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PREVALENCE AND DETERMINANTS OF ACADEMIC STRESS AMONG HIGHER SECONDARY ADOLESCENTS IN SOUTH KERALA.

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ABSTRACT:

Background: Academic stress is increasingly burdening students, who must navigate each stage of life in a fast-paced world. Challenges such as disinterest in classes, comparing academic abilities with peers, difficulty understanding subjects, and striving to meet parental expectations exacerbate this stress. The demanding schedule of school hours and coaching sessions makes it hard for students to maintain both physical and mental health. Consequently, children and adolescents, like adults, face daily hassles, with little time or freedom to enjoy life as they juggle early mornings, extra classes, and late-night study sessions. Academic stress is a concern not only for students but also for teachers, educators, and public health specialists. It hinders not only academic progress but only lead children to engage in harmful behaviours such as drug use, smoking, and alcoholism. This study aims to estimate the prevalence of academic stress and identify its contributing factors.

Materials and Methods: A cross-sectional study was conducted among adolescents in higher secondary schools in South Kerala. Balaji Rao Academic stress scale is used as pretested tool to measure academic stress. The sample included 301 adolescents, comprising both males and females.

Results: The study found that 37.0% of adolescents experienced slight academic stress, 28.0% had moderate stress, and 35.0% had high stress. Contributing factors included younger age, rural residence, and being female.

Conclusion: Academic stress poses a significant threat to school-going adolescents and requires immediate intervention at both academic and community levels. Implementing effective measures is crucial to address this issue and support the well-being of students

Keywords: Prevalence , Academic stress , Determinants , Higher Secondary adolescents

1. Introduction

In the present scenario, as the society is influenced by modernization and westernization, the path from adolescence to adulthood is endowed with stress. Stress is defined as any form of change leading to physical, emotional, or psycho-logical disturbances .[(1)]. It is an unpleasant state of emotional and physiological arousal that individual experience in situations that their perceive as dangerous or threatening to their will being.[(2)] Stress and anxiety in adolescents are just as prevalent as adults. Negligence of parents, high expectations in academic performances, abused childhood, growing up tensions and demand for family and responsibility etc. are the main causes of childhood and teen stress. According to Gupta and Khan (1987), academic stress essentially relates to mental distress associated with some anticipated frustration on account of academic failure or even a realization of the possibility of such a failure.[(3)]Academic stress has been tightening its grip on students as they have to complete a every step of the life in the fast moving world. Few of the academic problems are disinterest in attending classes, comparing academic ability with other students, inability to understand the subject and trying to meet parent expectation. Due to hectic school hours, coaching competition it has become extremely complicated for the students to maintain their physical as well as their psychological health. Students being children or adolescents have to deal with daily hassles as adults do. They have to wake up early to get ready for their school, have to attend extra coaching classes to enhance the subject knowledge or to prepare for the competition exams, they study till late night in order to maintain the performance but they do not get enough space, time or freedom to enjoy their life.[(4)]Apart from all these challenges students are being forced by the parents or by others to choose the academic discipline or make a carrier choice which seems to appear potentially beneficial in future. But the forceful career choice adversely affects health and well being of an individual. Academic stress is seen to be higher in adolescents and its leads to low self esteem, psychological problems like suicide and depression. Stressed children show signs of emotional disabilities, aggressive behavior, shyness, social phobia and often lack interest otherwise enjoyable activities. In a study conducted by Dawood (1995) found that students' stress affect their academic performance. He further showed that the most frequently mentioned stressor by students was school and fear related stressors. Many teenagers tend to become non conformist and fall prey to teenage depression in response to a variety of growing up anxieties. However stress induced fear and anxieties in children adversely affects children's performances at various levels.[(5)] Academic stress has got a number of negative psychological and physical effects as reported by studies. In an empirical study carried out in Bangalore city in 2018, reported the academic stress affects on physiological aspects and symptoms which were reported are fatigue (85.3%), difficulty to concentrate (78.1%), head ache (77.9%), and mood swings (74.5%), while nervousness and anxiety (63.2%) and sleep disorder (63.7%).[(6)] According to the statistics published by (2017) national crime record bureau there is one student every hour commit suicide. The bureau registered 1.8% students who committed suicide due to falling in examination and an 80% rise in suicide rates during a one year time frame. A 2018 Lancet report also quoted that the 15-29 age group in India has the highest rate of suicide in the world and academic stress been identified as the primary cause of these alarming figures.[(7)] Adolescents are particularly vulnerable to the problems associated with academic stress as transitions occur at an individual and social level. Students in secondary and tertiary education settings says a wide range of ongoing normative stressors which can be defined as normal day to day hassles such as ongoing academic demand.[(8)] The prevalence of academic stress and anxiety are high among 10 th and 12 th grades adolescents from private schools in kolkatta .[(9)] Accordingly, secondary or high school and tertiary students, commonly self report experiencing on going stress relating to education which we refer to as academic

related stress, such as pressure to achieve high marks and concern about receiving poor grades.

Academic stress has been identified as detrimental issue across various countries, cultures and ethnic groups. Academic stress is the anxiety and stress that comes from schooling and education. It is an important factor accounting for variation in academic achievement. It also contributes to major mental health hazards, problems both physical and mental stress related diseases. Stress makes a significant contribution to the prediction of subsequent student performance and act as a negative predicator of academic performance of students. With this background an attempt has been made in this paper to review the literature on academic stress among higher secondary schooling relation to certain variables. In today's highly competitive world, student face various academic problems include in exam stress, disinterest in attending class and inability to understand the subject.[10] Examination stress is the feeling of anxiety or apprehensions over one's performance in the exams. It can lead to students being unable to perform to the best of the abilities in exam. Academic stress is the major source of stress among adolescence and it may lead to low self esteem. Many psychological problems such as depression and suicide occur as a result of low self esteem . . On average across OECD countries, 66% students reported feeling stressed about poor grades and 59% reported that they often worry that taking a test will be difficult. OECD further found that 55% of students feel very anxious about school tests, even when they are well prepared. The impact of this ongoing academic related stress to students' outcomes and well being has not been comprehensibly explored. That is the current narrative review explores the impact of academic related stress on students academic performance, mental health and well being, so the researcher find its importance to access the level of academic stress among adolescence.[11] Academic stress is the mental and physical response of the body when academic-related demands are greater than the adaptive abilities of students, especially in the of absence of social support .[12] Academic stress is specifically related to the learning environment; therefore, the measurement scale with which to evaluate this stress is different from the evaluation of general stress. Students consider their time in university as a very stressful period . The performance in the 12th grade final examination is crucial for getting admission into one's preferred choice of college or university. The poor ratio of number of available institutions to the aspirants for college education ensures that the students face tremendous competition in getting admission to tertiary education. The pressure of preparation for examinations creates a high degree of anxiety in many students, especially in those who are unable to perform at a level that matches the potential they have shown in less stressful situations. A descriptive survey reveals adolescent girls have more anxiety and academic stress than boys among age group of 15-19 years from Kannur district, Kerala . Further notified Positive correlation was found between stress and anxiety (r 6.690) . In additionally statistically significant association between stress, anxiety and selected variables – parent related factors, peer related factors, school and academic related factors. Stress and anxiety have an adverse impact on health of adolescents. Hence, measures should be taken at school and community level to ensure its early recognition and treatment.[13] . The people of adolescence are facing various situations like family, school and society since they are falling in many antisocial activities like suicide, conflict, frustration, and minor and major crimes and so on. Research shows that academic stress leads to less wellbeing and increased like hood of developing anxiety or depression. Additionally, students who have academic stress tend to do poorly in schools.The World Health Organization (WHO) defines adolescent as those people between 10 and 19 years of age. Globally India has a largest adolescent population in the world. India is a home for over 250 million adolescent who constitute 20 % of the total population. Adolescence is a critical phase for achieving human potential. Some teens become overload with stress. When this happens, it leads to anxiety, withdrawal,

aggression, physical illness or poor coping skills such as drug and alcohol use. [14] Recent studies have suggested that student stress is one of the rises especially for those involved in higher education. The way in which these studies experience stress, the different stressors and their coping mechanism differ across school scenarios. Those who attend English medium schools may differ from other students in the stressors they face and in the same way, the syllabus or curriculum they follow may also affect these changes. These stressful experiences can directly affect their academic performance. Intelligent students are able to deal with such stressors because they don't want to trust out or burn out.Several studies have shown that poor academic performance has been caused by a lack of adequate teaching facilities, unqualified teachers, student's poor study habits, psychological adjustment problems such as anxiety, stress and depression. Researches which investigated adjustment of students in school showed that most of the problems were caused due to the academic anxiety regarding their future. According to the statistics published by (2017) national crime record bureau there is one student every hour commit suicide. The bureau registered 1.8% students who committed suicide due to falling in examination and an 80% rise in suicide rates during a one year time frame. A 2018 Lancet report also quoted that the 15-29 age group in India has the highest rate of suicide in the world and academic stress been identified as the primary cause of these alarming figures.[15] Thus the study concluded prevalence of academic stress could be guide professionals to recognise early symptoms of academic stress and implement specific stress reduction strategies to alleviate academic stress and thereby promote mental health among adolescents. The present study conveyed prevalence and determinants of academic stress among higher secondary students adolescence .

Objectives :

- To estimate prevalence of academic stress among higher secondary adolescents .
- To find out association between academic stress and socio demographic factors .

2. Materials and Methods:

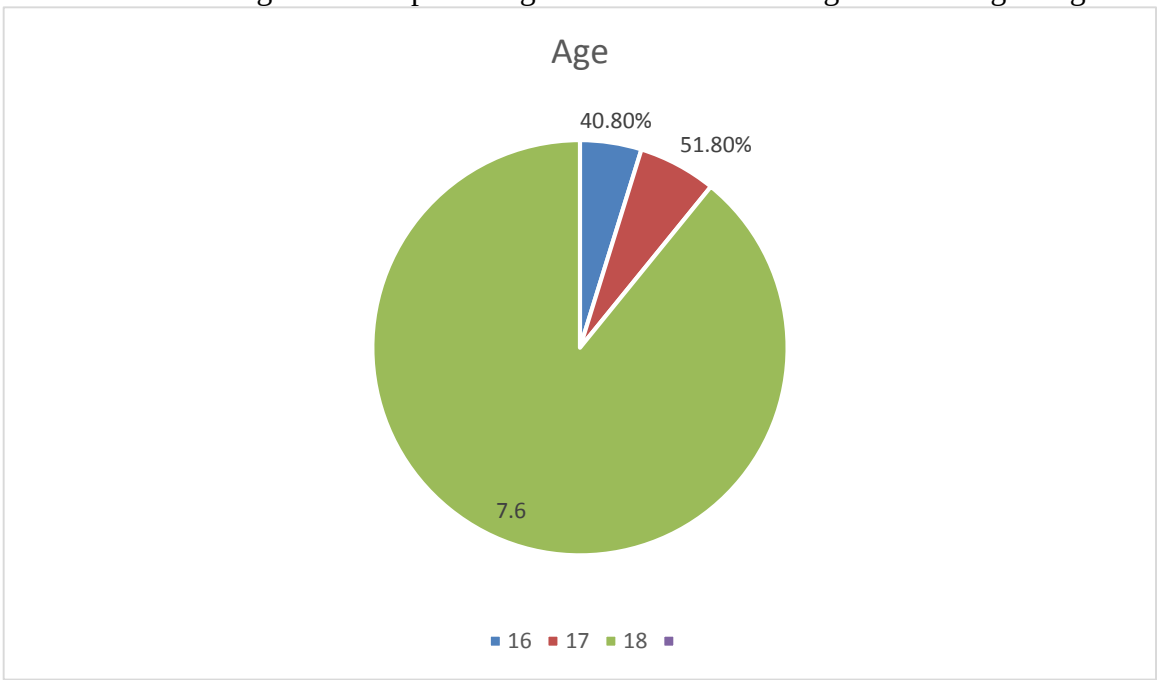
The cross sectional survey was adopted among 301 higher secondary adolescents . For conduct of the study , permission from Institution Ethical Committee (EC /09 / 2023) was obtained.

Self-structured standardized questionnaire was used to collect the basic data. The basic data comprised of demographic variables such as age gender, course opted and place of residence .And Academic Stress Scale by Balaji Rao (2013) was used to know the academic stress among students. There were 40 statements related to different situations that cause stress to the respondents such as incomplete or confusing study material, not enough discussion in class, biased / partial attitude of the teacher, lack of self-confidence, worrying about exams, the examination syllabus being too vast and so on. Each statement were rated on a 5 point scale from no stress, slight stress, medium stress, high stress and extreme stress and rated as 1, 2, 3, 4 and 5 respectively.

Six higher secondary schools were randomly selected from districts of Trivandrum . The sample comprises of both male and female respondents between the age group of 16 to 18 years. Data for the study was collected using the questionnaire which was formulated by the researcher. The researcher made visits to the different schools at different days and administered the questionnaire to the respondents. The respondents were asked to fill the questionnaire and give their replies for all the given questions. Any doubts that cropped up were dealt by the researcher herself. Muti stage cluster sampling was used in selecting the class divisions. Results were analysed in Jamovi software. Prevalence of academic stress was computed and expressed as percentage and 95% confidence interval was computed. Findings

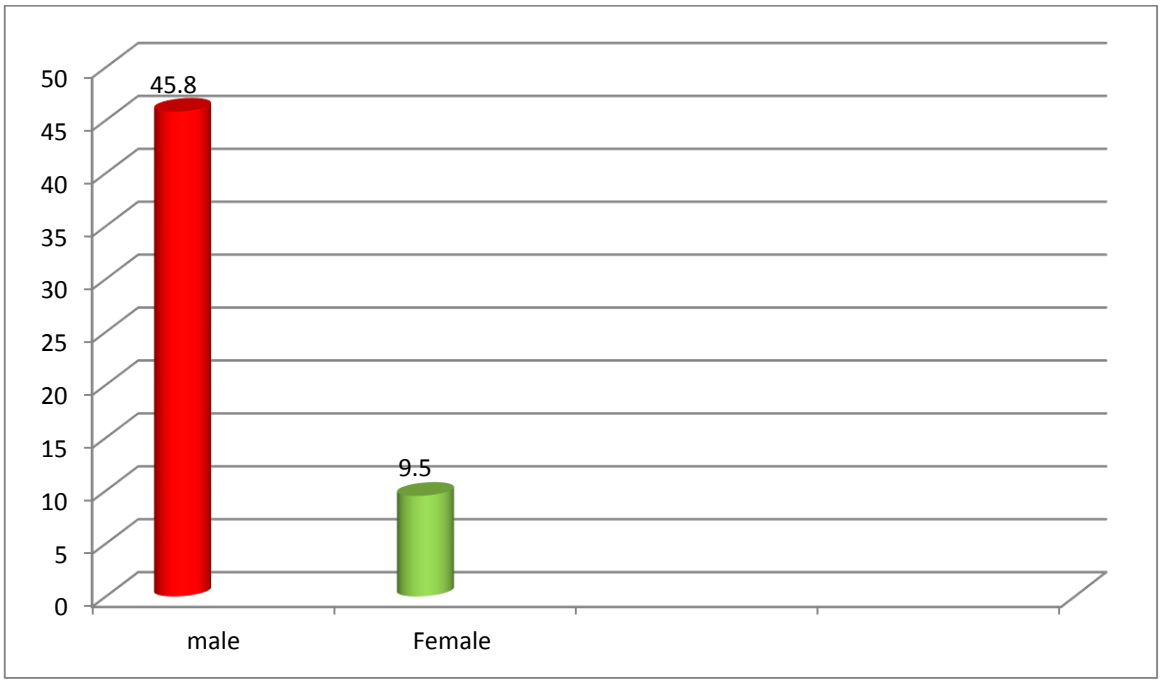
were expressed as frequency and percentage. Those variables found to have statistically significant association in univariate analysis were included in the logistic regression analysis.

Results : Diagram 1 : percentage distribution according to according to age



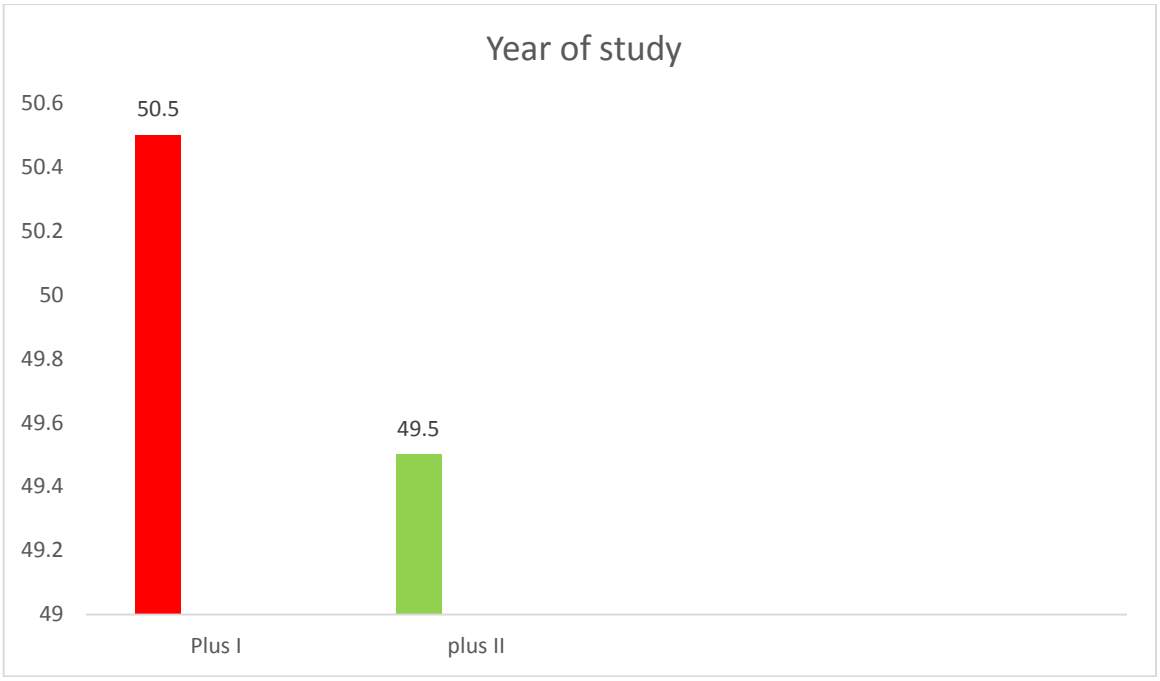
The socio-demographic characteristics of 301 adolescents reveal that the majority, 51.8%, are 17 years old, followed by 40.5% who are 16 years old, and 7.6% who are 18 years old.

Diagram 2 : percentage distribution according to according to Gender



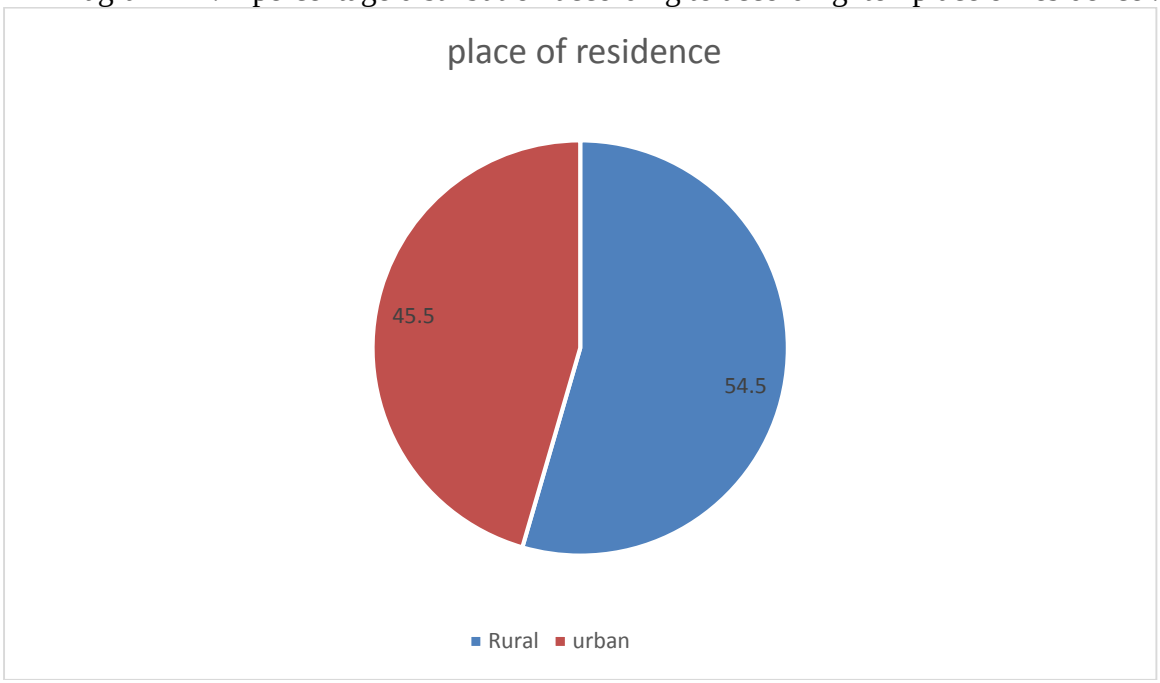
This figure depicted In terms of gender, 54.2% are female and 45.8% are male.

Diagram 3 : percentage distribution according to according to Years of study



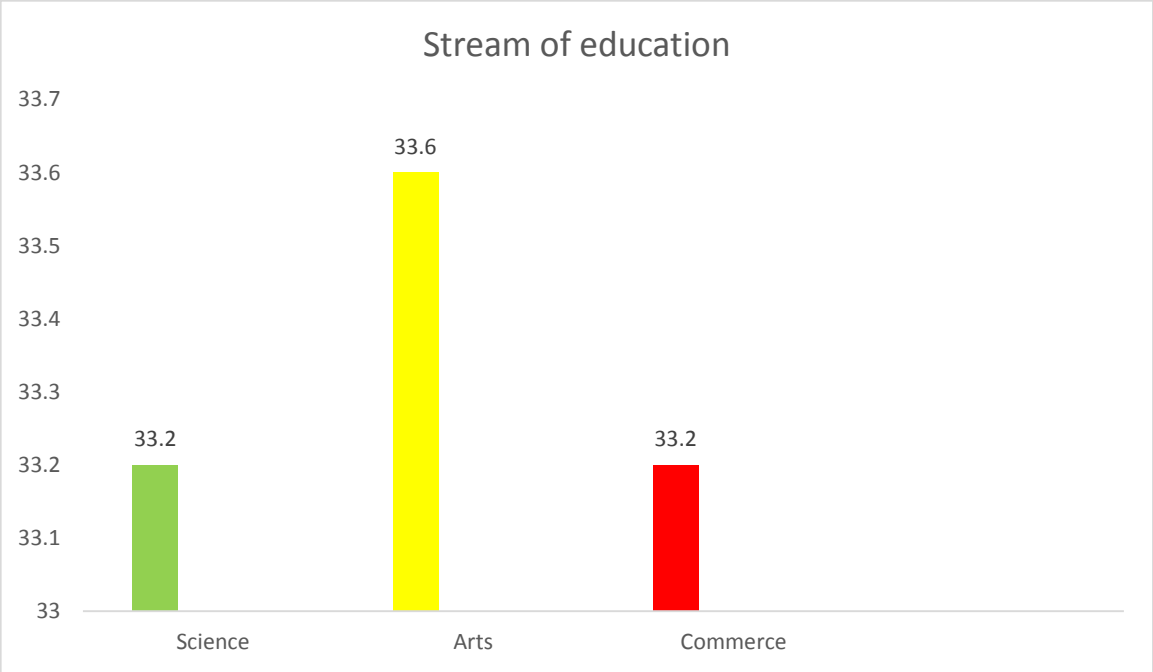
This figure illustrated their years of study, 50.5% are in Plus 1, and 49.5% are in Plus 2, more adolescents reside in urban areas, comprising 54.5%, .

Diagram 4 : percentage distribution according to according to place of residence .



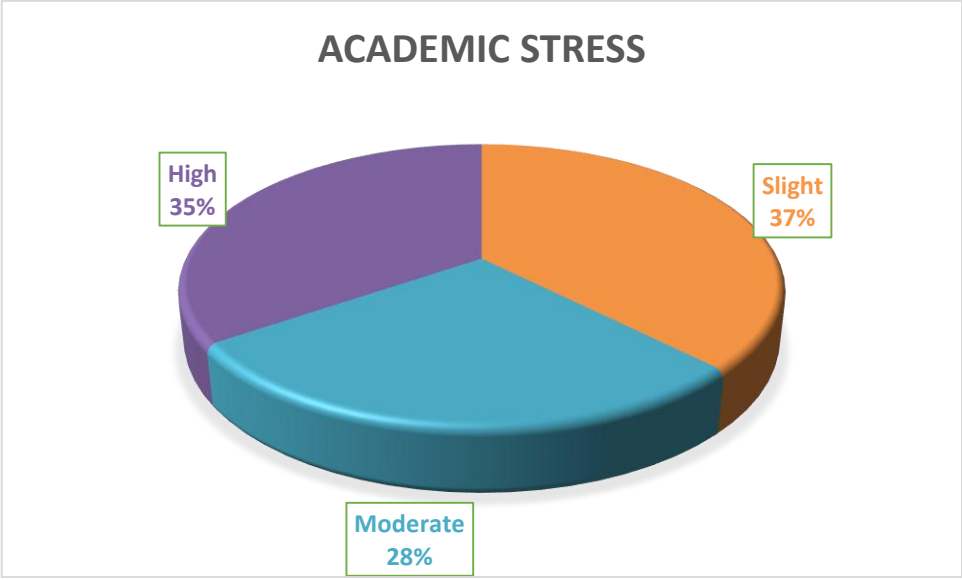
This figure represents their place of residence . More adolescents reside in urban areas, comprising 54.5%, while 45.5% live in rural areas.

Diagram 5 : percentage distribution according to according to stream of education



When considering their stream of education, the group is almost equally divided among Arts, Science, and Commerce, with 33.6% in Arts, and both Science and Commerce streams having 33.2% each.

Diagram 6 : Prevalence of Academic Stress



The study found that academic stress was high for 35% of the adolescents, moderate for 28%, and slight for 37%. It was expected that some form of stress will be present in school going adolescents. For the present study those who report high stress was considered as having academic stress. Thus the prevalence of academic stress in the study group was 35.0% with 95% CI 29.7%-40.4.

Table 1 : Factors Affecting Academic stress

Variables		Academic Stress				Total		$\chi 2$	p	OR	95 CI for OR	
		Slight		Moderate/ high							Lower	Upper
		No	%	No	%	No	%					
Age	16	37	30.3	85	69.7	122	100.0	4.5	0.033	1.69	1.04	2.75
	17 and above	76	42.5	103	57.5	179	100.0					
Gender	Male	63	45.7	75	54.3	138	100.0	7.1	0.007	1.89	1.18	3.04
	Female	50	30.7	113	69.3	163	100.0					
Year of study	Plus 1	57	37.5	95	62.5	152	100.0	0.0	0.988	0.996	0.625	1.59
	Plus 2	56	37.6	93	62.4	149	100.0					
Place of residence	Urban	78	47.6	86	52.4	164	100.0	15.3	0.001	2.6	1.6	4.3
	Rural	35	25.5	102	74.5	137	100.0					
Stream of education	Science/commerce	32	16.0	168	84.0	200	100.0	117.9	0.001	21.3	11.5	40
	Arts	81	80.2	20	19.8	101	100.0					
Total		113	37.5	188	62.5	301	100.0					

The analysis of academic stress among 301 adolescents, categorized as slight versus moderate/high, reveals significant differences across various socio-demographic factors. Among 16-year-olds, 69.7% experience moderate/high stress, compared to 57.5% of those 17 years and older. The odds ratio (OR) is 1.69, indicating a significantly higher likelihood of moderate/high stress in younger adolescents ($p = 0.033$). Gender-wise, 69.3% of females report moderate/high stress compared to 54.3% of males, with an OR of 1.89, showing a significant difference ($p = 0.007$). The year of study shows no significant difference, with 62.5% of Plus 1 and 62.4% of Plus 2 students experiencing moderate/high stress (OR = 0.996, $p = 0.988$). Place of residence is a significant factor, with 74.5% of rural adolescents experiencing moderate/high stress compared to 52.4% of urban adolescents, yielding an OR of 2.6 ($p = 0.001$). Stream of education shows the most substantial difference, with 84.0% of Science/Commerce students experiencing moderate/high stress compared to only 19.8% of Arts students, resulting in an OR of 21.3 ($p = 0.001$). Overall, 63.0% of the adolescents experience moderate/high academic stress.

Table 2 : Results of Logistic Regression

Variables	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
AGE Reference age above 18 years	0.465	0.323	2.070	1	0.150	1.591	0.845	2.997
GENDER (reference Males)	1.037	0.328	9.988	1	0.002	2.821	1.483	5.368
RESIDENCE (reference urban)	0.336	0.367	0.838	1	0.360	1.399	0.682	2.871
STREAM (reference Arts subjects)	3.333	0.391	72.505	1	0.000	28.030	13.014	60.372
Constant	-2.688	0.432	38.754	1	0.000	0.068		

The logistic regression analysis examining factors associated with academic stress provides several insights based on odds ratios (OR) and their significance levels.

1. **Age**: Adolescents aged 18 years and above serve as the reference group. For those younger, the OR is 1.591, suggesting a higher likelihood of experiencing academic stress, but this difference is not statistically significant (p = 0.150).
2. **Gender**: Males are the reference group. Females have an OR of 2.821, indicating they are significantly more likely to experience academic stress compared to males (p = 0.002).
3. **Place of Residence**: Adolescents living in urban areas are the reference group. Those residing in rural areas have an OR of 1.399, indicating a higher likelihood of experiencing academic stress, but this difference is not statistically significant (p = 0.360).
4. **Stream of Education**: Adolescents studying Arts subjects serve as the reference group. Those in Science/Commerce streams have a dramatically higher likelihood of experiencing academic stress, with an OR of 28.030, which is highly significant (p = 0.000).

Overall, these findings highlight significant gender and educational stream differences in academic stress, while age and place of residence do not show statistically significant differences.

3. Discussions

Using Balaji Rao Academic stress scale , the prevalence of academic stress was 35.0%. The important risk factors were age below 17 years, being female sex and stream of education. The study by Verma et al (2019) shows that the prevalence of academic stress as 30.5%. The prevalence was more in females (31.4%) than males (29.7%). The prevalence was high in 15 years (34.3%) and lowest in 14 years of age (22.9%).[16] Similarly, the prevalence was more in rural (53.9%) than in urban (46.1%). The findings are also confirmed by Kumar and Suneela (2022). The mean academic stress score was more for females than males and the difference was significant. Class 8 students and students from rural areas had low mean academic stress score but the differences were not statistically significant when compared with class 9 students and urban residents. [17]. A study conducted by Khanna et al (2023) put the prevalence of academic stress as 22.2 %. The prevalence of stress was significantly more

in females (28.9%) than females (15.7%). But the prevalence was more in younger age group but failed to reach statistical significance. . [18] The study by Gupta et al (2023) in West Bengal shows the prevalence of academic stress to be 33.7%. In the study prevalence was more in the age group 16-19 years (44.3%) than 14-15 years (22.5%).But the prevalence was more in females (44.7) than males (25.1%). Both these differences were significant. [19] A 2018 study by Anupama and Sarada demonstrates that very high academic stress for girls were seen in the cognitive and affective domains of academic stress and for boys' high academic stress was seen in the domains of behavioural, physical and social domains of academic stress. Type of school may exercise the level of academic stress among males and females but in both settings girls suffer more. The mean academic stress was more among government school boys and girls compared to private sector Sharma (2022) . [20] The study by Swarnika (2020) correlates the findings of the present study. The mean academic stress score was significantly more for females. The academic score was more for urban but was not statistically significant. [21]The Rantala et al (2021) study clearly demonstrates the variation of academic stress among different streams. The education stress was extremely severe in 36.1% of science students, 66.7% of commerce students and 23.5% of adolescent girls . [22]Another study by Vandana and Duhan (2022) shows that in rural areas, a higher percentage of science stream students experienced high levels of stress compared to their counterparts. Conversely, in urban areas, more arts stream students reported moderate and high levels of academic stress compared to science stream students. [23].

Students in secondary and tertiary education setting face a wide range of on going stressors related to academic demands . Previous research indicates that academic stress can reduce academic achievement ,decrease motivation and increase the risk of school drop out . The long term impact of academic stress reports poor quality of life and lower wellbeing and finally ends into serious Mental issues such as anxiety and depression . Additionally, the young students involve into health and risk behaviours like substance abuse and abuse are all important determinants of their current and future health and well being status . The experience of high level of academic -related stress increases the risk of young people developing various physical problems like obesity and reduced insulin sensitivity etc .

Limitations

When interpreting the results of this study, certain limitations must be considered. The cross-sectional survey design lacks interventions to reduce academic stress and involves only a limited number of participants, resulting in low statistical power. This design captures data at a single point in time, making it difficult to infer causality, track changes over time, or account for seasonal variations in stress levels, such as during exam periods. Future studies should incorporate objective measurements of biochemical stress parameters and stress reduction interventions to more effectively address academic stress in students.

4. Conclusion

Higher secondary adolescents are exposed to stress. The academic pressure is one of the major precursors for the stress. Our study findings points out indicate most of adolescents in higher secondary sessions are having academic stress and introduction of stress management techniques could be help to alleviate academic stress . Moreover the author recommends certain tips for reducing academic stress includes taking regular short breaks while working helps one relax and concentrate for longer, be calm and quiet on day of exam and never let negative thoughts get into mind .

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