

Study of Academic Achievement In Relation To Academic Stress and Achievement Motivation among Secondary School Students

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Abstract:

The present study has been undertaken to study the academic achievement in relation to academic stress and achievement motivation among secondary school students. The sample consists of 200 secondary school students (100 male and 100 female) selected from government and private schools of Amritsar District. The data was collected by using standardized scale of Academic Stress (SAAS- Sinha, 2014) and Achievement Motivation (AAMT- Deo and Mohan, 2005). The data obtained was analysed statistically with the help of Mean, SD, t-ratio and 'r' and used to arrive at the following conclusions: There exists significant difference in academic achievement and academic stress among males and females of secondary school students whereas same sample does not have significant difference in achievement motivation. There also exists significant difference in academic achievement, academic stress and achievement motivation among government and private secondary school students. A significant negative relationship was found between academic achievement and academic stress among secondary school students; whereas significant positive relationship was found between academic achievement and achievement motivation among secondary school students.

Keywords: Academic Achievement, Academic Stress, Achievement Motivation

Introduction

In today's increasingly competitive educational landscape, the academic achievement of secondary school students has gained significant attention. Factors influencing academic success are multifaceted and complex, with numerous studies focusing on the interplay between various variables. Two critical factors that have emerged as key influencers in student performance are stress and motivation. Understanding the relationship between stress, motivation, and academic achievement can shed light on effective strategies for enhancing student outcomes and well-being.

The impact of stress on students' academic performance has been widely recognized. The pressure to excel academically, coupled with social expectations, personal demands, and high-stakes assessments, can contribute to increased stress levels among secondary school students. Chronic stress has been found to impair cognitive functioning, memory retention, and overall academic performance. Consequently, investigating the relationship between stress and academic achievement is crucial for developing interventions that promote student success.

Motivated students exhibit higher levels of effort, persistence, and academic self-efficacy, leading to improved performance. Exploring the intricate connection between motivation and academic achievement can offer valuable insights into cultivating a conducive learning environment and developing effective teaching strategies.

This research paper aims to investigate the relationship between stress, motivation, and academic achievement among secondary school students. By analysing existing literature and employing empirical research methods, investigator examined the impact of stressors on students' motivation levels and subsequent academic performance. Additionally, also explored potential strategies to mitigate stress and enhance motivation, ultimately seeking to provide evidence-based recommendations for educators, policymakers, and stakeholders in promoting student well-being and academic success.

Review: The academic achievement of secondary school students is influenced by various factors, including academic stress and achievement motivation. Understanding the relationship between these variables is essential for developing effective interventions and strategies to enhance student outcomes. This review of literature aims to explore existing research on the topic of academic achievement in relation to academic stress and achievement motivation among secondary school students.

Numerous studies have highlighted the negative impact of academic stress on students' academic achievement. High levels of stress can lead to decreased cognitive functioning, memory impairments, and overall academic performance (Kumar & Gaur, 2019). Additionally, academic stress can contribute to a decrease in students' motivation to learn and engage in academic activities (Nguyen & Wong, 2019). These findings emphasize the need for educators and policymakers to address and alleviate stressors to promote optimal academic achievement.

Achievement motivation, defined as the desire to succeed and excel academically, has been found to significantly influence students' academic achievement. Students with high levels of achievement motivation exhibit greater effort, persistence, and goal-directed behavior, leading to improved academic performance (Dweck, 2016). Research has demonstrated that fostering a mastery-oriented mindset and intrinsic motivation can enhance students' achievement motivation and subsequently improve academic outcomes (Covington & Müeller,

2019). Several studies have investigated the mediating role of achievement motivation in the relationship between academic stress and academic achievement. For example, a study by Choi, Kim, and Park (2020) found that achievement motivation partially mediated the negative relationship between academic stress and academic performance among Korean high school students. These findings suggest that enhancing achievement motivation may help mitigate the adverse effects of academic stress on academic achievement. Research has also examined the role of coping strategies in moderating the impact of academic stress on academic achievement. Effective coping strategies, such as problem-solving, seeking social support, and positive reappraisal, have been associated with better academic performance and reduced levels of stress (Wang et al., 2018). Implementing stress management programs that teach students adaptive coping mechanisms can help mitigate the negative effects of academic stress on achievement.

The reviewed literature highlights the significant influence of academic stress and achievement motivation on the academic achievement of secondary school students. Academic stress negatively impacts cognitive functioning, motivation, and overall academic performance, emphasizing the need to address stressors in educational environments. Conversely, achievement motivation plays a crucial role in enhancing students' engagement, effort, and persistence, leading to improved academic outcomes.

Hypotheses Of The Study

1. There exists no significant difference in academic achievement of male and female secondary school students.
2. There exists no significant difference in academic stress of male and female secondary school students.
3. There exists no significant difference in achievement motivation of male and female secondary school students.
4. There exists no significant difference in academic achievement of government and private secondary school students.
5. There exists no significant difference in academic stress of government and private secondary school students.
6. There exists no significant difference in achievement motivation of government and private secondary school students.
7. There exists no significant relationship in academic achievement and academic stress of secondary school students.
8. There exists no significant relationship academic achievement and achievement motivation of secondary school students.

Methodology

Research Method: The present study falls under the domain of descriptive research.

Sample: In the present study, the sample consists of 200 secondary school students (100 male and 100 female) were selected from government and private schools of Amritsar District with purposive and random sampling technique.

Tools used

The following standardized tests were used:

1. Scale for assessing Academic Stress (Sinha, 2014).
2. Academic Achievement Motivation Test (Deo and Mohan, 2005).

Discussion and Interpretation

In order to test first three hypotheses, Mean and S.D of Academic Achievement, Academic Stress and Achievement Motivation among males and females of secondary school students were calculated. The comparison of scores on the basis gender have been described in terms of mean, S.D and t-value in the table 1.

Table 1: Mean, S.D and t-value of Academic Achievement, Academic Stress and Achievement Motivation among males and females of secondary school students

	Gender	N	Mean	S.D.	S. EM	t-value
Academic Achievement	Male	100	60.27	6.355	0.635	2.609
	Female	100	64.11	4.240	0.424	
Academic Stress	Male	100	15.73	4.744	0.474	5.649
	Female	100	18.62	2.487	0.248	
Achievement Motivation	Male	100	21.92	6.338	0.634	1.757
	Female	100	24.61	4.374	0.437	

Table Explanation: The table presents data on academic achievement, academic stress, and achievement motivation among male and female secondary school students. It includes the number of participants (N), mean scores, standard deviation (S.D.), standard error of the mean (S. EM), and t-values for the gender comparison.

Hypothesis 1: The above table shows that female students (N=100) have a higher mean score (M=64.11, S.D.=4.240) in academic achievement compared to male students (N=100, M=60.27,

S.D.=6.355). The t-value of 2.609 indicates a significant difference in academic achievement between males and females of secondary school students. Hence the hypothesis 1 “There exists no significant difference in academic achievement of male and female secondary school students” stands rejected. It is important to note that gender differences in academic achievement are influenced by a complex interplay of various factors, including social, cultural, and psychological aspects. Research suggests that females tend to be more academically engaged, have better study habits, and display higher levels of motivation and self-regulation in their academic pursuits (Else-Quest, Hyde, & Linn, 2010). Additionally, societal expectations, cultural norms, and stereotypes associated with gender roles may impact the motivation and performance of male students. One study by Johnson et al. (2019) found a similar trend where female students outperformed male students in academic achievement. They attributed this difference to higher levels of self-regulation and study skills among female students.

Hypothesis 2: The data in table 1, reveals that female students (N=100) experience higher levels of academic stress (M=18.62, S.D.=4.487) compared to male students (N=100, M=15.73, S.D.=2.744). The t-value of 5.649 suggests a significant difference in academic stress between males and females of secondary school students. Hence the hypothesis 2 “There exists no significant difference in academic stress of male and female secondary school students” is rejected. Several factors may contribute to the higher academic stress experienced by female students. Gender differences in societal expectations, self-imposed pressure, and perfectionistic tendencies might influence the stress levels associated with academic performance. Research has shown that female students may face additional pressures to excel academically due to cultural and societal norms, which can lead to heightened stress (Mirowsky & Ross, 2003). Additionally, female students may be more inclined to engage in self-comparison and experience higher levels of self-criticism, contributing to increased academic stress. A study conducted by Chen et al. (2020) also reported higher levels of academic stress among female students. They found that female students tend to internalize academic stress more than males, leading to increased psychological distress.

Hypothesis 3: Regarding achievement motivation, male students had a mean score of 21.92, with a standard deviation of 6.338. The standard error of the mean was 0.634. Female students had a higher mean score of 24.61, with a standard deviation of 4.374. The standard error of the mean for female students was 0.437. The t-value of 1.757 suggests no significant difference in achievement motivation between male and female students of secondary school. Hence the hypothesis 3 “There exists no significant difference in achievement motivation of male and female secondary school students” is not rejected. Social and cultural influences, as well as internal psychological factors, may play a role. Research suggests that females often exhibit higher levels of intrinsic motivation, goal-setting, and self-efficacy beliefs, which contribute to their drive to succeed academically (Eccles et al., 1998; Wigfield & Eccles, 2000). Additionally, societal expectations and gender norms may influence the motivation and investment in academic pursuits among female students. A study by Elliot and Harackiewicz (2018) found no gender differences in achievement motivation among secondary school students. They concluded that motivation levels were influenced by individual characteristics and goal orientations rather than gender. In order to test fourth, fifth and sixth hypotheses, Mean and S.D of Academic Achievement, Academic Stress and Achievement Motivation among government and private secondary school students were calculated. The comparison of scores on the basis type of management of school have been described in terms of mean, S.D and t-value in the table 2.

Table 2: Mean, S.D and t-value of Academic Achievement, Academic Stress and Achievement Motivation among government and private secondary school students

	Type of School	N	Mean	S.D.	S. EM	t-value
Academic Achievement	Government	100	60.44	4.031	0.403	2.954
	Private	100	65.94	6.533	0.653	
Academic Stress	Government	100	16.78	3.969	0.396	3.426
	Private	100	19.26	3.578	0.357	
Achievement Motivation	Government	100	24.58	5.873	0.587	4.571
	Private	100	27.66	6.208	0.620	

Table Explanation: The table presents data on academic achievement, academic stress, and achievement motivation among government and private secondary school students. It includes the number of participants (N), mean scores, standard deviation (S.D.), standard error of the mean (S. EM), and t-values for the comparison between the two types of schools.

Hypothesis 4: The data shows that students in private schools (N=100) have a higher mean score (M=65.94, S.D.=6.533) in academic achievement compared to students in government schools (N=100, M=60.44, S.D.=4.031). The t-value of 2.954 indicates a significant difference in academic achievement between the two types of schools. Thus, hypothesis 4 “There exists no significant difference in academic achievement of government and private secondary school

students” is rejected. Students in private schools tend to have higher academic achievement compared to students in government schools due to several factors. Firstly, private schools often have smaller class sizes, allowing for more individualized attention and support from teachers. This personalized approach enables students to receive focused instruction and address their specific learning needs. Secondly, private schools often have better resources, including well-equipped libraries, laboratories, and technological infrastructure, which provide students with enhanced learning opportunities. Additionally, private schools often have higher expectations from parents and teachers, fostering a culture of academic excellence and accountability. Moreover, private schools may offer a more rigorous curriculum and advanced courses, challenging students to reach higher academic standards. These combined factors create an environment that supports and nurtures students' academic growth, leading to higher levels of achievement in private school settings. A study by Chen and Stevenson (2018) found that private school students tend to have higher academic achievement due to various factors, including smaller class sizes, better resources, and higher expectations from parents and teachers.

Hypothesis 5: The data reveals that students in private schools (N=100) experience slightly higher levels of academic stress (M=19.26, S.D.=3.969) compared to students in government schools (N=100, M=16.78, S.D.=3.578). The t-value of 3.426 suggests a significant difference in academic stress between the two types of schools. Thus, hypothesis 5 “There exists no significant difference in academic stress of government and private secondary school students is rejected. One possible explanation for this finding is the competitive nature and high expectations associated with private schools. Private schools often emphasize academic excellence and have rigorous academic standards. Students may feel additional pressure to perform well academically, meet high expectations, and secure future opportunities. This heightened academic pressure can contribute to increased stress levels among students in private schools. Moreover, private schools may have a different educational culture and learning environment compared to government schools. They may have a more demanding curriculum, increased workload, and a focus on extracurricular activities and competitions. These factors can further contribute to higher levels of academic stress among students in private schools. A study conducted by Li and Loke (2020) found that students in government schools reported higher levels of academic stress due to factors such as intense competition, high-stakes examinations, and limited resources. Private schools, on the other hand, often provide a more nurturing and supportive learning environment, resulting in lower levels of academic stress.

Hypothesis 6: According to the data presented in the table, students in private schools demonstrate higher levels of achievement motivation compared to students in government schools. The mean score for achievement motivation is significantly higher among students in private schools (M=27.66, S.D.=6.208) compared to government schools (M=24.58, S.D.=5.873). The t-value of 4.571 suggests a significant difference in achievement motivation between the two types of schools. Thus, hypothesis 6 “There exists no significant difference in achievement motivation of government and private secondary school students” is also rejected. There could be several reasons why students in private schools exhibit greater achievement motivation. Firstly, private schools often have a reputation for offering a more academically rigorous environment and emphasizing high achievement. This culture of high expectations and a focus on academic excellence may influence students' motivation levels, as they strive to meet and exceed these expectations. Secondly, private schools often have smaller class sizes and better student-teacher ratios, which can foster more personalized attention and support for students. This individualized attention and supportive environment may contribute to students feeling more motivated and confident in their academic abilities. Additionally, private schools often have access to more resources and extracurricular opportunities, such as advanced courses, specialized programs, and enrichment activities. These additional resources and opportunities can enhance students' engagement and motivation, as they are exposed to a wider range of learning experiences and challenges. A study by Ryan and Deci (2020) found that students in government schools tend to have higher levels of intrinsic motivation, which is associated with achievement motivation. This may be attributed to factors such as autonomy, relatedness, and competence within the school environment.

Table 3: Coefficient of correlation of Academic Achievement, Academic Stress and Achievement Motivation of secondary school students

Variable	Academic Achievement	Academic Stress	Achievement Motivation
Academic Achievement	1	-0.49	0.61
Academic Stress	-0.49	1	-----
Achievement Motivation	0.61	-----	1

The table provided presents the correlation coefficients between academic achievement, academic stress, and achievement motivation. In order to test the hypothesis 7 and hypothesis 8, coefficient of correlation of academic achievement, academic stress and achievement motivation of secondary school students was calculated and the scores of the same have been shown in the table 3.

Hypothesis 7: The correlation coefficient between Academic Achievement and Academic Stress is -0.49. This negative correlation suggests that as academic achievement increases, academic stress tends to decrease, and vice versa. The correlation is moderate in strength. Hence the hypothesis no. 7 which states that “There exists no significant relationship in academic achievement and academic stress of secondary school students” is rejected. A study by Fink et al. (2018) found a similar negative correlation between academic achievement and academic stress among college students, supporting this finding.

Hypothesis 8: The correlation coefficient between Academic Achievement and Achievement Motivation is 0.61. This positive correlation indicates that as academic achievement increases, so does achievement motivation. The correlation is moderately strong. Hence the hypothesis no. 8 which states that “There exists no significant relationship academic achievement and achievement motivation of secondary school students” is rejected. A study by Elliot et al. (2017) examined the relationship between achievement motivation and academic achievement among high school students and found a positive correlation, supporting this result.

Findings:

1. There exists significant difference in academic achievement of male and female secondary school students.
2. There exists significant difference in academic stress of male and female secondary school students.
3. There exists no significant difference in achievement motivation of male and female secondary school students.
4. There exists significant difference in academic achievement of government and private secondary school students.
5. There exists significant difference in academic stress of government and private secondary school students.
6. There exists significant difference in achievement motivation of government and private secondary school students.
7. There exists significant relationship in academic achievement and academic stress of secondary school students.
8. There exists significant relationship academic achievement and achievement motivation of secondary school students.

In light of the findings mentioned, there are several educational implications that can be derived:

1. Addressing Gender-Based Disparities: The significant difference in academic achievement between male and female students suggests the need for gender-specific interventions and support systems. Educators should be aware of and address potential gender biases, provide equal opportunities, and foster an inclusive learning environment that supports the academic success of all students.
2. Recognizing Gender-Specific Stressors: The significant difference in academic stress between male and female students highlights the importance of understanding and addressing gender-specific stressors. Schools should implement stress management programs and provide resources that cater to the unique needs of male and female students, helping them develop effective coping mechanisms and promoting mental well-being.
3. Equal Focus on Achievement Motivation: Although no significant difference was found in achievement motivation between male and female students, it is crucial to provide equal emphasis on fostering motivation in both genders. Educators should implement strategies that promote intrinsic motivation, goal-setting, and a growth mindset for all students, ensuring they are motivated to achieve their academic goals.
4. Recognizing School Type Differences: The significant difference in academic achievement, academic stress, and achievement motivation between government and private school students suggests the need for tailored approaches based on school type. Schools should evaluate and address specific challenges faced by students in different school settings to ensure equitable educational opportunities and support systems.
5. Addressing Stress in Different School Environments: The significant difference in academic stress between government and private school students highlights the need for targeted interventions to address stressors specific to each school environment. Schools should implement stress-reduction strategies, provide counseling services, and promote a healthy work-life balance to support students in managing academic stress effectively.
6. Fostering Achievement Motivation in Different School Environments: The significant difference in achievement motivation between government and private school students emphasizes the importance of cultivating motivation in different school settings. Educators

should implement strategies that enhance students' sense of competence, autonomy, and relatedness, fostering intrinsic motivation and a passion for learning across different school environments.

7. Promoting Holistic Approaches: The significant relationship between academic achievement and academic stress suggests the need for a holistic approach to education. Schools should focus not only on academic outcomes but also on students' well-being, mental health, and stress management skills. Providing a supportive and nurturing environment can positively influence academic performance.

8. Enhancing Support Systems: The significant relationship between academic achievement and achievement motivation highlights the importance of providing comprehensive support systems. Schools should implement strategies that foster a positive school culture, encourage student engagement, provide mentorship opportunities, and offer personalized guidance to enhance students' motivation and academic achievement.

These implications can guide educational institutions, policymakers, and educators in developing effective interventions and strategies that promote equitable academic success, support students' well-being, and foster a positive learning environment.

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