

Relationship Between Academic Stress and Adjustment in Adolescent

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Cite this paper as: Manogya Singh, Dr. Nishi Fatma, Dr Aditya Pareek, (2025) Relationship Between Academic Stress and Adjustment in Adolescent. *Journal of Neonatal Surgery*, 14 (5s), 968-976.

ABSTRACT

This study investigates the relationship between academic stress and adjustment among adolescents using a quantitative, descriptive-correlational research design. A total of 160 secondary and higher secondary school students aged 13–19 were selected through stratified random sampling. Data were collected using standardized questionnaires—Sinha's Academic Stress Scale and the Adjustment Inventory for School Students (AISS)—and analyzed through SPSS. The results indicate a statistically significant and moderately strong positive correlation between academic stress and adjustment, with gender-based differences showing a slightly stronger association among female students. ANOVA results further confirmed the linear relationship between the two variables, and reliability analysis demonstrated excellent internal consistency of the tools used (Cronbach's Alpha = 0.974). These findings suggest that higher academic stress is linked to greater adjustment challenges, emphasizing the need for school-based interventions and parental support to foster better coping strategies among adolescents.

Keywords: Academic Stress, Adolescent Adjustment, School Students, Gender Differences, Social Adjustment, Emotional Adjustment

1. INTRODUCTION

The study used a quantitative, descriptive-correlational methodology to look into the link between teens' school worry and their ability to change (M. Singh & Pareek, 2024). A group of 160 school students was chosen using normal surveys, and their answers were analysed using SPSS to find trends and possible connections. Ethics rules were followed throughout the process, and leaders kept an eye on things.

Adolescence is a critical stage of development that is marked by major physical, emotional, cognitive, and social changes (Rakhimova Zarina Uktamovna, 2025). All adolescents go through this developmental stage, often described as one of "storm and stress," and can be exposed to various psychological pressures, particularly in academic realms (Scholar, Department of Sociology and Social Work, Annamalai University, Chidambaram (Tamil Nadu), India. et al., 2025). As the increasing demands of academics, peer expectations, parental pressures, and personal identity pursuit loads onto students, many can have considerable amounts of stress that may negatively impact their overall adjustment. Academic stress is one of the more common forms of psychological stress among adolescents, hailing from excessive workload, anticipated failure, competition, and lack of time (Naushad, 2022). If stress goes unmanaged with adolescents, academic stress can lead to emotional exhaustion, behavioral difficulty, and academic hindrance (D'Mello & Govindaraju, 2017).

On the other hand, adjustment is a fluid process where individuals do their best to align their internal requirements with external expectations. In adolescents, this perspective includes emotional adjustment, social adjustment, and academic adjustment (Kaljahi, 2016). Adjustment issues may be evidenced through social isolation, poor self-esteem, low educational achievement, and mental health issues including anxiety and depression (Vaz et al., 2015). Examination of the relationship between academic stress and adjustment has led researchers to identify a negative correlation between these two constructs (Karakose et al., 2023). In simple terms, as academic stress increases/decreases, adaptability and coping decreases/increases.

Several authors have suggested that there exist gender differences and the extent of academic stress between boys and girls when perceiving academic stress, and referring to levels of adjustment. Girls consistently report higher academic stress levels than boys, but boys are more likely to demonstrate adjustment capabilities (Young et al., 2018). There are many possible

explanations for these discrepancies, including social gender roles, emotional and coping styles, and availability of support. In recent years, researchers, like Taj et al. (2024), have discussed the importance of not only examining the intensity of stress, but also its domains (educational, personal, and environmental) and how the domains impact adolescents' adjustment methods(Abood & Al-Adamat, 2025).

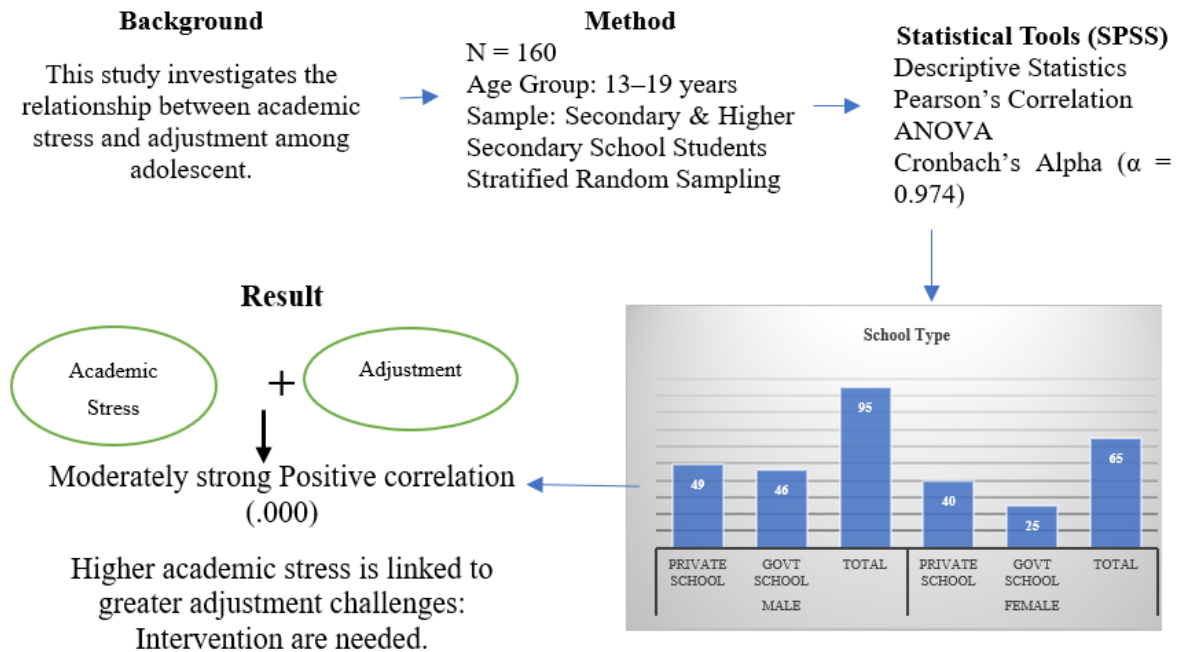


Fig 1: Graphical Abstract Depicting the Relationship Between Academic Stress and Adjustment Among Adolescents

Although there is increasing acknowledgement of academic stress as a public health issue, there has been little empirical attention to understanding how stress and adjustment relate in different adolescent subgroups(Compas et al., 2001). In addition, while we have established the most rudimentary relationships between these variables, few studies have utilized modern statistical techniques like SPSS and as well as an exploration of potential mediating or moderating variables. This study aims to fill a gap in the current research by using the right methods and psychological tools to look into the link between academic stress and recovery in teens(S. Singh et al., 2020). This by extension is important to the academic literature as well as practical implications to help inform educators, parents, and counsellors in their interventions and support of adolescents to promote well-being and resiliency(Twum-Antwi et al., 2020).

Theoretical framework

The study's theoretical base centers on the Transactional Model of Stress and Coping (Tolor & Fehon, 1987). This model conceptualized stress as a dynamic process that is entwined with the interplay between an individual and his or her environment. An outcome of stress occurs when an individual as appraises a situation as threatening and they perceive that they lack the resources to effectively cope with the situation(Terry, 1991). For adolescents, school-based stressors (exams, peer pressure, parental expectations, performance anxiety) influence these critical stress-related appraisals, as they have a direct influence on their emotional and behavioural adjustment.

The results in (Hussain et al., 2008) clearly show that people who experience higher levels of academic stress tend to have lower levels of adjustment(Hussain et al., 2008). This is especially true for students from public schools, where standards can often be higher than their skills. This further supports the view that stress appraisal and effective means of coping will be vital contributors to adolescents' adjustment. In this role, (Singh, 2018) extended understanding of stress perception by identifying additional factors such as social insecurity, low self-esteem, and peer-pressure as variables contributing to adjustment difficulties in relation to stressful situations, and increased the validation of theoretical connections between perceptions of stress and adaptive behaviours(Kaur & Singh, 2019).

Developmental psychology, as well as Adjustment Theory, support this frame. Adolescents are at a stage of development

marked by emotional instability, identity formation, and greater sensitivity to environmental demands(Cicchetti & Rogosch, 2002). As discussed in the studies above, adjustment is not a permanent outcome, but rather an ongoing process — emotional, social, and academic. When academic stress is too great for adolescents to cope with, they are more likely to show behavioral issues, emotional dysregulation, and disengagement in academic pursuits (Taj et al., 2024).

In consideration of this, the current study uses an integrative framework which brings together the Transactional Model of Stress and Coping with Developmental Adjustment Theory(Sun et al., 2023). This framework recognizes that adolescents experience and manage academic stress where these factors influence their adjustment in a variety of contexts. Overall the integrative framework supports a comprehensive perspective of stress and adjustment that includes not only the adolescents cognitive appraisal of their personal situation and circumstances, but also the social-contextual factors(DuBois et al., 2002).

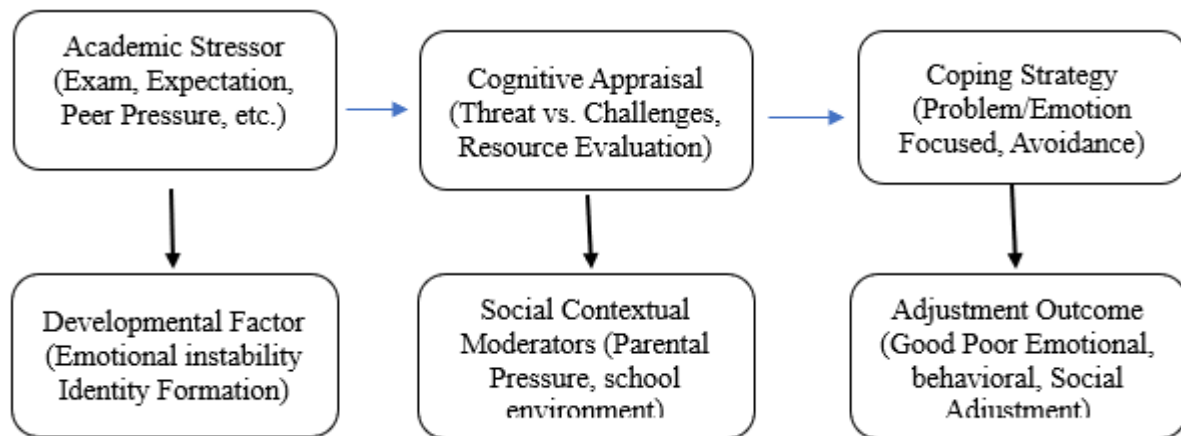


Fig 2. Theoretical framework

Objective

To examine the relationship between academic stress and adjustment among adolescent.

Hypothesis

H0: there are no significant relationship between academic and stress and adjustment among adolescent.

2. LITERATURE REVIEWS

The literature has underscored the importance of academic stressfulness and the fulfilment of their psychological needs on adolescents' school adjustment factors(Zhou et al., 2020). In their study, Fuentes et al. (2019) providers significant support for the positive association between indulgent parenting (characterized by emotional support) and school adjustment, reinforcing parental involvement's role in school success(De La Fuente et al., 2020). Ratelle & Duchesne (2014) also determined that perceived psychological need satisfaction (PNS)—autonomy, competence and relatedness—is essential in predicting positive adjustment academically, socially and emotionally that serves as protective against school related stressors(Ratelle & Duchesne, 2014). Collectively, the findings from both studies suggest that both family dynamics and psychological needs are fundamental in promoting positive school behaviours and reducing academic stressfulness during adolescence.

Changes in academic achievement, self-esteem, and peer relationship patterns further influences self-evaluation and adolescent adjustment. Tetzner et al. (2017) discovered bidirectional relationships between academic achievement and self-esteem, however, they noted that as adolescents age, peer acceptance increasingly influences self-esteem(Tetzner et al., 2017). Kundhare and Ghoti (2019) corroborated this, finding that all motivational constructs including achievement motivation and self-concept were positively related to adjustment in college students, although transitions could increase stress(Kundhare & Ghoti, 2019). Additionally, Hassan et al. (2016) noted that regular school attendance, which is a component of active engagement in educational settings, positively contributed to adolescent self-concept and achievement, which further substantiates the idea that behavioral engagement can help sustain a positive self-concept(Hassan, 2024). Despite variations in individual coping and evaluative responses to academic achievement, peer relationship dynamics, and individual self-evaluation reflect the relationship of self-evaluation to adjustment outcomes in adolescence(Li et al., 2024).

Sociodemographic and neurocognitive factors are also added to developmental self-concept and academic adjustment. Akos et al. (2014) found that students from economically disadvantage backgrounds have the greatest academic disruption during

school transitions, indicating the need for support (Akos et al., 2015). Bailey et al. (2018) also found executive functioning relates to academic self-concept, suggesting that cognitive difficulties potentially inhibit self-perception and accomplishments (Tobore, 2019). In neuroscience research, Van der Aar et al. (2019) and Van der Crujisen et al. (2018) related to academic self-concept earlier and supported that academic self-concept is biologically based, showing structural differences in activation foci when doing self-evaluative and future oriented decisions (Van Loon et al., 2020) (Van Der Crujisen et al., 2019). These different considerations illustrate how structural, cognitive, and neurological factors are interdependent in adolescents' academic identities.

The multi-dimensional aspect of self-concept and its domain-specific development during adolescence has been extensively researched. Kozina (2017) and Esnaola et al. (2018) both found changes in self-concept, with early adolescence experiencing declines in self-perception relating to social, emotional and academic domains, due in part to increased pressures (Kozina et al., 2024) (Esnaola et al., 2020). Wouters et al. (2013) introduced the Big-Fish-Little-Pond Effect (BFLPE) as a dimension where self comparison, as well compared with peers in high-achieving contexts, was shown to influence academic self-concept negatively (Ponnet et al., 2013). Prince and Nurius (2014) and León and Liew (2017) both showed academic identity and relationships in a school context as aspects of academic and wider resilience and motivation (Jang et al., 2025) (León & Liew, 2017). Overall, these studies temper the general idea of adolescent adjustment as underpinned by wholly psychological, social, and contextual interactions and highlight the need for greater systemic thinking to promote well-being and academic success (Denwigwe et al., 2024).

Research Gap

Although much previous research explored academic stress in specific populations, less is understood about how adolescents not suffering from diagnosed health outcomes cope with and adjust to academic-related stress. Studies such as Muluneh and Bejji (2024) conducted their studies on students living with chronic illness and cannot be generalized beyond that population. The exploration of adjustment as a multidimensional construct (i.e., emotional, social, and academic) in a universal school-based adolescent population is needed. The current study aims to fill this gap.

3. METHODS

1. Research Design

This method was used to directly show the link between teen stress over schoolwork and their ability to change to new situations. Using ordered data and statistical tools, the descriptive-correlational approach let the researcher look for patterns and links between factors. A quantitative, descriptive-correlational research method was used for the work. Using controlled surveys and statistical methods, this approach worked well to look into the link between teen stress over school and their ability to change. The approach meant the researcher was able to objectively measure the variables and outline patterns and associations of stress and adjustment levels.

2. Population and Sample

The study population consisted of adolescents between the ages of 13–19 years, and who attended secondary and higher secondary schools. 160 students participated based on stratified random sampling to allow for representation by gender, age, and type (public/private) of school. The sample was considered appropriate to provide adequate reliability using the statistical methods in SPSS.

3. Research Instruments

To collect primary data, two standardized questionnaires were used:

- **Academic Stress Scale:** Developed by Sinha et al. (2003), this measure assesses multiple aspects of academic stress, such as test anxiety, stress from academic demands, and parental pressure. It has 160 items and each item is rated on a 5-point Likert scale from "Strongly Disagree" to "Strongly Agree."
- **Adjustment Inventory:** Sinha and Singh's (1971) AISS or Adjustment Inventory for School Students was used to assess adolescent emotional, social and educational adjustment. This tool contains 160 items and a dichotomous response format; thus, higher scores represent poorer adjustment.

Both instruments were pilot-tested on a small sample to ensure clarity and internal consistency before full-scale administration.

4. Variables of the Study

- **Independent Variable (IV):** Academic Stress (with sub-dimensions such as academic pressure, exam anxiety, time management issues, and parental expectations).
- **Dependent Variable (DV):** Adjustment (measured across three dimensions—emotional adjustment, social adjustment, and academic adjustment).

- **Moderating Variable (optional, if included):** Gender or School Type.

5. Data Collection Procedure

The data was collected in person by administering printed questionnaires in classroom settings, with prior permission from school authorities. Informed consent was obtained from participants and their guardians. Respondents were instructed to answer honestly and anonymously, ensuring the ethical integrity of the process. The filled-in questionnaires were screened for completeness and then coded for analysis.

6. Data Analysis Technique

The Statistical Package for the Social Sciences (SPSS) was used to analyse the data that was put into Microsoft Excel. SPSS was chosen because it can do many statistical tests that can be used to look at how factors relate to each other in social science studies.

The following statistical procedures were employed:

- **Reliability Analysis:** Cronbach's alpha was used to assess the internal consistency of the scales.
- **Correlation Analysis:** Pearson's correlation was used to find the direction and strength of the link between stress at school and adjusting.
- **Analysis of Variance (ANOVA):** Used to identify differences in adjustment based on academic stress across groups such as gender and school type.
- **Measures of Association:** R, R², Eta, and Eta² values were computed to determine the strength and proportion of variance explained.

All ethical protocols were strictly followed during the course of this study. Participants were assured of their anonymity and the confidentiality of their responses. The study involved no harm or deception, and participation was voluntary at all stages.

4. PROCEDURE

The data for this study was collected through the administration of a structured questionnaire designed to assess academic stress and adjustment among adolescents. After obtaining permission from school authorities and informed consent from participants and their guardians, the questionnaire was distributed to students aged 13–19 years in selected schools. The respondents were assured of confidentiality and anonymity to encourage honest responses. Each participant was guided on how to respond to the 5-point Likert scale items, covering dimensions of academic stress (academic pressure, exam anxiety, time management, and parental expectations) and adjustment (emotional, social, and academic). The researcher facilitated the completion of questionnaires in a classroom environment to minimize response bias and clarify any ambiguities. Once collected, the data was coded and entered into the SPSS statistical software for analysis, including reliability checks, correlation, ANOVA and other relevant tests to test the hypothesized relationships.

5. DATA ANALYSIS

Data analysis lets the researcher look at the collected numeric data in a planned way, so they can look into the relationship between age group, school stress, and adjusting from all angles of a teen's life. The main goal of the study was to test the research theory by giving 160 students a group of accurate, well-structured surveys. Several statistical methods, including Pearson correlation, ANOVA, and reliability analysis, were used to find out how strong and important the links between the factors were. It is the researcher's intent to determine gazeowan high academic stress qualified with emotional, social, and academic adjustment by identifying differences in stress based on gender. The chapter is the most vital part of this research to interpret the results and draw meaningful conclusions regarding these two areas of academic stress and adjustment that foster academic debate to inform practice.

Table 1. Frequency

School Type			
Gender		Frequency	Percent
Male	Private School	49	51.6
	Govt School	46	48.4
	Total	95	100
Female	Private School	40	61.5

	Govt School	25	38.5
	Total	65	100

The distribution of school type based on gender shows that among male students, 51.6% attend private schools and 48.4% attend government schools, indicating a nearly equal representation across school types. In contrast, among female students, a higher proportion (61.5%) attend private schools, while 38.5% are in government schools, suggesting a greater preference or access to private education among females in the sample. Overall, this data highlights a slight gender-based variation in school type, with female students more concentrated in private institutions compared to their male counterparts.

Table 2. Reliability Statistics

Reliability Statistics	
Cronbach's Alpha	N of Items
.974	37

The 37 things on the scale have a Cronbach's Alpha score of 0.974, which means they are reliable. This number is very high, which means that the items are very consistent with each other and are very good at measuring the underlying concept. A Cronbach's Alpha score above 0.9 is usually thought to be good, meaning that the things are closely linked and constantly show the same idea. This means that the measure that was used in this study is scientifically sound and can be used for more research.ho.

Table 3. Correlations

Correlations			
		Academic Stress	Adjustment
Academic Stress	Pearson Correlation	1	.428**
	Sig. (2-tailed)		.000
	N	160	160
Adjustment	Pearson Correlation	.428**	1
	Sig. (2-tailed)	.000	
	N	160	160
**. Correlation is significant at the 0.01 level (2-tailed).			

A moderately positive correlation ($r = 0.428$) between academic stress and recovery among the respondents was found by Pearson's correlation analysis. This correlation is statistically significant at the 0.01 level ($p = 0.000$). To put it another way, this shows that as school stress rises, so do levels of adjustment, or vice versa. There is no chance in this link, as shown by the importance number. With a sample size of 160, the findings suggest a meaningful and reliable association between the two variables, highlighting the importance of considering academic stress in understanding students' adjustment patterns.

Table 4. ANOVA

ANOVA Table								
Gender				Sum Squares	of df	Mean Square	F	Sig.
Male	Academic Stress. *Between Groups	Adjustment.	(Combined)	60.723	4	15.181	16.819	.000
			Linearity	57.758	1	57.758	63.990	.000
			Deviation from Linearity	2.965	3	.988	1.095	.355

Female	Academic Stress. * Adjustment.	Within Groups		81.235	90	.903		
		Total		141.958	94			
		Between Groups	(Combined)	53.572	4	13.393	12.086	.000
			Linearity	50.847	1	50.847	45.884	.000
			Deviation from Linearity	2.725	3	.908	.820	.488
		Within Groups		66.490	60	1.108		
		Total		120.062	64			

The ANOVA results show that there is a strong direct link between academic stress and recovery for both male and female students. The F-value for men is 16.819, which is well below the 0.05 level of significance. The F-value for women is 12.086, which is also well below the 0.05 level of significance. This shows that school stress has a big effect on how well both boys and girls recover. The linearity component is also very important for both groups ($p = 0.000$), which means that there is a strong linear trend between the variables. However, the difference from linearity is not significant for either group (males: $p = 0.355$; females: $p = 0.488$), which means that the link between academic stress and recovery is linear and doesn't vary much. The study shows that there is a statistically significant and straight link between academic stress and recovery for both male and female students.

Table 5. Measures of Association

Measures of Association					
Gender		R	R Squared	Eta	Eta Squared
Male	Academic Stress. * Adjustment.	.638	.407	.654	.428
Female	Academic Stress. * Adjustment	.651	.424	.668	.446

The measures of association reveal a moderate to strong relationship between academic stress and adjustment for both male and female students. For males, the correlation coefficient (R) is 0.638 and R^2 is 0.407, indicating that approximately 40.7% of the variance in adjustment can be explained by academic stress. Similarly, for females, R is 0.651 and R^2 is 0.424, suggesting that 42.4% of the variance in adjustment is attributable to academic stress. The Eta and Eta Squared values further support this, showing effect sizes of 0.654 (Eta) and 0.428 (Eta^2) for males, and 0.668 (Eta) and 0.446 (Eta^2) for females. These findings indicate a substantial and consistent association between academic stress and adjustment across genders, with slightly stronger associations observed among female students.

Based on the numbers, the null hypothesis (H_0), which said there is no significant link between school stress and teenage transition, is not supported. There is a strong linear connection between the factors, as shown by Pearson's correlation coefficient ($r = 0.428$, $p < 0.01$) and ANOVA data for both male ($F = 16.819$, $p = 0.000$) and female students ($F = 12.086$, $p = 0.000$). Also, R^2 numbers of 0.407 for boys and 0.424 for females show that school stress explains a lot of the differences in how well they adjust. The results support the alternative theory, showing that school stress has a statistically significant effect on how well teens can adjust.

6. CONCLUSION

The findings of the data analysis reveal a significant and positive relationship between academic stress and adjustment among adolescents. The correlation analysis showed a moderate, statistically significant association between the two variables, supported further by ANOVA results indicating a strong linear trend across both male and female students. Measures of association such as R, R^2 , Eta, and Eta^2 demonstrated that academic stress accounts for a substantial proportion of the variance in students' adjustment levels, particularly among females. The reliability statistics confirmed the robustness of the measurement tools, and overall, the study underscores the influence of academic pressures on adolescent adjustment patterns. These insights highlight the urgent need for targeted interventions to help students manage stress more effectively and adapt positively within academic and social environments. Further research could explore longitudinal effects, cross-cultural comparisons, and intervention-based studies. Examining moderators like socioeconomic factors or digital learning environments could also enhance understanding of adolescent stress-adjustment dynamics.

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