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Examining the Relationship between Academic Stress and Self-Efficacy across Gender in Bihar's Senior Secondary Schools

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ABSTRACT

Academic stress and self-efficacy are important psychological factors influencing students' learning, motivation, academic engagement, and overall well-being, particularly during the senior secondary stage. The present study, titled "Examining the Relationship Between Academic Stress and Self-Efficacy Across Gender in Bihar's Senior Secondary Schools," examines the relationship between academic stress and self-efficacy among senior secondary school students, with particular emphasis on gender. A quantitative research approach with a descriptive-correlational design is adopted for the study. The sample comprises 876 students studying in Classes XI and XII in senior secondary schools of Bihar, including male and female students. Standardized tools are used to assess academic stress and self-efficacy. Descriptive statistics are used to examine the levels of the two variables, while an independent-samples *t*-test is employed to examine gender differences in academic stress and self-efficacy. Pearson's Product-Moment Correlation is used to determine the relationship between academic stress and self-efficacy, and regression analysis is used to examine the predictive role of academic stress in self-efficacy. The study seeks to provide a gender-sensitive understanding of how academic stress is associated with students' beliefs in their academic capabilities. The findings are expected to contribute to the development of supportive, student-centred and psychologically responsive educational practices in senior secondary schools of Bihar, with implications for teachers, counsellors, parents, and educational institutions.

Keywords: *Academic Stress, Self-Efficacy, Gender, Senior Secondary Students, Bihar, Gender Differences, Predictive Relationship.*

INTRODUCTION

The senior secondary stage constitutes a significant phase in students' educational and psychosocial development. Classes XI and XII are characterized by increasing academic demands, subject specialization, competitive examinations, career aspirations, and expectations from family, teachers, and society. At this stage, students are required to make important decisions regarding higher education and future careers while simultaneously coping with demanding curricula and performance expectations. These circumstances make senior secondary education a critical period for examining the psychological factors that influence students' academic functioning and well-being.

Among the psychological challenges associated with contemporary schooling, academic stress has emerged as an important concern. Academic stress may be understood as the psychological strain experienced when students perceive that the academic demands placed upon them exceed, or may exceed, their available resources for coping. Examination pressure, extensive coursework, competition, fear of failure, parental

expectations, time constraints, and uncertainty regarding future educational and career pathways may contribute to students' academic stress. While moderate academic pressure can sometimes encourage effort and goal-directed behaviour, persistent or excessive stress may adversely affect concentration, motivation, emotional well-being, academic engagement, and students' capacity to deal effectively with academic challenges. Consequently, academic stress represents an important area of educational and psychological inquiry.

Alongside academic stress, self-efficacy is a central psychological construct associated with students' academic behaviour. Bandura (1997) defined self-efficacy as individuals' beliefs in their capabilities to organize and execute the courses of action required to attain designated performances. In the educational context, academic self-efficacy refers to students' beliefs regarding their capability to learn, complete academic tasks, overcome difficulties, and attain desired academic outcomes. Students with stronger self-efficacy are generally more likely to approach challenging tasks with confidence, demonstrate persistence, regulate their efforts, and respond constructively to setbacks. In contrast, students with weaker self-efficacy may doubt their capabilities, avoid challenging tasks, and experience greater difficulty in sustaining effort when confronted with academic obstacles.

The relationship between academic stress and self-efficacy is therefore particularly relevant to understanding students' academic experiences. Self-efficacy influences how individuals perceive challenges, interpret demanding situations, and mobilize their cognitive, emotional, and behavioural resources. Students who believe that they are capable of managing academic demands may be more likely to perceive challenging situations as manageable and employ adaptive coping strategies. Conversely, students with lower self-efficacy may perceive the same academic demands as more threatening or overwhelming. Thus, examining the association between academic stress and self-efficacy can provide insight into the psychological processes underlying students' responses to academic demands.

The role of gender adds another important dimension to this relationship. Male and female students may encounter different academic expectations and social experiences that can influence their perceptions of academic demands, coping patterns, emotional responses, and beliefs about their capabilities. Family expectations, societal norms, educational opportunities, career aspirations, and experiences within the school environment may contribute to differences in how students experience and respond to academic stress. Similarly, self-efficacy may vary across students depending on their experiences of success, encouragement, social support, and opportunities for independent decision-making. However, gender differences cannot be assumed to be uniform across contexts and therefore require empirical examination within specific educational and sociocultural settings.

The Bihar educational context provides an important setting for such an investigation. Bihar has a large and diverse population of school-going adolescents who pursue senior secondary education across varied social, cultural, economic, and educational circumstances. Students may differ in their access to educational resources, family expectations, academic aspirations, learning environments, and preparation for higher education and competitive examinations. These contextual variations may influence both the academic pressures experienced by students and their beliefs regarding their ability to manage academic challenges. Therefore, examining academic stress and self-efficacy within the specific context of Bihar can provide contextually meaningful evidence for educational planning and student support.

The issue is particularly relevant to the changing demands of 21st-century education. Contemporary education extends beyond the acquisition of subject knowledge and emphasizes competencies such as self-confidence, resilience, self-regulation, adaptability, critical thinking, problem-solving, collaboration, and emotional well-being. Students are increasingly expected to become independent and lifelong learners who can manage challenges and make informed decisions about their educational and professional futures. In this context, self-

efficacy becomes an important psychological resource, while excessive academic stress may constitute a barrier to effective learning and holistic development.

Understanding the relationship between academic stress and self-efficacy also has practical implications for educational practice. Teachers can support students by providing constructive feedback, creating opportunities for mastery experiences, setting achievable learning goals, encouraging active participation, and developing supportive classroom environments. School counsellors can incorporate stress-management, self-regulation, and coping strategies into student-support programmes. Parents can also contribute by establishing realistic academic expectations and providing emotional support rather than excessive performance pressure. A gender-sensitive understanding of these psychological variables can further assist schools in developing responsive interventions that address the diverse experiences of male and female students.

Although academic stress and self-efficacy have received considerable attention in educational and psychological research, there remains a need for context-specific investigation of their relationship among senior secondary students, particularly within Bihar. Further, examining the two constructs across gender can provide a more differentiated understanding of students' psychological experiences during a critical educational transition. Such evidence can strengthen the empirical basis for developing interventions aimed at improving students' coping abilities, confidence, academic engagement, and overall well-being.

Review of Literature

Kumar, Singh, and Gupta (2025) found a significant negative relationship between academic stress and self-efficacy among Hindi- and English-medium students. The study also identified differences between the two groups, indicating that the medium of instruction and educational context may influence students' academic stress and self-efficacy.

Liu et al. (2024), in their longitudinal study, found that increased stress significantly predicted a decrease in students' academic self-efficacy, whereas the reverse relationship was weaker.

According to Schunk (2023), students with high self-efficacy are more likely to see academic challenges as manageable rather than threatening. They tend to use positive coping strategies when facing difficulties. In contrast, students with low self-efficacy may avoid challenging academic tasks, which can further increase their academic stress.

Pathak (2020) investigated academic stress and self-efficacy in relation to study habits among adolescents. The study emphasized adolescence as a critical developmental period during which academic experiences and behavioural patterns may influence adjustment and educational functioning. By examining academic stress and self-efficacy alongside study habits, the study highlighted the interconnected nature of cognitive, behavioural, and psychological factors in adolescents' academic lives.

Significance of the Study

In the 21st-century educational context, academic success requires not only subject knowledge but also self-efficacy, resilience, adaptability, emotional well-being, and effective coping skills. The present study is significant because it examines academic stress and self-efficacy among senior secondary school students of Bihar from a gender perspective. Its findings may help teachers and schools develop student-centred, psychologically supportive and competency-based learning environments. The study can support the integration of stress-management, goal-setting, problem-solving and self-regulation skills into educational practices. Parents and counsellors may also use the findings to promote healthier academic expectations. Thus, the study contributes to holistic development and 21st-century learner competencies, enabling students to manage academic challenges with greater confidence and resilience.

STATEMENT OF THE AIM

Examining the relationship between Academic Stress and Self-Efficacy across Gender in Bihar's Senior Secondary Schools

OBJECTIVES OF THE STUDY

1. To assess the level of Academic stress among male and female senior secondary school students of Bihar.
2. To assess the level of Self-efficacy among male and female senior secondary school students of Bihar.
3. To examine the relationship between academic stress and Self-efficacy among male senior secondary school students of Bihar.
4. To examine the relationship between Academic stress and Self-efficacy among female senior secondary school students of Bihar.

HYPOTHESIS OF THE STUDY

1. There is no significant difference between the level of Academic stress among male and female senior secondary school students of Bihar.
2. There is no significant difference between the level of self-efficacy among male and female senior secondary school students of Bihar.
3. There is no significant relationship between Academic stress and the Self-efficacy of male senior secondary school students of Bihar.
4. There is no significant relationship between Academic stress and the Self-efficacy of female senior secondary school students of Bihar.

METHODOLOGY

Research Approach and Design

The present study adopted a quantitative research approach and employed a descriptive-correlational research design. The study examined academic stress and self-efficacy among senior secondary school students of Bihar, with particular emphasis on gender differences and the predictive relationship between the two variables.

Population and Sample

The population of the study comprised students studying in Classes XI and XII in senior secondary schools of Bihar. A sample of 876 students was selected for the study. The sample included both male and female senior secondary school students from Bihar. The selected participants were administered standardized measures of academic stress and self-efficacy.

Tools used in the study

Standardized tool of Academic Stress, developed and standardized by Dr. Uday Kumar Sinha (2020) and self-constructed Scale for Assessing Self -Efficacy (SASE) consisting of 35 items were used.

STATISTICAL TREATMENT

Mean, SD, Independent-Samples t-test, Pearson Product-Moment Correlation (r) and Simple Linear Regression

RESULTS AND DISCUSSIONS

NULL HYPOTHESIS NO 1: **There is no significant difference between the level of Academic stress among male and female senior secondary school students of Bihar.**

TABLE NO.1 GENDER WISE DISTRIBUTION OF THE SAMPLE

Gender	N	Mean	S.D.	t-ratio	Remarks
Male	436	22.81	4.59	0.610	Significant
Female	440	22.62	4.32		

(The table value of 't' at the 5% level of significance is 1.96)

From the above table, it is inferred that the t-value is 0.610, which is less than the table value at the 0.05 level of significance. Hence, the null hypothesis is accepted, which means that there is no significant difference in mean scores of Academic stress between male and female senior secondary students.

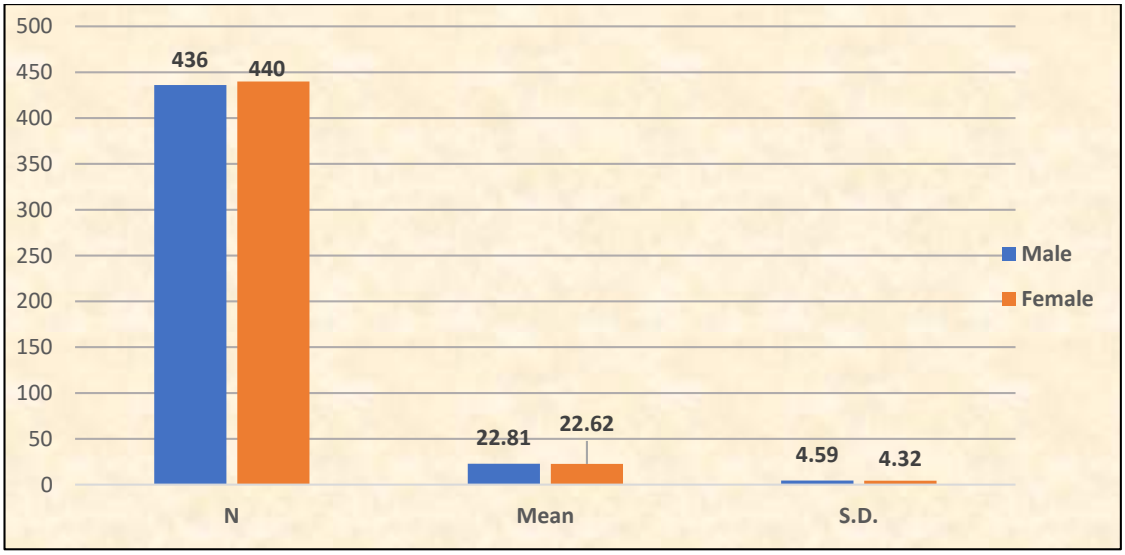

Fig. 1: Bar graph showing gender-wise differences in interpersonal relationship among senior secondary school students

NULL HYPOTHESIS NO. 2: There is no significant difference between the level of Self-efficacy among male and female senior secondary school students of Bihar.

Table No. 2: Difference between male and female Senior Secondary Students in their Self-Efficacy

Gender	N	Mean	S.D.	t-ratio	Remarks
Male	436	91.158	16.046	0.685	Significant
Female	440	91.911	16.412		

(The table value of 't' at the 5% level of significance is 1.96)

From the above table, it is inferred that the t-value is 0.685, which is less than the table value at the 0.05 level of significance. Hence, the null hypothesis is accepted, which means that there is no significant difference in mean scores of self-efficacy between male and female senior secondary students.

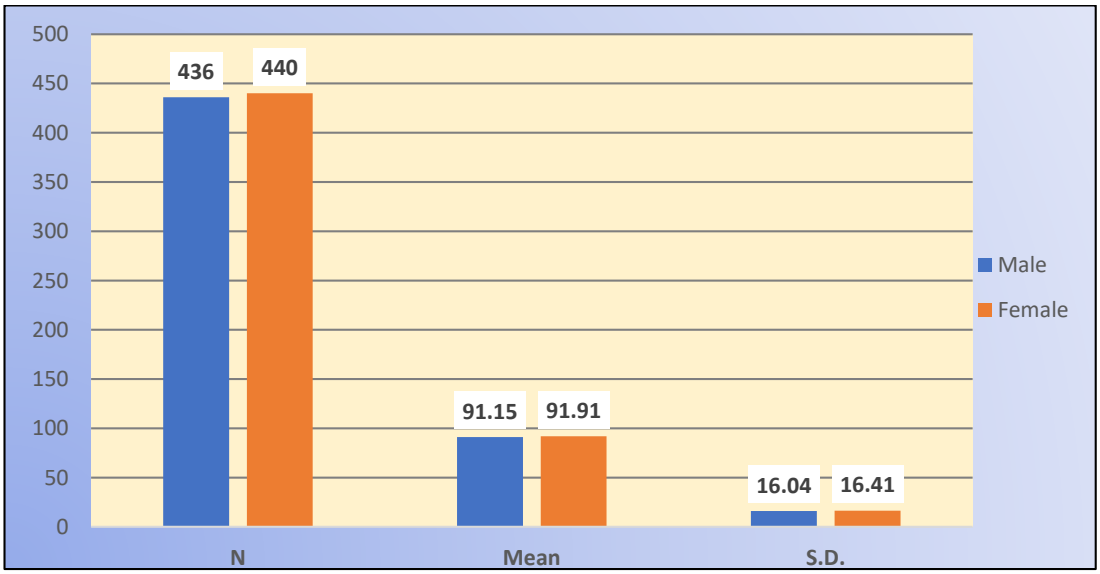

Fig. 2: Mean and Standard Deviation (SD) of Female and Male Senior Secondary Students in Their Self-Efficacy

NULL HYPOTHESIS NO 3: There is no significant relationship between Academic stress and the Self-efficacy of male senior secondary school students.

Table No. 3: Relationship between academic stress and self-efficacy of male senior secondary school students

Correlations					
		AS	SE	AS Male	SE Male
AS	Pearson Correlation	1	.324**	1.000**	.043
	Sig. (2-tailed)		.000	.000	.376
	N	876	876	436	436
SE	Pearson Correlation	.324**	1	.043	1.000**
	Sig. (2-tailed)	.000		.376	.000
	N	876	876	436	436
AS Male	Pearson Correlation	1.000**	.043	1	.043
	Sig. (2-tailed)	.000	.376		.376
	N	436	436	436	436
SE Male	Pearson Correlation	.043	1.000**	.043	1
	Sig. (2-tailed)	.376	.000	.376	
	N	436	436	436	436
**. The correlation is significant at the 0.01 level (2-tailed).					

The findings obtained from the table infer that the coefficient of correlation values between academic stress and self-efficacy of male senior secondary school students is significant at the 0.01 level of significance; thus, the framed hypothesis is rejected, and it can be said that there is a significant relationship between academic stress and self-efficacy of senior secondary school students.

NULL HYPOTHESIS NO 4: There is no significant relationship between Academic stress and the Self-efficacy of female senior secondary school students.

Table 4: Relationship between Academic stress and Self-efficacy of female senior secondary school students

Correlations					
		AS	SE	AS Female	SE Female
AS	Pearson Correlation	1	.324**	.046	-.014
	Sig. (2-tailed)		.000	.333	.765
	N	876	876	440	440
SE	Pearson Correlation	.324**	1	.124**	.122*
	Sig. (2-tailed)	.000		.009	.010
	N	876	876	440	440
AS Female	Pearson Correlation	.046	.124**	1	.899**
	Sig. (2-tailed)	.333	.009		.000
	N	440	440	440	440
SE Female	Pearson Correlation	-.014	.122*	.899**	1
	Sig. (2-tailed)	.765	.010	.000	
	N	440	440	440	440
**. The correlation is significant at the 0.01 level (2-tailed).					
*. The correlation is significant at the 0.05 level (2-tailed).					

The findings obtained from the table, infer that the coefficient of correlation values between academic stress and self-efficacy of female senior secondary school students is significant at the 0.01 level of significance; thus, the framed hypothesis is rejected, and it can be said that there is a significant relationship between academic stress and self-efficacy of senior secondary school students.

FINDINGS OF THE STUDY

1. There is no significant difference in mean scores of Academic stress between male and female senior secondary students.
2. There is no significant difference in mean scores of Self-efficacy between male and female senior secondary students.

3. There is a significant relationship between Academic stress and Self-efficacy of senior secondary school students.
4. There is a significant relationship between Academic stress and Self-efficacy of senior secondary school students.

Conclusion

The present study, "Examining the Relationship Between Academic Stress and Self-Efficacy across Gender in Bihar's Senior Secondary Schools," focuses on two important psychological dimensions of students' academic experiences. The senior secondary stage involves considerable academic demands and future-oriented decisions, making students' ability to manage stress and maintain confidence in their academic capabilities particularly important.

Overall, the study highlights the importance of addressing academic achievement and psychological well-being together. Strengthening students' self-efficacy, providing appropriate academic and emotional support, and creating responsive classroom environments can contribute to more resilient, confident, and effective learners. Such efforts are consistent with the broader goals of contemporary and 21st-century education, which emphasize not only academic competence but also students' holistic development and well-being.

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