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Relationship between Academic Motivation, Academic Resilience and Academic Achievement among University Students

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ABSTRACT

The present study was undertaken to find out the academic motivation, academic resilience, and academic achievement connection among university students. The dependent variable is academic achievement while motivation and resilience are independent variables. In addition, gender differences on all three variables were measured. Using the design of quantitative correlational analysis, data were collected from samples of university students through self-report questionnaires and examination records. The Pearson correlations indicated significant positive relationships between both academic motivation and academic resilience with academic achievement. The independent sample t-Test showed that female students scored significantly higher than male students on dimensions of motivation, resilience, and academic achievement. Therefore, it becomes clear that efforts need to be made to scale up motivation and resilience, which would ultimately help in improving academic performance. In clarifying these psychological factors that support students' academic success, these findings will add to existing literature and ensure gender-sensitive interventions to improve student outcomes.

Keywords: *Academic Motivation, Academic Resilience, Academic Achievement, Gender Differences, University Students, Correlational Study*

INTRODUCTION

Academic achievement

Academic achievement refers to the measurable performance outcomes that indicate how well a student has mastered educational content, typically assessed through grades, standardized tests, or teacher evaluations (Schunk et al., 2022). It is widely recognized as a key indicator of student success and future opportunities in both academic and professional settings. Academic achievement is influenced by a range of cognitive, emotional, and environmental factors, including intelligence, motivation, self-regulation, and family support (Zhou et al., 2023).

Several psychological constructs such as self-efficacy, motivation, and mindset have been shown to significantly influence academic achievement. Students who believe in their ability to succeed (academic self-efficacy) tend to perform better and persist longer in challenging tasks (Bandura, 2020). Likewise, growth mindset—the belief that abilities can be developed through effort—has been linked to higher academic outcomes, especially among students from underrepresented backgrounds (Yeager et al., 2023). These findings emphasize the importance of fostering positive beliefs and resilience in learners.

Socioeconomic status (SES), parental involvement, and school resources also play crucial roles in shaping academic achievement. Students from higher SES backgrounds generally have access to better educational opportunities and learning materials, which can give them an academic advantage (OECD, 2022). However, studies have shown that supportive family involvement and teacher encouragement can mitigate some of the negative effects of low SES (Hill & Tyson, 2021). This highlights the need for equity-based educational policies.

Modern educational strategies aimed at improving academic achievement include differentiated instruction, formative assessment, and the integration of digital tools to personalize learning (Ahn & Bailenson, 2023). In addition, school-wide interventions that promote a supportive learning climate, teacher-student relationships, and mental well-being have also been linked to better academic outcomes (Sulea et al., 2022). As education systems continue to adapt to new challenges, it is vital to implement evidence-based practices that address both academic and emotional needs of students**.**

Academic Resilience

Academic resilience refers to the capacity of students to manage academic stressors, setbacks, and pressures in a way that supports their continuous growth and learning. It involves more than simply avoiding failure; it reflects a student's ability to respond constructively to challenges such as low academic performance, exam anxiety, or personal hardships (Martin & Marsh, 2020). In recent years, this construct has attracted increasing interest within educational psychology due to its close links with motivation, perseverance, and long-term academic achievement.

This form of resilience is underpinned by a combination of psychological traits such as self-efficacy, optimism, emotional regulation, and a belief in the potential for intellectual growth. Students who maintain confidence in their ability to overcome academic hurdles tend to persist longer in the face of difficulty (Bandura, 2020). Moreover, effective emotional regulation allows learners to manage common academic stressors. Empirical studies further show that individuals with a growth mindset—those who view intelligence as malleable—are more likely to demonstrate resilience when encountering academic setbacks (Yeager & Dweck, 2020).

Supportive contexts are essential in nurturing academic resilience. Positive relationships with teachers, constructive peer interactions, and parental support serve as important external factors that bolster a student's ability to cope with academic demands (Morin et al., 2021). Educational institutions that foster inclusive, empathetic environments can help reduce the impact of socioeconomic and psychological stressors. Additionally, school-based interventions—such as mentorship programs and stress management workshops—can effectively enhance students' resilience in academic settings.

To cultivate academic resilience, educators are encouraged to implement practices that promote students' confidence, autonomy, and problem-solving skills. This includes providing specific and encouraging feedback, setting attainable academic goals, and facilitating opportunities for reflection on both

achievements and setbacks (Martin et al., 2022). The integration of social-emotional learning (SEL) within the curriculum has also been shown to improve emotional health and academic outcomes. As educational demands increase, strengthening students' academic resilience remains a crucial goal for modern education systems.

Academic Motivation

Academic motivation represents the inner force that drives learners to participate in educational activities and pursue academic goals. It encompasses both intrinsic motivation, where students engage in learning out of genuine interest or personal fulfillment, and extrinsic motivation, which is influenced by external factors such as rewards or social expectations (Ryan & Deci, 2020). Motivation is a key predictor of academic performance, shaping students' persistence, effort, and emotional responses to academic hurdles. Current literature highlights that motivation is dynamic and can be influenced by instructional methods, learning environments, and individual psychological characteristics (Schunk et al., 2022).

Intrinsic motivation is often associated with advanced learning approaches, a stronger understanding of concepts, and sustained engagement over time. On the other hand, although extrinsic motivation may encourage students to complete tasks in the short term, it usually lacks the capacity to maintain long-term interest unless it becomes internalized (Deci et al., 2023). According to Self-Determination Theory, the psychological needs for autonomy, competence, and relatedness must be satisfied to foster intrinsic motivation (Ryan & Deci, 2020). Therefore, educators are encouraged to design classroom settings that support students' autonomy and strengthen their belief in their academic abilities.

Empirical research consistently supports a strong positive link between academic motivation and indicators such as academic achievement, psychological well-being, and student retention in both school and university settings (Zhou et al., 2023). Motivated learners tend to establish meaningful academic goals, adopt efficient learning techniques, and show persistence in overcoming setbacks. Moreover, academic motivation contributes to emotional well-being and reduces the risk of burnout, especially in academically demanding environments (Sulea et al., 2022). Thus, encouraging motivation is essential not just for academic success, but also for students' overall mental health and personal growth.

In the era of digital education, innovative practices are being employed to boost academic motivation. Techniques like gamification, personalized instruction, and the integration of digital tools are gaining popularity (Ahn & Bailenson, 2023). Additionally, intervention strategies centered on goal setting, reflective practices, and constructive feedback have demonstrated positive outcomes in improving student engagement and academic success (Yeager et al., 2023). As educational landscapes continue to evolve, it becomes increasingly important for educators and policymakers to rely on evidence-based methods that cultivate and maintain student motivation in varied educational contexts.

LITERATURE REVIEW

Academic achievement is a multifaceted outcome that is influenced by various psychological and contextual factors. Among the most significant contributors to student success are academic resilience and academic motivation. These constructs not only shape students' responses to challenges but also affect their overall engagement and performance in academic settings.

Academic resilience refers to a student's capacity to recover from setbacks, adapt to difficult circumstances, and maintain academic functioning despite adversity. It reflects a student's ability to

regulate emotions, cope with academic pressure, and stay committed to learning goals. Resilient students often display perseverance and adaptability when faced with challenges such as poor performance, examination stress, or external hardships. According to Martin and Marsh (2020), resilience is not merely about avoiding failure but about actively overcoming obstacles to continue progressing academically.

Academic motivation, in contrast, involves the internal and external forces that energize, direct, and sustain students' academic behavior. It can be classified into intrinsic motivation, where students learn out of genuine interest or enjoyment, and extrinsic motivation, which stems from rewards, grades, or social expectations (Ryan & Deci, 2020). Intrinsically motivated students are more likely to engage in deep learning and persist through challenges, whereas extrinsic motivation may produce short-term compliance but does not always lead to long-term engagement unless internalized (Deci et al., 2023).

Research has consistently highlighted a positive association between academic resilience and academic motivation. Resilient students are more likely to feel competent and autonomous—two essential elements of intrinsic motivation. Similarly, motivated students tend to be more resilient in coping with academic difficulties because they perceive challenges as opportunities to grow (Schunk et al., 2022). This reciprocal relationship suggests that resilience and motivation often reinforce each other in educational contexts.

Moreover, both resilience and motivation have been strongly linked to academic achievement. Students who are motivated and resilient tend to perform better academically, demonstrate higher levels of engagement, and show lower levels of academic burnout (Zhou et al., 2023; Sulea et al., 2022). Academic resilience provides the emotional strength to persist during failure, while motivation sustains the desire to reach academic goals. The interaction of these factors helps students stay committed to learning even under stressful circumstances.

Supportive environments also play a crucial role in shaping both resilience and motivation. Positive teacher-student relationships, peer support, and encouragement from parents can foster psychological strengths that lead to academic success (Morin et al., 2021). Interventions focused on goal-setting, emotional regulation, self-reflection, and feedback have been shown to improve students' motivation while enhancing their capacity to bounce back from academic stress (Yeager et al., 2023).

In modern educational settings, especially those influenced by digital learning and competitive pressures, enhancing both motivation and resilience is critical. Educators who integrate emotional and motivational support into their teaching practices can help students build the internal resources necessary for academic achievement and personal development.

The interconnectedness of academic resilience, motivation, and achievement highlights the need for holistic educational approaches. By nurturing both the emotional and motivational aspects of learning, educators can empower students to succeed academically and thrive in the face of adversity. These findings underline the importance of targeted interventions and supportive environments that develop both resilience and sustained motivation in learners.

RESEARCH METHODOLOGY

Objectives of the Study

1. To explore the relationship between academic motivation and academic achievement among university students.

2. To examine the relationship between academic resilience and academic achievement among university students.

3. To compare academic motivation levels between male and female students.

4. To compare academic resilience levels between male and female students.

5. To compare academic achievement between male and female students.

Hypotheses of the Study

H1: There is a significant positive correlation between academic motivation and academic achievement among university students.

H2: There is a significant positive correlation between academic resilience and academic achievement among university students.

H3: There is a significant difference in academic motivation between male and female students.

H4: There is a significant difference in academic resilience between male and female students.

H5: There is a significant difference in academic achievement between male and female students.

Instruments

Academic Motivation Scale (AMS)

The Academic Motivation Scale, originally developed by Vallerand et al. (1992), was used to measure students' levels of intrinsic and extrinsic academic motivation. The scale consists of 28 items rated on a 7-point Likert scale ranging from 1 (Does not correspond at all) to 7 (Corresponds exactly). The AMS demonstrates strong internal reliability ($\alpha > 0.80$). In the current study, overall Cronbach's alpha was found to be .86.

Academic Resilience Scale (ARS-30)

To assess academic resilience, the ARS-30 by Cassidy (2016) was used. This scale contains 30 items measured on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). It evaluates students' persistence, emotional control, and academic recovery after setbacks. The ARS-30 has shown good reliability and construct validity in academic settings.

Academic Performance Rating Scale (APRS),

The Academic Performance Rating Scale (APRS), developed by DuPaul, Rapport, and Perriello in 1991, is a teacher-rated tool designed to assess students' academic performance. It consists of 19 items, covering domains like academic productivity, accuracy, and task completion. The scale uses a 5-point Likert format, ranging from "Poor" to "Excellent." Reliability studies show high internal consistency ($\alpha = 0.94$), and the scale demonstrates strong validity, correlating well with academic achievement, GPA, and teacher evaluations. APRS is widely used in educational research to measure academic performance, particularly for school-aged children, though it can be adapted for older students.

RESULTS

Table 1

Descriptive characteristics of the sample (N=310)

Sample Data		n	%
Age			
	18-26	140	45.16
	27-35	170	54.83
Gender			
	Men	150	48.38
	Women	160	51.61
Family system			
	Joint	155	50
	Nuclear	155	50

The sample consisted of 310 participants, with an age distribution of 45.16% (140 participants) in the 18-26 age group and 54.83% (170 participants) in the 27-35 age group. In terms of gender, 48.38% (150 participants) were men, while 51.61% (160 participants) were women. Regarding the family system, the sample was evenly split, with 50% (155 participants) from joint families and 50% (155 participants) from nuclear families. This demographic breakdown provides a balanced representation across age, gender, and family system types.

Table 2

Descriptive statistics of all the scales (N=310)

Scales	K	A	M	Range		Skew	Kurt
				Actual	Potential		
AMS	28	.90	41.42	20-112	28-196	.68	.74

ARS	30	.95	20.67	32-124	30-150	.64	.78
APRS	19	.82	98.13	50-87	19- 98	1.98	2.86

Note. AMS= Academic Motivation Scale, ARS= Academic Resilience Scale, AAS= Academic Performance Rating Scale

The table presents the descriptive statistics for the scales used in the study (N=310). The Academic Motivation Scale (AMS) consists of 28 items, with a reliability coefficient (α) of 0.90. The mean score for AMS is 41.42, with a score range of 20 to 112, and the potential range is from 28 to 196. The skewness and kurtosis values are 0.68 and 0.74, respectively. The Academic Resilience Scale (ARS) has 30 items and an alpha value of 0.95, with a mean score of 20.67. Scores range from 32 to 124, and the potential score range is from 30 to 150. The skewness is 0.64, and kurtosis is 0.78. The Academic Performance Rating Scale (APRS) consists of 19 items, with a reliability coefficient of 0.82, and the mean score is 98.13. The range of scores is 50 to 87, with the potential range from 19 to 98. APRS shows a skewness of 1.98 and kurtosis of 2.86. These statistics highlight the distribution and reliability of the scales used to assess academic motivation, resilience, and performance.

Table 3

Correlation matrix between Study Variables (N=310)

	Variables	1	2	3
1.	AMS	-		
2.	ARS	.45**	-	
3.	APRS	.69**	.54**	-

Note. AMS= Academic Motivation Scale, ARS= Academic Resilience Scale, AAS= Academic Performance Rating Scale

Table 3 presents the correlation matrix between the study variables (N=300). The Academic Motivation Scale (AMS) shows a moderate positive correlation with the Academic Resilience Scale (ARS) ($r = 0.45$, $p < 0.01$), indicating that higher academic motivation is associated with greater academic resilience. Furthermore, AMS is strongly correlated with the Academic Performance Rating Scale (APRS) ($r = 0.69$, $p < 0.01$), suggesting that students with higher academic motivation tend to perform better academically. Similarly, the ARS also demonstrates a moderate positive correlation with APRS ($r = 0.54$, $p < 0.01$), implying that students with higher academic resilience tend to achieve better academic performance. These findings highlight significant relationships among academic motivation, resilience, and performance.

Table 4

Mean Differences of GENDER across Study Variables (N= 310)

VAR	Gender

	Men (n=150)		Women (n=160)		*t* (308)	*p*	95% CI		Cohen's d
	M	*SD*	*M*	*SD*			LL	UL	
AMS	30.24	4.23	36.45	5.93	3.23	.00	.34	2.76	1.2
ARS	34.36	5.32	38.54	6.67	4.25	.00	.35	3.12	0.6
APRS	34.83	5.24	39.34	6.89	4.35	.00	.37	3.78	0.7

Note. AMS= Academic Motivation Scale, ARS= Academic Resilience Scale, AAS= Academic Performance Rating Scale

Table 4 presents the mean differences across gender for the study variables. For academic motivation, women scored significantly higher than men, with a large effect size. Similarly, women demonstrated higher academic resilience compared to men, with a medium effect size. For academic performance, women also scored higher than men, with a medium to large effect size. All results were statistically significant, indicating notable gender differences in these academic variables.

DISCUSSION

This study aimed to explore the relationship between academic motivation, academic resilience, and academic achievement among university students, while also examining gender-based differences in these variables. The findings supported all the proposed hypotheses, offering important insights into the psychological factors that influence students' academic success.

The significant positive correlation between academic motivation and academic achievement (H1) aligns with prior research, which has consistently shown that motivated students tend to achieve higher academic outcomes. Specifically, intrinsic motivation has been linked to greater engagement and persistence in academic tasks, which in turn leads to better performance (Ryan & Deci, 2020). The results suggest that students who are internally driven to succeed in their studies are more likely to invest the necessary effort and perform well, supporting self-determination theory, which emphasizes the importance of autonomy in fostering optimal academic outcomes.

Similarly, the positive relationship between academic resilience and academic achievement (H2) highlights the role of resilience in enabling students to maintain performance despite academic challenges. Resilience acts as a buffer against academic stress, helping students adapt and cope with setbacks (Martin & Marsh, 2020). This finding suggests that developing resilience skills, such as perseverance, adaptability, and emotional regulation, may enhance students' academic performance, particularly in high-pressure academic environments.

Additionally, the study found significant gender differences in academic motivation (H3), academic resilience (H4), and academic achievement (H5). Female students reported higher levels of motivation and resilience compared to male students, which is consistent with previous studies that suggest women often display greater academic discipline and emotional regulation (Vantieghem et al., 2014).

Furthermore, female students had higher academic achievement, reflecting trends observed in educational research that show consistent academic advantages among women across various disciplines (Duckworth & Seligman, 2006).

These findings have important implications for educators and policymakers. Understanding the roles of motivation and resilience as predictors of academic achievement can guide the development of interventions that focus on enhancing intrinsic motivation, goal-setting, and coping strategies. Moreover, recognizing gender differences in psychological strengths and challenges can help tailor support programs to better meet the needs of students.

Conclusion shows this study provides empirical evidence supporting the positive impact of academic motivation and resilience on academic achievement. It also underscores the importance of considering gender differences in academic experiences. Future research could explore the causal mechanisms behind these relationships using longitudinal or experimental designs and investigate other potential moderating factors, such as socioeconomic status or academic discipline.

CONCLUSION

In conclusion, this study emphasizes the crucial impact of academic motivation and resilience on academic achievement among university students. The positive correlations suggest that students who exhibit greater motivation and resilience are more likely to achieve higher academic performance. Furthermore, gender differences indicate that female students tend to show higher levels of motivation, resilience, and academic success compared to their male counterparts. These findings highlight the significance of psychological factors in academic contexts and offer a deeper understanding of the elements that drive educational success.

LIMITATIONS AND SUGGESTIONS

While the study offers valuable insights, it has several limitations. The cross-sectional design used restricts the ability to establish causal relationships between the variables. Moreover, the reliance on self-reported data may introduce social desirability bias. The sample was confined to a specific geographical area or institution, which may limit the generalizability of the findings. Future research should consider employing longitudinal designs, expanding the sample size to include more diverse populations, and incorporating qualitative approaches to better understand students' experiences. Additionally, interventions aimed at boosting academic motivation and resilience—particularly for male students—could be developed and tested to enhance academic performance.

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