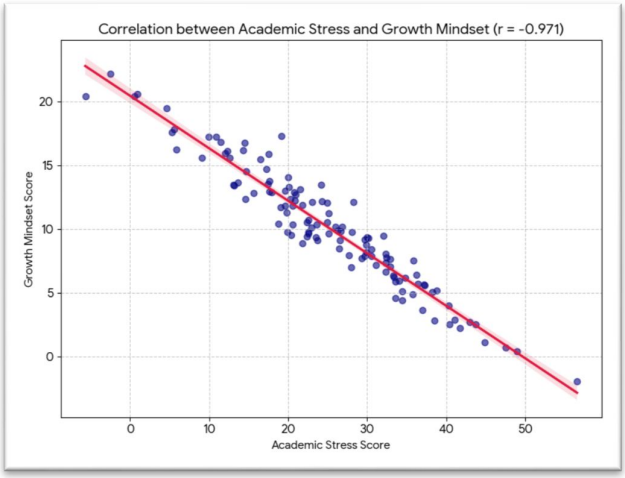

Figure 2: Scatter Plot Demonstrating the Significant Negative Correlation between Academic Stress and Growth Mindset (r = -.971)

Table 3

Group Statistics Showing Mean Differences in Academic Stress and Growth Mindset by Gender Among Undergraduate Students (N = 120)

Group Statistics					
	Gender	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Academic stress	male	59	23.78	11.747	1.529
	female	61	23.80	13.041	1.670
Growth mindset	male	59	10.51	4.928	.642
	female	61	10.66	5.540	.709

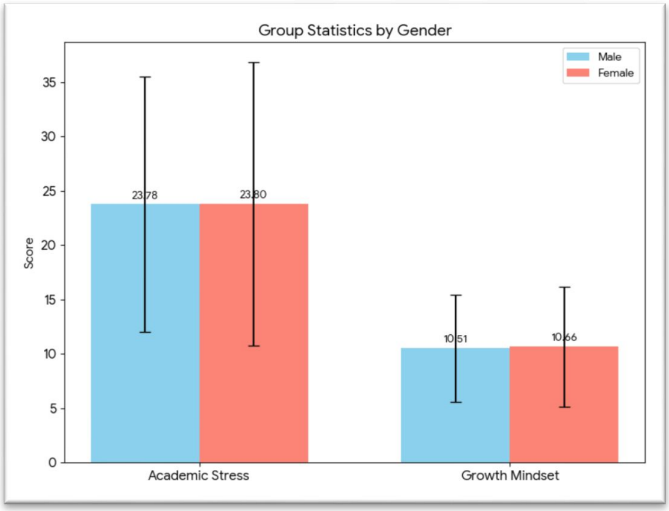

Figure 3: Mean Scores and Standard Deviations for Academic Stress and Growth Mindset by Gender (N=120)

Table 4

Independent Samples t-Test Results for Gender Differences in Academic Stress and Growth Mindset (N = 120)

Independent Samples Test										
		Levene's Test for Equality of Variances		**t-test for Equality of Means**						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Academics tress	Equal variances assumed	1.779	.185	-.010	118	.992	-.024	2.268	-4.515	4.468
	Equal variances not assumed			-.010	117.415	.992	-.024	2.264	-4.508	4.460
Growth mindset	Equal variances assumed	2.370	.126	-.154	118	.878	-.147	.958	-2.045	1.751
	Equal variances not assumed			-.154	117.190	.878	-.147	.956	-2.042	1.747

To test the second and third null hypotheses (H02 and H03), independent samples *t*-tests were conducted to examine whether significant gender differences exist in academic stress and growth mindset among undergraduate students. Prior to interpreting the results of the *t*-tests, Levene's test for equality of variances was assessed to determine whether the assumption of homogeneity of variance was met for each variable. With respect to academic stress, the descriptive statistics indicated that male students (N = 59) had a mean score of 23.78 (SD = 11.75), whereas female students (N = 61) had a mean score of 23.80 (SD = 13.04). The near-identical mean values suggest that both male and female students reported comparable levels of academic stress. Levene's test for equality of variances was non-significant, $F(1, 118) = 1.779$, $p = .185$, indicating that the assumption of homogeneity of variance was satisfied. Accordingly, the *t*-test results for equal variances assumed were interpreted. The independent samples *t*-test revealed that there was no statistically significant difference in academic stress between male and female students, $t(118) = -0.010$, $p = .992$. The mean difference between the groups was negligible (Mean Difference = -0.024), and the 95% confidence interval for the difference ranged from -4.515 to 4.468. Since the confidence interval includes zero and the p-value is substantially greater than the conventional alpha level of .05, the result indicates a lack of statistically significant difference between genders. Therefore, the null hypothesis (H02), which stated that there would be no significant gender difference in academic stress among undergraduate students, was retained.

Similarly, for growth mindset, descriptive statistics showed that male students (N = 59) had a mean score of 10.51 (SD = 4.93), while female students (N = 61) had a slightly higher mean score of 10.66 (SD = 5.54). Although female students demonstrated marginally higher scores, the difference in means was minimal, suggesting broadly similar levels of growth mindset across genders. Levene's test for equality of variances was again non-significant, $F(1, 118) = 2.370$, $p = .126$, indicating that the assumption of equal variances was not violated. Therefore, the results corresponding to equal variances assumed were considered appropriate for interpretation. The independent samples *t*-test revealed that the difference in growth mindset between male and female students was not statistically significant, $t(118) = -0.154$, $p = .878$. The mean difference was -0.147, and the 95% confidence interval ranged from -2.045 to 1.751. As the confidence interval includes zero and the p-value exceeds the .05 threshold, the difference between male and female students is not statistically meaningful. Consequently, the null hypothesis (H03), which posited that there would be no significant gender difference in growth mindset, was also retained.

The findings from the independent samples *t*-tests indicate that gender does not significantly influence either academic stress or growth mindset among undergraduate students in the present study. Both male and female students appear to experience similar levels of academic stress and hold comparable beliefs regarding the malleability of intelligence and abilities. These results suggest that gender may not be a critical factor in shaping these psychological constructs within this sample. The absence of significant gender differences highlights the potential universality of academic stress experiences and mindset orientations among undergraduate students, regardless of gender.

DISCUSSION

The present study was undertaken to examine the relationship between academic stress and growth mindset among undergraduate students in Kerala, and to explore whether gender differences exist in these psychological constructs. The findings of the study provide meaningful insights into the cognitive and emotional processes that underlie students' academic experiences, particularly within the context of higher education where academic demands are often intense and multifaceted. A key finding of the study is the presence of a **strong and statistically significant negative relationship** between academic stress and growth mindset. The results indicated that students who reported higher levels of growth mindset experienced substantially lower levels of academic stress. This finding aligns with contemporary theoretical frameworks and empirical research that emphasize the adaptive role of growth-oriented beliefs in academic contexts. A growth mindset, conceptualized as the belief that intelligence and abilities can be developed through effort, learning, and persistence, has been consistently associated with more positive academic outcomes and better psychological adjustment (Dweck & Yeager, 2019).

The strength of the correlation observed in this study is particularly noteworthy, suggesting that growth mindset may function as a powerful protective factor against academic stress. Students with a growth mindset are more likely to interpret academic challenges as opportunities for learning rather than as threats to their competence. This adaptive appraisal reduces the likelihood of experiencing stress in response to academic demands. In contrast, students who hold a fixed mindset may perceive challenges as indicators of their limitations, leading to heightened anxiety, fear of failure, and increased stress. These findings are supported by recent research indicating that growth mindset is associated with lower levels of academic stress and greater resilience among university students (Zhao et al., 2022; Park et al., 2023).

The results can be understood within the broader framework of self-regulation and coping. Students with a growth mindset tend to adopt mastery-oriented goals, engage in sustained effort, and utilize effective coping strategies when faced with academic difficulties (Burnette et al., 2020). These adaptive behaviors not only enhance academic performance but also mitigate the psychological burden associated with academic pressures. Recent studies have also highlighted that mindset-based interventions can significantly improve students' stress management by altering their cognitive appraisals and promoting adaptive coping mechanisms (Yeager et al., 2022). Therefore, the present findings reinforce the importance of fostering growth mindset as a means of promoting both academic success and psychological well-being.

Another important objective of the study was to examine gender differences in academic stress and growth mindset. The findings revealed that there were **no statistically significant differences** between male and female students in either academic stress or growth mindset. Both groups reported nearly identical mean scores for academic stress and very similar levels of growth mindset, indicating that gender does not appear to be a determining factor in these constructs within the present sample. The absence of gender differences in academic stress suggests that both male and female students are exposed to similar academic pressures and respond to them in comparable ways. This finding is consistent with recent literature indicating that academic stress is influenced more by situational and environmental factors—such as workload, evaluation systems, and academic expectations—rather than by gender alone (Pascoe et al., 2020). In contemporary educational contexts, particularly in higher education, both male and female students often face similar academic demands, which may explain the lack of significant differences observed in the present study.

Similarly, the lack of significant gender differences in growth mindset suggests that beliefs about intelligence and learning are not inherently gender-specific but are shaped by broader educational and socio-cultural influences. Recent research has indicated that both male and female students are equally capable of developing growth-oriented beliefs when exposed to supportive learning environments and constructive feedback (Bostwick et al., 2020). This finding highlights the universality of mindset as a psychological construct and suggests that interventions aimed at fostering growth mindset can be effectively implemented across genders without the need for gender-specific adaptations. The findings of the present study have important theoretical and practical implications. From a theoretical perspective, the study contributes to the growing body of literature emphasizing the role of cognitive beliefs—particularly growth mindset—in influencing academic stress. The strong inverse relationship observed between academic stress and growth mindset underscores the importance of integrating cognitive and motivational frameworks in understanding students' academic experiences.

The findings suggest that educational institutions should prioritize the development of growth mindset among students as a strategy for reducing academic stress. This can be achieved through various means, including incorporating mindset-oriented training programs, providing constructive feedback that emphasizes effort and improvement, and creating learning environments that encourage persistence and resilience. Given that no gender differences were observed, such interventions can be universally applied to all students, thereby maximizing their impact. Despite the valuable insights provided by this study, certain limitations must be acknowledged. The use of a cross-sectional research design limits the ability to establish causal relationships between academic stress and growth mindset. While the findings indicate a strong association, it cannot be conclusively determined whether growth

mindset reduces academic stress or whether lower stress levels facilitate the development of a growth mindset. Future research employing longitudinal or experimental designs would be beneficial in addressing this limitation. Additionally, the reliance on self-report measures may introduce response biases, such as social desirability or subjective interpretation of questionnaire items. Future studies may consider using multi-method approaches, including behavioral measures or qualitative data, to obtain a more comprehensive understanding of these constructs. Furthermore, the sample was limited to undergraduate students in Kerala, which may affect the generalizability of the findings to other populations or cultural contexts.

CONCLUSION

The present study was conducted to examine the relationship between academic stress and growth mindset among undergraduate students in Kerala, as well as to explore potential gender differences in these variables. The findings of the study provide clear and meaningful evidence regarding the psychological factors that influence students' academic experiences. The results revealed that undergraduate students, on average, experience a moderate level of academic stress and demonstrate a moderate level of growth mindset, with considerable variability across individuals. This indicates that while some students are able to effectively manage academic demands and maintain adaptive beliefs about learning, others may be more vulnerable to stress and hold less flexible views about their abilities.

A major finding of the study is the existence of a **strong and statistically significant negative relationship** between academic stress and growth mindset. This suggests that students who possess a higher growth mindset tend to experience lower levels of academic stress. In other words, the belief that intelligence and abilities can be developed through effort appears to act as a protective factor, enabling students to cope more effectively with academic challenges. Conversely, students with lower levels of growth mindset may be more prone to experiencing stress due to maladaptive interpretations of academic difficulties. The study also found **no significant gender differences** in either academic stress or growth mindset. Male and female students reported similar levels of stress and comparable beliefs about learning and intelligence. This indicates that gender does not play a significant role in influencing these variables within the present sample and suggests that academic stress and mindset are shaped more by individual and contextual factors than by gender. The findings of the study highlight the critical importance of growth mindset in the academic context. Promoting growth-oriented beliefs among students may serve as an effective strategy for reducing academic stress and enhancing psychological well-being. Educational institutions, therefore, have a vital role to play in fostering supportive learning environments that encourage effort, persistence, and resilience. In conclusion, the study contributes to the growing body of literature emphasizing the interplay between cognitive beliefs and academic stress. By demonstrating the strong inverse relationship between growth mindset and academic stress, and the absence of gender differences, the study underscores the need for universal, mindset-focused interventions aimed at improving students' academic and emotional outcomes.

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