



Academic Self-Efficacy, Academic Motivation and Coping Skills in Academia: A Cross-Sectional Exploration

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ABSTRACT

The association between academic self-efficacy, academic motivation, and coping skills among graduate students has been reported in previous literature, yet comprehensive assessments in this area are lacking. Coping skills are considered predictors for both academic self-efficacy and academic motivation. This study aimed to assess the roles of academic self-efficacy, academic motivation, and coping skills in the lives of graduate students. A correlational research design was employed for this purpose. Convenient sampling was utilized to select 300 participants for the study. Data were collected through the General Self-Efficacy, Academic Motivation, and Brief-COPE instruments. The study revealed a significant positive correlation between academic self-efficacy, academic motivation, and coping skills, indicating a strong connection among these variables. Further, the gender differences were assessed, but no significant differences were found among study variables. The findings of this study underscore the importance of academic self-efficacy, academic motivation, and coping skills in graduate students' lives. The significant positive correlation among these variables suggests that interventions targeting improvement in one area may positively influence the others. Additionally, the lack of gender differences in these variables indicates that strategies for enhancing academic performance, motivation, and overall well-being should be inclusive and not gender-specific. Institutions can utilize these findings to develop programs aimed at supporting students with low coping skills to enhance their academic performance, motivation, and overall well-being.

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1. Introduction

Students came across with several responsibilities throughout undergraduate to graduate studies including fulfilment of family commitments, completion of university's work, saving money, and cope up with the ongoing stress to make their careers. In relation to this, the study findings revealed that self-efficacy, motivation and coping skills play a vital role in order to cope up with the studies related stress. Further, high self-efficacy and strong coping skills of graduate students help them to deal effectively with their emotions and time management (Algorani & Gupta, 2023). Allen, Barrall, Vincent, and Arria (2021) concluded that in reality these responsibilities direct them to live their life with low stress level. It is noticed that mental health concerns are increasing and are affecting everyone. A graduate student's strong belief on academic abilities, motivation and coping strategies can play a significant role in managing life stressors and promoting mental their well-being (Gazder, Ali, Naqvi, Zehra, Memon, & Rafay, 2014). Freire, Ferradás, Regueiro, Rodríguez, Valle, and Núñez (2020) showed that in academic environment, stress is the main concern of graduate students and in result several studies have focused on the prevalence of mental health problems. Further, there

are many commitments in which graduate students' involve in including academic and co-curricular activities that might have a noticeable effect on the graduate student's well-being (Andrade & Yoo, 2019). In order to understand the negative consequences of the pressure of graduate students' responsibilities, it has become important to give emphasis on individuals' academic self-efficacy, academic motivation and coping skills to enhance their mental health performance. As a result, they feel confident about their capabilities and can better live a meaningful life with positive mental health (de Almeida Santos & Benevides Soares, 2018).

1.1. Academic Self-Efficacy

Bandura's self efficacy theory suggests that an individual's belief lead them to complete the particular assigned task to achieve the desired academic goal. It emphasizes on the opinions of people about themselves in situations involving academic success. The concept of academic self-efficacy emphasized that an individual can have the essential capabilities to perform a designated task to the optimal level. For example, a student is sure about his abilities and skills to perform well on a task. Anike, Marire-Nwankwo, and Ezeanya (2020) suggested that student's high self-efficacy is determined by confidence during the completion of assigned tasks. A study conducted by Husain, 2014 emphasized on the numerous factors including gender and academic self-efficacy is associated with academic accomplishment and academic motivation. The study findings showed that the higher levels of academic self-efficacy are related with increased academic motivation and adaptive coping strategies. Students who have high self-efficacy are set more challenging goals for themselves and they use effective coping skills to cope up with their academic stress.

1.2. Academic Motivation

The term academic motivation focused on the likeness of a student about academic subjects that particularly shown by their consistency in achieving good academic results. A person who is strongly motivated can show their strong desire to learn by engage in thoughtful learning. A research found that intrinsic motivation, which stems from personal interest and enjoyment of learning, is positively associated with academic self-efficacy and adaptive coping skills (Steinmayr, Weidinger, Schwinger, & Spinath, 2019). The two basic areas into which motivation is separated are internal motivation and external motivation. When the individual is influenced by external motivation and has a distinct goal, internal motivation provides the required incentive for acting (Mutlu, 2018). Due to its strong connections to new learning, abilities, methods, and behaviors, it was observed by psychologists that education must include motivation. As one of the preliminary constructions for characterizing this form of motivation, they have presented motivation for academic accomplishment.

1.3. Coping Skills

Coping skills are techniques that we can use to help us avoid or at least lower the intensity of our negative feelings. Coping is the ideas and actions used to control stressful conditions internally and externally. Despite the existence of more than 400 documented coping mechanisms, they fall within the emotionally focused or problem-focused (Salimzadeh, Saroyan, & Hall, 2017). Wishful thinking is an example of an emotion-focused coping strategy that attempts to manage difficult emotions in the midst of difficulty to decrease the psychological impacts of stress. On the other hand, problem-focused coping entails making an effort to solve the issue by modifying or removing the stressor. Engagement coping attempts to physically and mentally distance oneself from unpleasant circumstances and accompanying emotions are made when engaging in support-seeking. In contrast to disengagement coping, engagement coping involves making active attempts to directly address a stressful circumstance or related sentiments (Salimzadeh, Saroyan, & Hall, 2017). Research has shown that students with higher academic self-efficacy and motivation tend to utilize adaptive coping strategies such as problem-solving, seeking social support, and positive reframing. These strategies help individuals navigate academic demands and maintain a positive mindset (Algorani & Gupta, 2023). Combining problem-focused and emotion-focused coping skills allows students to effectively manage stress and reduce its impact. Problem-focused coping involves finding practical solutions and taking action to address the stressor directly (Zaccoletti et al., 2020). Emotion-focused coping focuses on managing and regulating emotions associated with the stressor. By using both approaches, students can predict and prepare for stressors, perceive and understand their emotions, manage stress in the moment, react in a balanced manner, and alter their behavior over time to build resilience and improve well-being. This

comprehensive approach equips students with practical tools to address the stressor while also managing their emotional well-being (Freire et al., 2020).

2. Theoretical Framework

The concept of academic self-efficacy, academic motivation and coping skills is closely related to "Albert Bandura's social cognitive theory" (Nickerson, 2022). The social cognitive theory places an emphasis on how people learn in social contexts. This viewpoint holds that people are active agents who have the capacity to be both influenced and affected by their surroundings. Nabavi, 2012 explained that the aim of social cognitive theory is to describe the regulation and reinforcement mechanism of people's behavior in order to produce goal-directed behavior. The theory emphasized on the concept of reciprocal determinism, which describes the dynamic and reciprocal interaction between individuals with a variety of learned experiences, the environment, the external social context, and behavior, or the way one responds to stimuli to achieve goals. Its core theme is that people need a sense of empowerment and control over the significant events in their lives (Wood & Bandura, 1989). This sense of control is influenced by several factors, including self-efficacy, outcome expectancies, objectives, and self-evaluation (Wood & Bandura, 1989). As an illustration of how reciprocal determinism operates, consider the following: If a student has self-efficacy or the belief that they are capable to pass an exam, they are more likely to put out the necessary effort to study (behavior). If they don't believe they can do well on the test, they won't study as hard. Their test results will therefore either confirm or disprove what they believe about their aptitudes (self-efficacy) (outcome) (Nickerson, 2022).

The social cognitive theory developed by (Bandura, 1986) includes the self-efficacy theory. The two main factors influencing behavior, according to this strategy, are perceived self-efficacy and outcome expectations. According to studies, adolescents acknowledge the effect of role models in peer imitation to support the growth of their self-efficacy. Peer collaboration also affects one's sense of self-worth (Lee, Kwon, & Ahn, 2021). It is thought that adolescent self-efficacy is positively correlated with peer relationships (Shao & Kang, 2022). Coping skills, or strategies used to manage stress, are closely related to social cognitive theory. According to this hypothesis, people pick up knowledge by watching others and developing expectations for their own behavior or responses. Individuals learn how to cope through these observations and expectations. The social cognitive theory offers a framework for comprehending how people learn and build the abilities to deal with stress, anxiety, and challenging emotions in this way (Andrade & Yoo, 2019). In academic motivation, individuals are driven to pursue academic goals by their own expectations and beliefs. The encouragement and reinforcement they receive from their social surroundings such as family, friends, teachers, and other important adults are included in social cognitive theory (Hitches, Woodcock, & Ehrich, 2022). The social environment can give rewards and punishments, which can impact how individuals view their academic goals and the work they are ready to devote to reaching them (Wang, Kiuru, Degol, & Salmela-Aro, 2018).

3. Method

3.1. Hypotheses

H1: There would be a significant relationship between academic self-efficacy, academic motivation and coping skills in graduate students.

H2: There would be significant gender differences among academic self-efficacy, academic motivation and coping skills in graduate students.

3.2. Participants and Procedure

Permission was taken from the authors for the use of instruments. For this research, 300 participants were taken from the age of 22 or above. The participants were of graduate students enrolled in Master's or Ph.D. programs at institutions in Islamabad and Rawalpindi. They were ensured by not imposing any restrictions depending on the field of study. The sample was taken through convenient sampling and this research used a correlation research design. Convenient sampling was chosen because it is a useful way to find graduate students with busy lives and limited time. It was communicated to the individuals that their participation in this study would be completely voluntary. Obtained information would be kept confidential and used for only research purposes. After their endorsement, they filled consent form and demographic information sheet. The General Self-Efficacy Scale (GSES), Brief-COPE and Academic Motivation Scale (AMS) were used to evaluate the variables. Participants were

instructed to choose the best suitable option describing their problem. If they find any difficulty regarding words/statements they could ask for guidance. Participants were encouraged to respond on all items without any hesitation. No time limit was given for the completion of the questionnaires; however, the average time taken by the participants was 10-15 minutes.

3.3. Measuring Instruments

3.3.1. The General Self-Efficacy Scale

General Self-Efficacy Scale (GSES) was developed in 1981 by (Schwarzer & Jerusalem, 1995). It was developed to measure perceived self-efficacy and the capacity to deal with a range of challenging life circumstances. Goal-setting, effort commitment, perseverance in the face of obstacles, and recovery from failures are all made easier by perceived self-efficacy. It can be viewed as a beneficial resource for resistance. To access this concept, a brief 10-item psychometric instrument is constructed. Each statement suggests an internal-stable attribution of success and alludes to successful coping. The overall score on the GSE runs from 10 to 40, with a higher score indicating greater self-efficacy. Cronbach's alpha is typically in the high 0.80 and spans from 0.76 to 0.90.

3.3.2. Brief-COPE

Brief COPE, developed by Carver, Scheier, and Weintraub in 2018, assesses various coping mechanisms individuals use in response to stressful life events. It comprises 28 items categorized into problem-focused, emotional-focused, and avoidant coping strategies. Problem-focused coping involves active coping and planning, aiming to directly address stressors. Emotional-focused coping includes positive reframing and acceptance, focusing on managing emotional responses to stress. Avoidant coping encompasses strategies like self-distraction and denial, which aim to avoid or minimize stressors. These dimensions, measured on a Likert scale from 0 to 4, provide insights into how graduate students cope with challenges, thereby influencing their academic drive and self-efficacy. Cronbach's alpha is 0.70.

3.3.3. Academic Motivation Scale (AMS)

University students' levels of academic motivation were assessed by the Academic Motivation Scale of Vallerand, Pelletier, Blais, Briere, Senecal, and Vallieres (1992). It includes a 28-item, seven-point likert scale with seven subscales for measuring a motivation, three types of extrinsic motivation (external, introjected, and identified regulation), and three types of intrinsic motivation (intrinsic motivation to know, to accomplish things, and to experience stimulation). Cronbach's alpha is 0.84 whereas subscales' alpha reliability ranged from 0.71 to 0.84. The composite reliability of the AMS subscales, which showed values between 0.73 and 0.86, further validated the scale's dependability.

4. Data Analysis

The data analysis section outlines the procedure for testing the proposed hypotheses including the association between academic self-efficacy, academic motivation, and coping skills, as well as for exploring gender differences using SPSS-26. The decision to incorporate non-parametric tests, specifically Spearman's rank correlation coefficient and the Mann-Whitney tests, was strategically made to accommodate the distribution characteristics of the data and the nature of the variables analyzed. Non-parametric tests were chosen in response to the non-normal distribution of some data sets and when the variables under investigation were not strictly continuous but rather ordinal or when the assumptions of parametric tests could not be satisfactorily met. This approach not only ensures the integrity and appropriateness of the statistical analyses conducted but also enhances the reliability of the findings by adequately addressing potential methodological concerns associated with data distribution and variable characteristics.

5. Results

In the results section a frequency table for the categorical variables was created and included. The frequency table contains the frequency and its percentages. Calculations were made for the continuous variable's skewness, kurtosis, mean, standard deviation, and range. The reliability of the scales is shown in a reliability table together with the number of items, Cronbach's alpha, mean, and standard deviation. Since the data was identified as non-normal, for this non-parametric testing was done to determine the correlation and Mann-Whitney test.

Table 1: Demographic Characteristics of Academic Self-Efficacy, Academic Motivation and Coping skills (N=300)

Variables	Categories	f	%	M	S.D	Range
Gender	Male	150	50			
	Female	150	50			
Age				28.31	4.05	22-48
Semester				3.34	2.11	1-12
Marital status	Single	205	69.3			
	married	95	31.7			
Occupation	Working	271	90.3			
	Students	29	9.7			
Institute	Public	89	29.7			
	Private	129	42.7			
	Semi-government	83	27.7			
Family system	Joint	58	19.3			
	Nuclear	242	80.7			
Socioeconomic status	Lower	29	9.7			
	Middle	197	65.6			
	Upper	74	24.7			

Note. f= frequency, %= percentage, M= Mean, SD= Standard Deviation

Table 1 demonstrates the frequency, percentage, mean, standard deviation and range of demographic variables. The variables include gender, age, semester, marital status, occupation, family system, socio-economic status having the total sample size of 300. Table shows the equal representation of male and female graduate students, and majority of them were single. Most of the students were working and belonged to private institutes. Majority of the sample were living in nuclear system and their socioeconomic status was middle.

Table 2: Reliability Analysis of Academic Self-Efficacy, Academic Motivation and Coping Skills (N=300)

Scales	n	SD	α	Range	
				Actual	Potential
GSES	10	5.10	.79	17-39	4-40
BCS	28	12.91	.87	34-101	4-112
AMS	28	26.39	.90	69-190	7-196

Note. GSES= (General Self-Efficacy Scale), BCS= (Brief COPE scale), AMS= (Academic Motivation Scale).

Table 2 explains the reliability of the scales used in this study. For general self-efficacy scale, brief COPE and academic motivation scale the Cronbach alpha came out to be acceptable, good and excellent respectively.

Table 3: Correlation Analysis of Study Variables (N=300)

Variables	1	2	3
Academic self-efficacy	-	.22**	.42**
Academic motivation	-	-	.45**
Coping skills	-	-	-

Note. =**p<.001

Table 3 shows the results of the correlation analysis. It shows the relationships between graduate students' academic self-efficacy, academic drive, and coping skills. It also shows the statistical significance values and effect sizes for these relationships. It indicates that there is positive correlation between academic self-efficacy, academic motivation and coping skills.

Table 4: Mann-Whitney for Gender Differences (N=300)

Variable	Male		Female		U	p
	N	M	N	M		
Academic self-efficacy	150	149.71	150	151.29	11131.50	.87
Academic motivation	150	151.73	150	149.27	22456.50	.81
Coping skills	150	148.43	150	152.57	10939.00	.68

Table 4 shows results of the Mann-Whitney test that looked at how gender affected academic self-efficacy, academic drive, and coping skills among graduate students. Along with statistical significance values, effect sizes (which can be interpreted using the right measures,

like Cohen's d) show how big the differences are between the male and female subjects. It shows Mann Whitney test of two independent samples test, explains the mean difference of academic self-efficacy, academic motivation, and coping skills along gender differences. Results found non-significant differences between of academic self-efficacy, academic motivation, and coping skills along gender differences.

6. Discussion

The study aimed to find out the relationship between academic self-efficacy, academic motivation, and coping skills among graduate students. The findings on the positive interconnections between academic self-efficacy, academic motivation, and coping skills among graduate students are also found in prior research, emphasizing the pivotal role these factors play in academic success across educational levels (Behroozi, Rezaie, & Alipoor, 2018). This study extends the existing literature by highlighting the significance of these constructs in the unique context of graduate education, where the pressures and challenges differ markedly from undergraduate settings (Bhati, Baral, & Meher, 2022). Utilizing well-established scales such as the General Self-Efficacy Scale (GSES), the Brief COPE Scale, and the Academic Motivation Scale (AMS), the research demonstrated a significant positive correlation between these variables. These findings align with established theories such as Bandura's social cognitive theory and Lazarus and Folkman's transactional model of stress and coping, suggesting that individuals with higher self-efficacy beliefs are more likely to exhibit greater effort, set challenging goals, and effectively cope with academic challenges (Bai, Nie, & Lee, 2022). The results underscore the importance of fostering academic self-efficacy among graduate students, as it not only influences their motivation levels but also enhances their ability to manage stress and effectively navigate academic demands.

Furthermore, the study's examination of gender differences in academic self-efficacy, academic motivation, and coping skills yielded noteworthy results. Contrary to some prior assumptions, the analysis revealed that gender did not play a significant role in these variables among the graduate student sample. The absence of significant gender differences in academic self-efficacy, academic motivation, and coping skills suggests a more nuanced interpretation influenced by social cognitive theory (Burkholder, Hwang, & Wieman, 2021). Gender norms and expectations within diverse educational contexts may shape individuals' perceptions and responses to academic challenges. Furthermore, previous research indicates that gender differences in these constructs may diminish as students progress through higher education, contributing to the non-significant findings in this study (Graves, Hall, Dias-Karch, Haischer, & Apter, 2021). This finding diverges from previous research suggesting potential gender disparities in academic self-efficacy and coping strategies. Instead, the study highlights the nuanced nature of these constructs and emphasizes the need for a comprehensive understanding that goes beyond gender-based generalizations (Chen, Peng, Xu, & O'Brien, 2018). Moreover, these results contribute to the ongoing discourse on gender and academic performance, suggesting that other factors beyond gender may exert a more substantial influence on graduate students' academic experiences and outcomes. The study sheds light on the intricate interplay between academic self-efficacy, academic motivation, and coping skills among graduate students. By confirming the positive relationship between these constructs, the research underscores the importance of interventions aimed at enhancing students' self-efficacy beliefs and coping strategies to foster academic success. Additionally, the findings challenge traditional assumptions regarding gender differences in academic self-efficacy, academic motivation, and coping skills, suggesting a more nuanced understanding of these constructs.

6.1. Limitations

The study has a few limitations. This study is conducted on students of Master's and Ph.D. and the sample size was limited, due to which results cannot generalize properly. Secondly, that data was self-reported which might not be valid. Lastly, lack of control over extraneous variables such as academic performance, personal characteristics, or external stressors.

6.2. Recommendations and Implications

The future recommendation for the researchers is future studies should include academic performance with these variables. The data in the future should be collected by using

a mix-method approach. Future researchers could include undergraduate students and can investigate the methods to improve coping skills. Future researchers might use this study to know how students use coping skills, which gender has more coping skills and use which type of coping skills more, which universities have better coping skills either private, government, or semi-government. Lastly it has discovered the impact of degree programs on coping skills. This study will help the institution to improve and help students with low coping skills by initiating the support services including counselling services, career development programs, and stress-management workshops. Further, promoting self-efficacy beliefs, fostering intrinsic motivation, and teaching effective coping skills can enhance students' academic performance, motivation, and overall well-being. Moreover, for the enhancement of graduate students' academic self-efficacy, academic motivation, and coping skills, academic institutes may collaborate with the policy makers to launch programs that leads to the implementation of above-mentioned support services. In addition to this, academic institutions may also incorporate elements that promote holistic well-being, such as mindfulness practices, wellness courses, and opportunities for social connection and community building among graduate students. In practical settings such as university counselling services or academic support programs, the findings suggest a need for interventions focused on enhancing graduate students' academic self-efficacy, motivation, and coping skills. Implementing targeted programs that promote self-belief, intrinsic motivation, and effective coping strategies can contribute to better academic performance and overall well-being among graduate students. Additionally, tailored support services should be inclusive and address diverse student needs to ensure equitable access and effectiveness.

7. Conclusion

From the current study, it is found that the significant positive correlation between academic self-efficacy, academic motivation, and coping skills among graduate students. These findings underscore the importance of fostering these constructs to promote academic success and well-being. Furthermore, the non-significant gender differences suggest a need for more nuanced approaches to understanding how gender interacts with academic experiences. Moving forward, future research could explore additional factors influencing these constructs and their impact on graduate student outcomes. Practically, interventions aimed at enhancing self-efficacy, motivation, and coping skills can be developed to support graduate students in navigating the challenges of higher education.

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