

FROM STRESS TO SUCCESS: STREAM-WISE ANALYSIS OF ACADEMIC STRESS & PERFORMANCE IN ADOLESCENTS

Mandeep Kaur

Department of Psychology
Punjabi University, Patiala

Jeenat Rani

Research Fellow (JRF)
Department of Psychology
Punjabi University, Patiala

ISSN 2277-7733

Volume 13 Issue 2,
September 2024

Abstract

In the tumultuous journey of adolescent, the weight of academic stress often casts a looming shadow, shaping not only students' mental well-being but also their academic trajectories. Amidst the pressures of exams, competition, and societal expectations, understanding the intricate dance between academic stress and performance becomes paramount. Previous studies have hinted at the influence of various demographic and educational factors on these dynamics, from stream selection to family background. Objectives: The objective of the study was to investigate stress levels among students and their potential impact on academic performance. Sample: 186 school going adolescents out of which 92 were boys and 94 were girls from district Bhimani, Haryana. Tools: Socio Demographic datasheet was used to collect the relevant socio demographic information followed by Academic Stress Scale (Rajendran & Kaliappan 1990) and Academic Performance Scale (Christopher McGregor, 2015) Design: Descriptive statistics, The dataset was analysed in terms of its frequency and percentage distribution but also through statistical measures such as skewness and kurtosis, One Way ANOVA test was applied. Data collected was analysed using Statistical Package for Social Sciences (SPSS-29 version). Result: Significant gender difference was found; girls showed higher academic stress and academic performance than Boys. The findings further suggested that indicated heightened stress levels among medical and private school students, as evidenced by in stream selection and school type. These findings were discussed with regard to their implications for the structure and dynamics of the self.

Keywords: Academic Stress and Performance, Gender, Adolescents, Streams

In 1936, Hans Selye was the first to define stress, characterizing it as "the non-specific response of the body to any demand for change." Furthermore, stress is an environmental condition where forces from the outside or inside the person impact the person's physical or emotional health, or both (Stoppler, 2011). Stress can have a negative impact on a student's academic performance. Every person who advances in life experiences a variety of shifts and turns, and stress always seems to be a part of the process. Adolescents are especially susceptible to the idea of academic stress since they are going through both personal and social changes. Therefore, in order to develop appropriate and effective intervention strategies, it becomes essential to comprehend the causes and effects of academic stress. According to a study by Elias, Ping, and Abdullah (2011), undergraduate students had moderate levels of stress, with medical students having the highest level of stress among all undergraduate students. Additionally, a weak but statistically significant correlation was discovered

ACADEMIC STRESS & PERFORMANCE IN ADOLESCENTS

between students stress levels and their academic achievement. Siraj, Roslan, Hasan, Jin, and Othman (2014) discovered in another study that medical students experience higher levels of stress. In the hope of finding the source of stress among Filipinos, CNN Philippines conducted an open online poll in 2017 and revealed that out of the 200 respondents 23% of them identified that studies and work as a primary source of their stress.

The atmosphere in an academic setting is completely different from a non-academic and hence, the various stressors that trigger the students would be different. Differences would be seen in the causes, sources and even consequences of such stressors (Chang & Lu, 2007). Academic stress causes distress not only to the student but also to the institution in terms of its optimum functioning and even to the environmental agents around the student. Factors like frequent examinations, excessive assignments, poor time management skills, poor social relationships and peer competition were seen to be principal reasons for academic stress in students (Cheng, Leong, & Geist, 1993; Fairbrother & Warn, 2003). These are factors that are not limited to the West, but studies in India have also identified these sources as primarily responsible for high-stress levels (Sreeramareddy, Shankar, Binu, Mukopadhyay, Ray & Menezes, 2007). Stress is any situation that evokes negative thoughts and feelings in a person, all people do not experience the same negative thoughts and feeling when stressed when students appraise their education as a challenge, stress can bring them a sense of competence and an increased capacity to learn (Kaur & Kaur). Numerous nations, civilizations, and ethnic groups have recognised academic stress as a harmful problem (Wong, Wong, & Scott, 2006). Understanding the relationship between environmental stressors, students assessment of academic-related pressures, and their responses to those stressors might help explain academic stress (Lee & Larson, 2006). Stress frequently peaks when there are insufficient resources to meet the demands of school, which can result in physiological and psychological symptoms (Lou & Chi, 2000). Students are reporting increasing anxiety, depression, and even suicidal thoughts as a result of this stress increase, which has led to a number of mental health issues. Academic stress is cited by Kadapatti and Vijayalaxmi (2012) as a career stopper. In the field of higher education, Mazo (2015) discovered that students majoring in Information Technology at the undergraduate level view their school work as overwhelming, leading to significant levels of stress. This stress manifests itself through symptoms such as sleep disturbances and irritability, as noted by AL-Hroub and Ycaza (2017). Research conducted in India supports the notion that academic stress has negative repercussions, as highlighted by Rangaswami (1982) and Verma, Sharma & Harson (2002). Particularly, students in rural areas are found to be more susceptible to depression, anxiety, and stress, as evidenced by a study on students in junior colleges (Baviskar et al., 2013). High school seniors, who are faced with board exams, experience heightened levels of stress, leading to symptoms such as depression, anxiety, and reduced academic

ACADEMIC STRESS & PERFORMANCE IN ADOLESCENTS

performance. Additionally, students in this state may exhibit signs of school refusal, irritability, and phobias, further detracting from their interest in school work and academic success (Chan et al., 1999). The academic environment plays a significant role in shaping students' experiences and outcomes.

According to Krishna Lal (2013), students today must put forth more effort due to the new challenges they face in the classroom. Kaur (2014) acknowledged that the stress of school has an impact on teenagers' mental health. In comparison to boys, girls were found to have worse mental health when it came to academic stress. This was explained in the study, which found that parental pressure and student stress worsen mental health. Prabhu (2015) conducted research on a range of environmental, social, and financial factors that influence stress levels. Private school students experience more stress than public school students. In his research, Dimitrov (2017) asserted that stress can be reduced by guaranteeing that students place the utmost importance on their well-being. He also came to the conclusion that the educational system does not do enough to support students' holistic development and has more to do with granting academic credentials.

Need and Significance of the Study

Though stress is often considered bad but there is always the other side of the coin. The right kind of stress helps in sharpening the mind and reflexes thus helps in boosting memory. Mild stress is always needed for efficient and effective working. It can help one to meet daily challenges and can motivate students to reach their goals.

In the present time, students face various academic problems, which include exam stress, inability to understand the subject or lack of interest towards class etc. Academic stress is the feeling of anxiety or apprehension over the ones performance mainly in the academic activities. Due to academic stress students unable to perform to the best of their abilities in examination. It also creates problems in their academic performance. Academic pressure is a common experience among students, especially in competitive educational environments. Understanding its impact on academic performance can provide valuable insights for educators, administrators, and policymakers. Academic performance during school years can have long-term consequences for individuals' career opportunities and overall success. School is not only about acquiring knowledge but also about developing essential skills such as time management, resilience, and coping strategies. Investigating how students navigate academic pressure can help prepare them for similar challenges they may encounter in higher education or the workforce. Gender disparities in academic performance and educational attainment have been well-documented. Investigating how academic pressure contributes to these disparities can inform efforts to promote gender equity in education and address systemic barriers faced by girls or boys in achieving academic success. Programme for International Student Assessment (PISA), conducted by the Organization for Economic Co-operation and

ACADEMIC STRESS & PERFORMANCE IN ADOLESCENTS

Development (OECD). While PISA primarily focuses on assessing 15-year-old students' performance in reading, mathematics, and science, it also includes questions related to students' well-being and attitudes towards learning, which can indirectly reflect academic stress levels. Additionally, some national surveys or studies conducted by educational institutions or mental health organizations may specifically investigate academic stress among school students. The present study designed to determine how academic stress influence upon the academic performance of the school level students. The landscape of education is continually evolving, with new fields and interdisciplinary studies emerging. However, traditional streams such as Medical, Non-Medical, Arts, and Commerce remain fundamental pillars of our educational system. This study underscores the need to continue valuing and evolving these traditional streams to meet contemporary demands.

Objectives of the Study

In conducting the present study, the researchers formulated the following objectives of the study: To study differences in academic stress and academic performance among school students in respect to their academic stream; To compare academic stress and academic performance of private and govt. school students.

Hypotheses: On the basis of the above objectives, the hypotheses were formulated as follows: There would be significant difference in academic stress among school students of diverse stream; There would be significant difference in academic performance among school students of diverse stream; There would be significant difference in academic stress among school students of private & government school; There would be significant difference in academic performance among school students of private & government school.

Methodology

Inclusion Criteria: Students who are Studying in 11th grade to 12th standard; The age range 16-20 years; Both male and female; Willing to participate in the study.

Exclusion: Currently taking any medications for emotional difficulties such as anxiety or depression; Person diagnosed with any psychiatric disorder; Currently receiving Psychotherapy

Ethical considerations: Informed consent from the participant was collected; Respect for the dignity of research participants had been prioritized; Anonymity of individuals and organizations participating in the research had been ensured; he researcher safeguarded the right to privacy of the participants; Participants was given the choice to drop out at any point of the research study

Sampling: The study included 186 participants, comprising both boys and girls students from Public and Private schools from district Bhiwani (Haryana). The study aimed to investigate the academic stress and academic performance among adolescents aged 16-20, spanning 11th to 12th grade of diverse academic stream. This diverse sample allowed for a comprehensive examination of the research variables across different demographic groups. Purposive sampling was utilized to select participants from both government and private schools in

ACADEMIC STRESS & PERFORMANCE IN ADOLESCENTS

Bhiwani, (Haryana). G Power software was employed to calculate the appropriate sample size for the study.

Tools: Socio Demographic data sheet: The socio-demographic data sheet collected various background characteristics of the participants to provide insights into the demographic profile of the study sample. Participants were asked to provide personal information such as their name, age, gender, and date of birth, alongside details regarding their educational background including grade or class level, type of school attended (government or private), and the name of the school. Family-related information was also gathered, including parent or guardian names, family income level, number of siblings, and parental education level.

Academic Stress Scale: The scale was originally developed and standardized by Kim (1970). The scale was adopted to Indian conditions by Rajendran & Kaliappan (1990) and Rao (2012). The academic stress scale consists of 40 items. There were five options for each item, ranging from “No stress” to “Extreme Stress.” Each option is assigned a score of 0, 1, 2, 3, 4 respectively. The scale was classified into five categories and each category comprised of 8 items. The scale includes five components i.e., Personal Inadequacy, Fear of Failure, Interpersonal difficulties with teachers, Teacher-pupil relationship / Teaching methods, Inadequate study facilities. The total score for each category would range from 0 to 32, calculated by summing the scores of the eight items within each category. Each item has a score ranging from 0 to 4, the total score could range from 0 (if a respondent selected “No stress” for every item) to 160. Those who scored more than the mean score of 67.13 were considered to have high academic stress and those less than the mean score of 67 had no academic stress. The higher the value of the score, the more academic stress and vice-versa. The reliability co-efficient was calculated using test-retest method and found to be 0.82.

Academic Performance Scale: The Academic Performance Scale developed by Christopher McGregory in 2015. For the total score, an internal consistency of .89 and a test-retest reliability of .85. The APS consisted of (8) 5-point scale items. This 5-point scale assessment was carried out by Carson Birchmeier, Emily Grattan, Sarah Hornbacher, and Christopher McGregory of Saginaw Valley State University. To score the scale, “Strongly Agree” is scored (5); “Agree” is scored (4); “Neutral” is scored (3); “Disagree” is scored (2); and “Strongly Disagree” is scored (1). Performance assessments can be categorized into five distinct levels, each reflecting a different degree of achievement and proficiency. Scoring between 33 and 40 indicates an exceptional level of performance, showcasing outstanding competency and consistent excellence in meeting or surpassing expectations. A score ranging from 25 to 32 signifies a commendable level of performance. Those within this range exhibit good proficiency, consistently meeting expectations and often exceeding them in certain aspects. Performance falling between 17 and 24 is considered moderate. Individuals in this range generally meet expectations but may occasionally

ACADEMIC STRESS & PERFORMANCE IN ADOLESCENTS

struggle or demonstrate inconsistencies in their performance. While they contribute adequately, there may be areas where improvement or development is needed to enhance effectiveness. Scores ranging from 9 to 16 indicate poor performance. Individuals within this range frequently fail to meet expectations and may require significant support or intervention to improve their performance. Lastly, scoring between 0 and 8 indicates failing performance. Individuals in this range consistently fail to meet expectations and may not demonstrate the necessary skills or understanding required for their role. Scale scores showed adequate internal consistency, 2-week test–retest reliability, and satisfactory concurrent validity.

Procedure: To explore academic stress and academic performance among school students and compare academic stress level based on gender and school type. Participants were selected from both government and private schools in Bhiwani, Haryana encompassing students in grades 11th to 12th. Out of the 200 samples collected, data was successfully obtained from 186 students. The remaining 14 samples were excluded due to various reasons, which included: Out of the 200 samples collected, data was successfully obtained from 186 students. The remaining 14 samples were excluded due to issues such as incomplete responses, where some students did not finish all parts of the survey or questionnaire. Additionally, certain key questions were left unanswered, and there were inconsistencies in the data provided, such as conflicting answers. These problems made the data from these 14 students unusable for the purposes of this study. Prior to data collection, rapport was established with each participant to ensure comfort and willingness to participate in the study. Participants under the age of 18 were required to obtain consent from their respective teachers or legal guardians before participating in the study. For participants aged 18 and above, self-consent was obtained. Participants were provided with questionnaires designed to assess academic stress and performance. Clear instructions regarding the purpose of the study, the questionnaire format, were provided to all participants. Any queries or concerns raised by participants were addressed to ensure clarity and understanding. Responses to the questionnaire were collected from participants in a structured manner, ensuring consistency and accuracy in data acquisition. Data collected from the questionnaires were securely stored and handled to maintain confidentiality and integrity throughout the research process. Measures were taken to ensure the validity and reliability of the questionnaire used in the study. Academic stress levels reported by male and female students were compared using suitable statistical tests, such as F-tests. This examination sought to identify potential variations in academic stress levels influenced by the type of educational institution attended, shedding light on differential stress experiences across school types. Efforts were made to ensure participant privacy and confidentiality throughout the data collection process.

ACADEMIC STRESS & PERFORMANCE IN ADOLESCENTS

Statistical analysis: Descriptive statistics were computed to summarize the characteristics of the variables under study. Measures such as mean, standard deviation were calculated to provide an overview of the distribution of data. Additionally, skewness and kurtosis values were examined to assess the symmetry and peakedness of the data distribution. Frequency analysis was conducted to determine the occurrence of different responses or categories within the variables. The frequencies and corresponding percentages of each response category were computed to identify patterns and trends within the data. F-test was employed to compare the means of two independent groups, such as male and female students, or students from government and private schools.

Table 1 : Descriptive Statistics of Socio-Demographic Variables

Variables	Level	Frequency	Percentage	Skewness	Kurtosis
Age	16-18	89	47.85	0.0	-2.0
	19-20	99	53.23		
Gender	Girls	94	50.54	0.0	-2.0
	Boys	92	49.46		
Grade	11 th	89	47.85	0.0	1.97
	12 th	99	53.23		
Stream	Medical	55	29.57	3.23	2.75
	Non- medical	50	26.88		
	Arts	41	22.04		
	Commerce	40	21.51		
School	Private	97	52.15	-2.01	-0.12
	Govt.	89	47.85		
Father occupation	Farmer	45	24.19	0.596	-1.120
	Private job	32	17.20		
	Govt. job	35	18.82		
	Business	34	18.28		
	Self employment	40	21.51		
Family type	Nuclear	45	24.19	0.0	-2.0
	Joint	141	75.81		
Area	Rural	75	40.32	0.41	2.01
	Urban	111	59.68		

The data provided offers a comprehensive overview of various demographic and educational factors, allowing for an in-depth analysis of their distribution patterns. Starting with age distribution, the dataset indicates a nearly balanced representation between two age groups, with approximately 47.85% falling into the 16-18 age bracket and 53.23% in the 19-20 age range. Examining gender distribution, the dataset reveals a near-equal split between girls and boys, with girls comprising 50.54% and boys 49.46% of the total sample. This balanced representation underscores gender parity within the population under consideration. Moving to academic variables, the distribution across grades shows a slightly higher representation in the 12th grade compared to the 11th grade, with 47.85% in the 11th grade and 53.23% in the 12th grade. Regarding stream selection, the data portrays varying degrees of representation across different streams. The medical stream stands out with 29.57% representation,

ACADEMIC STRESS & PERFORMANCE IN ADOLESCENTS

followed by non-medical (26.88%), arts (22.04%), and commerce (21.51%). This distribution highlights the diverse academic interests and career aspirations among students. When considering school types, private schools attract a slightly higher percentage of students at 52.15% compared to government schools at 47.85%. This distribution reflects the educational landscape within the population, with a notable preference for private institutions. Analysing father occupations, the dataset showcases diverse career paths among parents. Farmers constitute 24.19%, followed by private job holders (17.20%), government job holders (18.82%), business owners (18.28%), and self-employed individuals (21.51%). This distribution illustrates the occupational diversity within the sample population. Family type exhibits a predominance of joint families, comprising 75.81% of the total, while nuclear families represent 24.19%. Finally, the urban-rural distribution indicates 40.32% of individuals residing in rural areas and 59.68% in urban areas. This distribution highlights the urban-centric nature of the population, with a larger proportion residing in urban locales.

Table 2 : The distribution of Academic Stress scores of subjects treated by the four methods of Academic Stream

	Academic Stream	N	Mean	Std. Deviation	Std. Error
Academic stress	Medical	55	99.80	27.10	3.65
	Boys	24	60.30	15.13	
	Girls	28	69.24	30.83	
	Non- medical	50	84.68	28.34	4.01
	Boys	26	54.5	28.29	
	Girls	24	59.25	29.05	
	Arts	41	74.41	20.41	2.02
	Boys	20	45.51	14.45	
	Girls	21	59.23	17.67	
	Commerce	40	68.00	23.92	1.96
	Boys	22	40.00	15.56	
	Girls	21	48.00	17.65	
	Total	186	90.29	28.21	2.07

Table 3 : Summary of analysis of variance for Academic Stress Across Different Streams

		Sum squares	Df	Mean square	F
Academic stress	Between groups	55550.69	3	18516.90	36.75**
	Within groups	91697.63	182	503.83	
	Total	147248.3	185		

Table 4 : Differences in Academic Stress based on Academic stream-post hoc test

			Mean difference	Std error	Sig
Bonferroni	M	NM	10.12	4.39	.133
		A	35.39	4.63	.000
		Comm.	41.80	4.66	.000
	NM	M	-10.12	4.39	.133
		A	25.27	4.73	.000
		Comm	31.68	4.76	.000
	A	M	-.35.39	4.63	.000

ACADEMIC STRESS & PERFORMANCE IN ADOLESCENTS

		NM Comm	-.25.27 6.41	4.73 4.99	.000 1.000
	Comm.	M NM A	-41.80 -31.68 -6.41	4.66 4.76 4.99	.000 .000 1.000

The First hypothesis put forward that “There would be significant difference in academic stress among school students of diverse stream”. The result indicated that there was a statistically significant difference in academic stress among different stream, as $(F(3,182)= 36.75, p=<0.01)$. Students pursuing the medical and non-medical streams exhibit comparatively higher mean stress scores, with averages of 99.80 and 84.68 (Table no.2) respectively, suggesting academic pressures within these fields. Moreover, the wider standard deviations of 27.10 and 28.34 for these streams imply considerable variability in stress experiences among students. For the medical stream, the mean stress score for boys was 60.30 with a standard deviation of 15.13, and for girls, it was 69.24 with a standard deviation of 30.83. For the non-medical stream, the mean stress score for boys is 54.5 with a standard deviation of 28.29, and for girls, it was 59.25 with a standard deviation of 29.05. Conversely, students in the arts and commerce streams report lower mean stress scores of 74.41 and 68.98, respectively, indicating relatively lower academic stress levels. The narrower standard deviations of 20.41 and 23.92 for these streams suggest more consistent stress experiences among students. For the arts stream, the mean stress score for boys is 45.51 with a standard deviation of 14.45, and for girls, it is 59.23 with a standard deviation of 17.67. For the commerce stream, the mean stress score for boys is 40.00 with a standard deviation of 15.56, and for girls, it is 48.00 with a standard deviation of 17.65. Overall, these findings underscore the varying degrees of academic stress experienced by students across different academic streams, with implications for understanding and addressing stress-related challenges in education.

The table no. 4 revealed that there was a significant difference between the academic stress in students of various streams that is Arts and commerce and medical & non-medical stream. The academic stress of the non- medical students had a significant difference with that arts and commerce stream. There was a significant difference in the academic stress of arts stream with that medical and non- medical stream. The academic stress of commerce student had significant difference with that of medical and non- medical student. The Bonferroni test results provide multiple comparisons among four groups labeled medical, non- medical, arts, commerce. Each comparison assesses the mean differences between the groups, along with their statistical significance. When comparing group Medical with non- medical the mean difference is 10.12 with a standard error of 4.69. The p-value is 0.133, which is greater than 0.05, indicating that the difference is not statistically significant. Comparing medical with arts yields a mean difference of 35.39 and a standard error of 4.63. The p-value is less than 0.001, showing a statistically significant difference. In the

ACADEMIC STRESS & PERFORMANCE IN ADOLESCENTS

comparison between medical and commerce, the mean difference is 41.80 with a standard error of 4.66. The p-value is again less than 0.001, indicating a significant difference. Comparing non-medical with arts results in a mean difference of 25.27 and a standard error of 4.73. The p-value is less than 0.001, indicating a significant difference. The 95% confidence interval ranges from 12.65 to 37.88, which does not include zero, confirming the significance. Finally, comparing non-medical with commerce shows a mean difference of 31.68 and a standard error of 4.76. The p-value is less than 0.001, indicating a statistically significant difference. In summary, the comparisons reveal significant differences between most pairs of groups, except for the comparison between medical and non-medical where the difference is not statistically significant.

Based on the findings, it can be concluded that students enrolled in the medical stream tend to experience the highest levels of academic stress compared to their counterparts in non-medical, arts, and commerce streams. This conclusion is supported by the significant differences observed in academic stress levels between the medical stream and all other streams investigated in the study. The outcomes of our study corroborate the findings of Reddy (2018) this study concludes that stream wise difference in stress exists in students. Data on difference of academic stress among students enrolled in science and arts streams. The mean score of academic stress of students enrolled in science stream is 86.9 while that of the students enrolled in arts stream is 80.7. There exist statistically significant difference exist between academic stress of students enrolled in science stream and arts stream. The result revealed that students enrolled in science stream found academically more stressed as compared to the students enrolled in arts stream.

Therefore, it can be inferred that medical stream students exhibit the highest degree of academic stress among the groups studied. Our study results are in line with existing research Shubham Sharma, Chamola , Nikita Pandey(2021) result showed that when students enrolled in science and arts streams are compared together, they differed significantly in their academic stress. Students enrolled in science stream were found academically more stressed as compared to students enrolled in arts stream. Our study corroborates the findings of Aafreen, Priya, and Gayathri (2018); students studying in science stream had stress more compared to students studying in other streams. Prabhu, (2015) Students from Arts students are less stressed than the students from Science stream. Medical stream students perceive higher academic stress compared to students in arts, commerce, or non-medical streams due to the demanding nature of their coursework, extensive study hours, and pressure to excel in competitive examinations. Chokshi, Rangwala Dumra (2021) study result showed statistically significant difference was seen in the mean scores of depression and anxiety among science and non-science students ($p < 0.005$). Students belonging to science stream showed more depression and anxiety overall as well as when compared on basis of age groups. Similar results were

ACADEMIC STRESS & PERFORMANCE IN ADOLESCENTS

also observed among science students who said it was not their own decision to choose their stream. Medical education is widely recognized for its rigorous and demanding curriculum, which includes complex subjects such as anatomy, physiology, pharmacology, and pathology. Medical students typically face a heavy workload, extensive study hours, and frequent assessments, including practical exams, clinical rotations, and licensure examinations. The sheer volume and depth of the material covered in medical school can be overwhelming, leading to heightened stress levels among students.

Table 5 : The distribution of Academic Performance scores of subjects treated by the four methods of Academic Stream

	Academic Stream	N	Mean	Std. Deviation	Std. Error
Academic performance	Medical	55	46.92	17.11	2.65
	Boys	24	28.30	12.12	
	Girls	28	37.24	10.53	
	Non- medical	50	48.5	18.34	2.03
	Boys	26	31.5	11.29	
	Girls	24	34.5	12.25	
	Arts	41	56.00	17.92	1.03
	Boys	20	34.00	14.45	
	Girls	21	39.00	17.17	
	Commerce	40	61.98	18.41	
	Boys	22	39.23	12.16	
	Girls	21	45.51	15.62	
	Total	186	52.75	25.21	3.07

Table 6 : Academic performance Scores Across Different Academic Streams

		Sum squares	Df	Mean square	F
Academic Performance	Between groups	5907.76	3	1969.25	42.28**
	Within groups	8477.65	182	46.58	
	Total	14385.40	185		

Table no. 7 Differences in Academic performance based on Academic stream- post hoc test

			Mean difference	Std error	Sig
Bonferroni	M	NM	-12.93	1.33	.000
		A	-6.63	1.41	.000
		Comm.	-6.60	1.66	.000
	NM	M	12.93	1.39	.000
		A	-13.56	1.73	.000
		Comm	-7.23	1.66	.000
	A	M	6.63	1.62	.000
		NM	13.56	1.73	.000
		Comm	6.33	1.91	.000
	Comm.	M	6.60	1.66	.000
		NM	7.23	1.76	.000
		A	-6.33	1.92	.000

The second hunch suggested that “There would be significant difference in academic performance among school students in respect to their academic stream”. The academic performance scores varied across different streams. The result indicated that there was a statistically significant difference in academic

ACADEMIC STRESS & PERFORMANCE IN ADOLESCENTS

performance between the different stream, as $(F(3,182)= 42.28, p=<0.01)$. In the medical stream, the total mean performance score was 46.92 with a standard deviation of 17.11 (Table no. 5) boys had a mean of 28.30 and an SD of 12.12, while girls had a mean of 37.24 and an SD of 10.53. In the non-medical stream, the total mean was 48.5 with an SD of 18.29; boys had a mean of 31.5 and an SD of 11.29, and girls had a mean of 34.5 and an SD of 12.25. For the arts stream, the total mean performance score was 56.00 with an SD of 17.92; boys had a mean of 34.00 and an SD of 14.45, and girls had a mean of 39.00 and an SD of 17.17. In the commerce stream, the total mean was 61.98 with an SD of 18.41; boys had a mean of 39.23 and an SD of 12.16, and girls had a mean of 45.51 and an SD of 15.62. The results show that there are statistically significant differences in academic performance among students from different academic streams. Medical students performed worse compared to all other streams. Arts students performed better compared to all other stream. The bonferroni post hoc analysis revealed significant difference in mean scores among the four streams (Table no. 7). This finding is matched with the findings of some previous related literature by Bhati, Baral, Venkateswar Meher (2022) Further, the results revealed that undergraduate students of the science stream were having high academic self-efficacy were having significantly higher academic performance as compared to others. Science and commerce streams can be more demanding due to their focus on subjects that require intense study and practice, such as physics, chemistry, mathematics, and economics. The relatively lower workload in arts can reduce stress and allow students more time to absorb and understand their subjects, leading to better academic outcomes. The arts stream generally has a less intensive curriculum compared to science and commerce. This reduced pressure can lead to a better academic performance as students can manage their studies more effectively without the high stress associated with rigorous subjects like mathematics and physics.

Table 8 : Showing comparison of Academic Stress between Government and Private school students

	School type	N	Mean	SD	Cohen's value
Academic stress	Private	97	68.75	19.82	0.82
	Government	89	54.19	15.23	

The third hypothesis stated that “There would be significant difference in academic stress among school students of govt & private school.” In the private school students, the mean academic stress level was 68.75 with a standard deviation of 19.82 (Table no 8) while in the government school students, the mean academic stress level was 54.19 with a standard deviation of 15.23. The Cohen's d value of approximately 0.82 indicated large effect size. This means that the difference in academic stress levels between students in private and government schools is significant. The results of the study align closely with the conclusions drawn from prior research by Thenmozhi, Poornima (2020) highlights the varying levels of stress experienced by students in private school. The findings reveal that students in this demographic experience low, moderate, and high levels of stress, with a noticeable progression from lower to higher

ACADEMIC STRESS & PERFORMANCE IN ADOLESCENTS

stress categories. Study's findings are consistent with Aneetta , Inchara Chamaiah (2022) result reveals the level of Academic stress of students of private and government institution the mean score of the academic stress based on the institution were 112.48 for private institution and 100.65 for government institution respectively. The mean score is greater for students of private institution. According to Ghosh (2016) students in private schools have more academic stress than their equivalent in government schools. The higher levels of stress experienced by students in private schools compared to those in government schools could be attributed to the academic rigor and elevated expectations commonly associated with private educational institutions. These institutions often prioritize academic excellence and achievement, fostering an environment where students feel compelled to excel academically. Consequently, the heightened academic demands and expectations prevalent in private schools may contribute significantly to the increased stress levels observed among students enrolled in these institutions.

Table 9 : Showing comparison of Academic Stress between Government and Private school students

	School type	N	Mean	SD	Cohen's value
Academic performance	Private	97	78.75	21.81	0.74
	Government	89	64.19	17.28	

The fourth hypothesis argued that “There would be significant difference in academic performance among school students of govt, private school?”. For private school students, (M=78.75,SD= 21.81) whereas for government school students, (M=64.19 SD=17.28 (Table no 9).The Cohen's d value of approximately 0.74 indicated moderate to large effect size. This means that the difference in academic performance levels between students in private and government schools is significant. This suggests that the academic performance across streams significantly differs, and the effect is meaningful. The results of this study align with our findings by Dickson, Rebeck Lalrinpuui, Ramhlupuii, Vasty, C.Lalsangpuui(2023) the results obtained from the above shows that the students from the Private school have performed better than the students from the Government school. There's a strong hope for uplifting government schools, aiming to restore their former glory and ensure they stand shoulder-to-shoulder with private schools in shaping our nation. However, there's a pressing concern regarding teacher attendance and the use of proxy teachers in government secondary schools.

Implications

The study on academic performance and academic stress among adolescents, comparing the arts, commerce, medical, and non-medical streams, offers valuable insights with several practical implications. Firstly, identifying which stream experiences the highest levels of academic stress allows schools can implement targeted mental health programs. For instance, if medical stream students experience the most stress, institutions can introduce specific

counselling services, stress management workshops, and peer support groups to mitigate this stress. Understanding the differences in academic performance allows educators to adopt the most effective teaching strategies from high-performing streams. If commerce and arts students perform best, their teaching methods could be analysed and adapted for use in other streams to boost overall academic achievement. The findings can inform better allocation of educational resources. Streams with higher stress levels might benefit from additional resources such as tutoring centres, relaxation spaces, or extracurricular activities aimed at reducing stress.

References

- Aafreen, M. M., Priya, V. V., & Gayathri, R. (2018). Effect of stress on academic performance of students in different streams. *Drug Invention Today*, 10(9), 1176-1780.
- Baby, A.& Chamaiah Swamy, I. (2022). A Comparative Study of Academic Stress Among Government and Private Undergraduate Students. *International Journal of Indian Psychology*, 10(3), 676-683. DIP:18.01.069.20221003, DOI:10.25215/1003.069
- Baviskar, P. M., Phalke, V.D. and Phalke, D. B. (2013): Depression, Anxiety and Stress: A comparative study in Arts, Commerce & Science Junior College students in Rural Area of India. *GRA – Global Research Analysis* 2(11), 183-185.
- Bhati, K., Baral, R., & Meher, V. (2022). Academic Self-Efficacy and Academic Performance among Undergraduate Students in Relation to Gender and Streams of Education. *Indonesian Journal of Contemporary Education*. <https://doi.org/10.33122/ijoce.v4i2.35>.
- Chan, K. Y., Hung, E. C. S., Pin, H. Y., & Ithnin, H. B. (1999). Stress among medical students in a medical college of South India/ *Commentary. Education for Health*, 12(1), 63
- Chinzah, D. V., Lalrinpuui, R., Ramhlupuii, V., Lalthanpuui, V., & Lalsangpuui, C. (2023). A Comparative Study of the Academic Achievement of Government and Private Secondary School in the High School Leaving Certificate (HSLC) Examination. *International Journal of Creative Research Thoughts*, 11(4).
- Chokshi, A. S., Rangwala, P. P., Dumra, G. H., Thakrar, M. R., Singh, A. J., & Lakdawala, B. M. (2021). Depression, anxiety and stress amongst students in science verses non-science stream: a comparative study. *International Journal Of Community Medicine And Public Health*, 8(7), 3461–3467. <https://doi.org/10.18203/2394-6040.ijcmph20212602>.
- CNN Philippines. (2017). Filipinos cite job and studies as the top cause of stress- CNN PH poll. Retrieved June 2018 from <http://cnnphilippines.com/lifestyle/2015/09/23/Filipinos-top-causes-of-stress-job-traffic-money.htm>

ACADEMIC STRESS & PERFORMANCE IN ADOLESCENTS

- Dhull, I., and Kumari, S. (2015): Academic Stress Among Adolescents in Relation to Gender. *International Journal of Applied Research* 1(11), 394-396.
- Dimitrov.G (2017). A study on the impact of Academic Stress among college students in India, *Ideal Research*. 2(4)
- Kaczmarek M, Trambacz-Oleszak S. School-Related Stressors and the Intensity of Perceived Stress Experienced by Adolescents in Poland. *Int J Environ Res Public Health*. 2021 Nov 10;18(22):11791. doi: 10.3390/ijerph182211791. PMID: 34831544; PMCID: PMC8619610.
- Kaur, M.& Kaur, T. (2021) *Correlational Analysis Of Academic Stress With Test Anxiety And Guided Imagery*. *Journal of Emerging Technologies and Innovative Research*. 8(2),59-74.
- K. Jayasankara Reddy, Karishma Rajan Menon, AnjanaThattil (2018). Academic stress and its sources among university students. *Biomed Pharmacol J*, 11(1) pp 531- 537.
- Krishan Lal (2014). Academic stress among adolescent in relation to intelligence and demographic factors. *American International Journal of Research in Humanities, Arts and Social Sciences*, 5(1) pp. 123-129.
- Llego, J.H., Gabriel, E.P. Corpus, J.L. (2018) A Correlational Study on the Stress Level and Academic Performance of Nursing Students. *Journal of basic and applied Research*, 4(4): 83-87.
- Murberg T.A., Bru E. School-related stress and psychosomatic symptoms among Norwegian adolescents. *School Psychol. Int.* 2004;25:317–332. doi: 10.1177/0143034304046904.
- Prabu Suresh P (2015). A study on academic stress among higher secondary stress, *International Journal of Humanities and Social Science Invention*, 4(10), 63-68.
- Rajendran, R., & Kaliappan, K. V. (1990). Efficacy of behavioural programme in managing the academic stress and improving academic performance. *Journal of Personality and Clinical Studies*, 6(2), 193-196.
- Rangaswamy, K., 1982, Tension headache in adolescents. *Journal of Psychological Researchers*, 26(2), 70-72.
- Selye, H. (1956). *The Stress of Life*. New York: McGraw Hill
- Selye, H. (1976), *Stress in Health and Disease*, MA: Butterworth, Reading.
- Sharma, S., Chamola, B. P., & Pandey, N. (2021). Comparative study of stress among students of different streams: Science and arts. *International Journal of English Literature and Social Sciences*, 6(3) <https://ijels.com/10.22161/ijel.63.41>
- Thenmozhi. P & Poornima. R (2020). Comparison of academic stress between government and private school higher secondary students. *International Journal of Indian Psychology*, 8(1), 545-551. DIP:18.01.070/20200801,DOI:10.25215/0801.070

ACADEMIC STRESS & PERFORMANCE IN ADOLESCENTS

Vanlalruata, D., Chinzah, R., Lalrinpuii, Ramhlupuii, V., Lalthanpuii, C., & Lalsangpuii A(2023). International Journal of Creative Research Thoughts. Comparative Study of the Academic Achievement of Government and Private Secondary School in the High School Leaving Certificate (HSLC) Examination. 11(4),910-917.

Previous publications

Rani, J. & Toor, M.K. (2024). Unraveling the Bond between Emotional Intelligence, Happiness and Mindfulness in Adolescents. *International Journal of Indian Psychology*, 12(2), 001-010. DIP: 18.01.151.20241202, DOI:10.25215/1202.151.

Kaur, M., & Rani, J. (2024). Under the Shadows of Authority: Unveiling Age and Gender Disparities in Obedience. *International Journal of Interdisciplinary Approaches*, 2(5), 959-979. DOI: <https://doi.org/10.61113/ijiap.v2i5.370>.

Toor, M.K. & Rani, J. (2024) Exploring Happiness Through Forgiveness, Optimism, Spirituality, Gratitude Among Adolescents. *International Journal of Research and Analytical Reviews*, 11(2), 867-882.

Acceptance letter received by Journal of Indian academy of applied psychology (UGC care listed)