Mindfulness, Self-Compassion, Resilience, and Academic Anxiety among College Students: A Structural Equation Modeling Approach

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Abstract. *One of the challenges faced by students is academic anxiety, which can have negative impacts on their academic activities. The aim of this study was to examine the direct effects of mindfulness, self-compassion, and resilience on academic anxiety, as well as the mediating role of resilience in these relationships. A cross-sectional study was conducted, and a sample of 344 university students from Jambi Province, Indonesia was recruited to complete the Academic Anxiety Scale (AAS), Five Facet Mindfulness Questionnaire (FFMQ), Self-Compassion Scale (SCS), and Brief Resilience Scale (BRS). The structural model was tested using Partial Least Squares Structural Equation Modeling (PLS-SEM). The study revealed that there were significant negative effects of mindfulness, self-compassion, and resilience on academic anxiety. Additionally, the findings indicated that resilience acted as a mediator in these relationships. This study has implications for the importance of preventing and managing academic anxiety among students by enhancing mindfulness, self-compassion, and resilience. Counseling services in universities should be maximized to address this issue.*

Keyword: *Academic Anxiety, Mindfulness, Self-Compassion, Resilience*

INTRODUCTION

Students are an important element in higher education institutions. Their performance plays a vital role in producing quality output, which in turn can make them desirable workers who can take responsibility for economic and social development (Norhidayah, Jusoff, Ali, Najah, & Salamat, 2009). However, the ideal condition of students is not always achieved as many issues are faced by students, especially those who lack psychological resilience (Wu et al., 2020). One of the problems that sometimes arises in students is academic anxiety.

Anxiety is a typical response to specific situations, and it is considered normal to experience low levels of anxiety. However, when anxiety becomes severe, it can pose a significant concern. Anxiety is characterized by feelings of apprehension, nervousness, or unease regarding an uncertain outcome (Longdom, 2021; Sujadi et al., 2020, 2021). Tracy characterizes anxiety disorder as a prevalent mental health condition characterized by sensations of unease, apprehension, and fear (Tracy, 2019). Academic anxiety refers to a type of anxiety that is specifically related to academic or educational contexts (Mahajan, 2015). It not only includes anxiety related to exams, but also anxiety related to specific educational subjects, such as math, reading, science, and foreign languages (Mahajan, 2015). Academic anxiety as a comprehensive concept that encompasses anxiety associated with customary academic tasks. Fundamental aspects of academic anxiety include concerns about underperforming in comparison to peers, apprehension about academic

responsibilities, and stress experienced within the classroom setting (Cassady, Pierson, & Starling, 2019).

Academic anxiety can become increasingly detrimental over time, as a student's performance in academic tasks declines, the level of anxiety associated with those tasks can increase, leading to a vicious cycle of academic underachievement and increased anxiety (Hooda & Saini, 2017). Social anxiety can also affect students' academic performance (Hooda & Saini, 2017; Khalaila, 2015; Thomas, Cassady, & Heller, 2017). Academic anxiety can disrupt the mental and physical well-being of students, and therefore solutions need to be found to address it. Anxiety can affect various aspects of a student's life, such as motivation (Li, Cho, Cosso, & Maeda, 2021), mental health (Salehi, Rahimzadeh, Molaei, Zaheri, & Esmaelzadeh-Saeieh, 2020; Silva, Brito, & Pereira, 2021), as well as physical activity and sleep disorders (Stanton et al., 2020). Some symptoms that may arise due to academic anxiety include difficulty sleeping, difficulty concentrating, frequent worrying, and irritability (Hawes, Szenczy, Klein, Hajcak, & Nelson, 2022; Nikayin et al., 2016).

Some students may encounter academic anxiety. Research indicates that academic pressure is the most significant contributor to variance in anxiety, followed by financial pressure, support from family, and support from peers (Jones, Park, & Lefevor, 2018). In another study, anxiety was also found in students related to parental expectations, foreign language, social, and emotional (Ata, 2016). This issue also occurred in a group of pharmacy students at one campus in the UK (Mirawdali, Morrissey, & Ball, 2018). Furthermore, anxiety also occurs when students face specific courses. For example, there is a group of students who experience anxiety in mathematics (Carey, Devine, Hill, & Szűcs, 2017). Anxiety also sometimes occurs when students are about to face exams (Brady, Hard, & Gross, 2018). During the COVID-19 pandemic, students' anxiety also increased (Alemany-arrebola, Rojas-ruiz, Granda-vera, & Davis, 2020). Several surveys describe academic anxiety as still being one of the issues faced by students. This situation is certainly concerning because it can disturb the balance of students' lives and have adverse effects on their academic pursuits.

Several literatures explain that academic anxiety experienced by students can be caused by internal factors, such as mindfulness (Bamber & Morpeth, 2019; Breedvelt, Amanvermez, Harrer, & Karyotaki, 2019; Song & Lindquist, 2015; Yazdanimehr, Omidi, Sadat, & Akbari, 2016). Mindfulness is a concept that emerged in the social sciences. However, this concept is not easily defined and confusing for readers (Nilsson & Kazemi, 2016). Mindfulness is intentionally and non-judgmentally trained awareness of current experiences, including feelings, thoughts, and bodily sensations. Mindfulness is usually associated with meditation and other contemplative practices, but can also be applied in daily life (Kabat-Zinn, 2003). Mindfulness is the ability to focus one's attention on the present moment with full awareness, without judging, categorizing, or identifying experiences as good or bad (Bishop et al., 2004). It can be enhanced through a specific training program (Creswell, 2017). Several studies have shown that mindfulness practice significantly reduces anxiety levels. In addition, mindfulness practice can also improve individuals' ability to regulate emotions and improve overall quality of life (Bamber & Morpeth, 2019; Breedvelt et al., 2019).

Another aspect mentioned in the literature that affects academic anxiety is self-compassion (Bajaj & Pande, 2016; Muris, Meesters, Pierik, & de Kock, 2016; Soysa & Wilcomb, 2015). Self-compassion is a state of mind that involves increasing self-kindness and decreasing self-judgment, increasing human values, increasing attention and decreasing over-identification, and suggesting that these elements influence each other (K. D. Neff, 2016). Self-compassion is also the courage

to face difficulties and failures with empathy, sincerity, and self-respect (K. D. Neff & Germer, 2013). The three primary components of self-compassion are self-kindness, common humanity, and mindfulness (K. Neff, 2011). Self-kindness refers to how we treat ourselves with kindness and support. Common humanity shows that failure and difficulty are normal and unavoidable parts of human experience. Mindfulness is the ability to shift attention to the present experience without judging or evaluating (K. Neff, 2011). The correlation between self-compassion and academic anxiety is that self-compassion can help reduce academic anxiety levels in students (Soysa & Wilcomb, 2015). Increasing self-compassion levels can help students reduce academic anxiety, increase mental well-being, and improve learning motivation (Bajaj & Pande, 2016).

Another factor that affects academic anxiety is resilience (Anyan & Hjemdal, 2016; Ran et al., 2020; Zhang et al., 2020). Resilience can be defined as the ability to overcome or cope with difficulties, be resilient in facing challenges and failures, and recover from traumatic events or significant stress (American Psychological Association, 2022). A person's capacity to deal with hardships or traumatic experiences while keeping healthy social and psychological functioning is known as resilience (Jumiarti, Hayati, Hardi, Sujadi, & Febrianti, 2022; Masten & Narayan, 2012; Putra, Sujadi, Bustami, & Indra, 2022). Students who have high levels of resilience tend to have lower levels of academic anxiety. Students with high levels of resilience can cope with and adapt to academic challenges such as task demands, exams, and social pressure (Anyan & Hjemdal, 2016). In addition to directly affecting academic anxiety, resilience is also effective in mediating the relationship between mindfulness, self-compassion, and academic anxiety (Pérez-Aranda et al., 2021).

Several studies have emphasized the importance of resilience among the relationships of variables. Furthermore, the research theme is still rarely explored in the context of educational environment in Indonesia. The findings of this study can provide an overview for academic leaders to develop academic anxiety intervention programs. In this study, we attempt to analyze the effect of mindfulness, self-compassion, and resilience on academic anxiety.

Therefore, we propose the following hypotheses: 1) mindfulness directly affects academic anxiety; 2) self-compassion directly affects academic anxiety; 3) mindfulness directly affects resilience; 4) self-compassion directly affects resilience; 5) resilience directly affects academic anxiety; 6) mindfulness affects academic anxiety through resilience; and 7) self-compassion affects academic anxiety through resilience. Figure 1 illustrates the integration model for the relationship between the variables tested
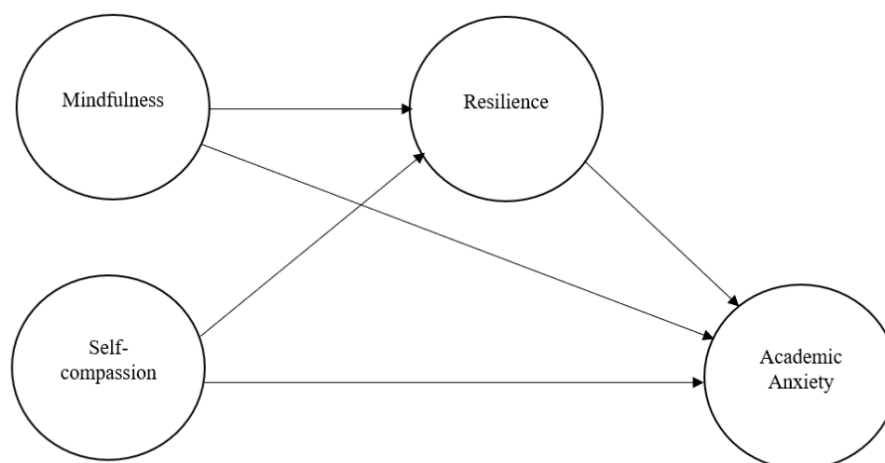

Figure 1. The Proposed Theoretical Framework of the Study

METHOD

Study Design and Participants

The research employed an online cross-sectional survey methodology. A cross-sectional study is an observational study that examines data from a population at a specific moment in time (Wang & Cheng, 2020). This approach is frequently utilized to determine the occurrence of health outcomes, explore health determinants, and characterize population attributes (Wang & Cheng, 2020). The use of online surveys aims to facilitate data collection so that data can be obtained more quickly and accurately. The research scale was input into a Google Form application and distributed via WhatsApp from April to June 2022. When respondents received the link, they were asked to agree to participate in the study. Next, they were asked to fill out their identity and respond to each statement on the research scale. During this period, a total of 344 students at a state university in Jambi Province participated in the survey. Table 1 displays the demographic characteristics of the participants.

Table 1. Demographic and Specific Characteristics of Respondents

Demographic Variable	Category	Frequency	Percentage
Gender	Male	133	38.66
	Female	211	61.34
Year/Semester	2021/II	85	24.71
	2020/IV	117	34.01
	2019/VI	89	25.87
	2018/VIII	53	15.41
Faculty	Sharia	65	18.89
	Education and Teacher Training	103	29.94
	Islamic Studies, Humanities, and Da'wah	32	9.30
	Islamic Economics and Business	144	41.86
Grade Point Average (GPA)	> 3.50	201	58.43
	< 3.50	143	41.57

Table 1 depicts the characteristics of respondents based on specific categories. We examined four aspects, namely gender, academic year/semester, faculty, and Cumulative Grade Point Average (CGPA). Based on gender, females dominated the sample. Regarding academic year/semester, the majority of participants were from the 2020 cohort or 4th semester, while the least number of respondents were from the 2018 cohort or 8th semester. Currently, they are in the process of completing their thesis and do not have any face-to-face meetings. Furthermore, in terms of faculty, the Faculty of Education and Teacher Training dominated the sample, while the fewest number of respondents were from the Faculty of Islamic Studies, Humanities, and Da'wah. This is reasonable as the population distribution between these two faculties is significantly different. Lastly, based on CGPA, generally, the surveyed students had good academic achievement (>3.50), but the percentage was not significantly different from those who had a CGPA < 3.50.

Measurement

We adapted four measurement scales for data collection. The adaptation process followed the concept formulated by Beaton. Adapting a questionnaire for use in a new country, culture, and/or language requires the use of unique methods to achieve equivalence between the original source

and the target version of the questionnaire (Beaton, Bombardier, Guillemin, & Ferraz, 2000). The research scale adaptation process consists of four stages, including: 1) translation. In this stage, the researchers sought the assistance of two English lecturers; 2) synthesis of translation results by a language expert; 3) expert committee review. In this stage, the translated research scales were validated by guidance and counseling experts and research methodology experts; and 5) field testing. In the fifth stage, field testing was conducted on research respondents, including Alpha Cronbach. The measurement scales included are:

Academic Anxiety Scale (AAS)

The scale used to measure academic anxiety in this study is the Academic Anxiety Scale developed by Cassady, Pierson, and Starling in 2019 (Cassady et al., 2019). This scale is an expansion of the Cognitive Test Anxiety Scale, which exclusively focuses on cognitive indicators of test anxiety (Cassady & Johnson, 2002). The Academic Anxiety Scale measures broader aspects of anxiety, not limited to cognitive factors. The survey instrument utilized in this investigation comprises 11 Likert-type items that were designed to reflect apprehensions and anxieties in academic settings and circumstances. Response options are identical to the CTAR ("1 = Never happens to me," "2 = Happens to me a little bit," "3 = Happens to me sometimes," and "4 = Happens to me a lot"). The scale has a high estimated reliability, with a split-half Guttman reliability of 0.91 and a CA of 0.90 (Cassady et al., 2019). For the purpose of this research, we conducted internal consistency testing using Cronbach Alpha, which yielded a score of 0.94.

Five Facet Mindfulness Questionnaire (FFMQ)

The Five Facet Mindfulness Questionnaire (FFMQ) is an instrument for measuring an individual's capacity and propensity to cultivate mindfulness in everyday life (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). The questionnaire encompasses 39 items that evaluate five dimensions of mindfulness (Baer et al., 2006). A five-point Likert scale is used for the scale. FFMQ has gained popularity in both research and clinical settings as a tool to assess individual levels of mindfulness (Baer et al., 2006). The initial validation study that the FFMQ has a five-factor structure consistent with mindfulness theory and a high level of internal consistency (CA = 0.75 to 0.91 for each aspect) (Baer et al., 2006). Additionally, additional study reveals that the FFMQ has good convergent and discriminant validity (Baer et al., 2008). The retesting of internal consistency yielded a Cronbach's alpha score of 0.97.

The Self-Compassion Scale (SCS)

The Self-Compassion Scale (SCS) is one of the most well-known instruments for measuring self-compassion (K. D. Neff, 2003). The purpose of the SCS is to assess the degree to which individuals are capable of cultivating self-kindness and understanding in challenging circumstances. The scale consists of 26 items covering six dimensions (Pommier, Neff, & Tóth-Király, 2020). The rating system uses a 5-point measure. Research has shown that the SCS has high validity and reliability. In an initial validation study, Neff demonstrated that the SCS has a three-factor structure that aligns with the theory of self-compassion and has good internal consistency (CA = 0.92 for the overall scale) (K. D. Neff, 2003). Reliability was also found to be good, with CA values ranging from 0.80 to 0.93 for each aspect (K. D. Neff, 2003). The testing we conducted resulted in a Cronbach's alpha score of 0.93.

The Brief Resilience Scale (BRS)

The Brief Resilience Scale (BRS) is a tool created to assess an individual's ability to bounce back from challenging experiences rapidly (Smith et al., 2008). The scale consists of six items that focus on an individual's ability to face the future with positivity and confidence in their ability to overcome obstacles (Smith et al., 2008). On a 5-point Likert scale, participants are asked to rate how much they agree with the statements given (Smith et al., 2008). Numerous investigations have evaluated the BRS's validity and reliability. Smith et al. found that the BRS demonstrated good convergent and discriminant validity when compared to other resilience measures. In addition, the scale demonstrated excellent internal consistency, with CA coefficients ranging from 0.80 to 0.91 in a number of investigations (Smith et al., 2008). Furthermore, we conducted an additional internal consistency test, which resulted in a Cronbach's Alpha score of 0.94.

Statistical Analysis

We used Partial Least Squares Structural Equation Modeling (PLS-SEM) to assess the developed model, which is a multivariate statistical analysis method used to model and investigate complex relationships between multiple variables. PLS-SEM is useful for dealing with multicollinearity issues and complex models, where there are many independent variables that interact with each other. PLS-SEM consists of two main stages, namely the outer model and inner model stages (Henseler, Hubona, & Ray, 2016). During the outer model stage, factor analysis is conducted on each construct or independent variable to assess the validity and reliability of the constructs. In this stage, validity and reliability assessments are conducted to gauge the extent to which the constructs accurately reflect the measured variables (Hair, Hult, Ringle, & Sarstedt, 2017). Each hypothesis in the model is evaluated using path coefficients in the inner model stage to see how much the exogenous variables influence the endogenous variables (Hair et al., 2017). The path coefficients obtained from the analysis must be statistically significant, with a p-value less than the predetermined level of significance (< 0.05) (Hair et al., 2017).

FINDINGS

Measurement Model

Evaluation of the measurement model in PLS-SEM is the stage where each construct is analyzed to measure its reliability and validity. At this stage, a factor analysis is conducted to test construct validity and reliability. Construct validity can be tested using the Average Variance Extracted (AVE) coefficient and factor loading. The AVE coefficient measures how much variance of a construct is explained by the indicators used, while the factor loading measures how much the indicator influences the measured construct. Construct reliability can be tested using either CA or Composite Reliability (CR) (Hair et al., 2017). The measurement model evaluation can be seen in Table 2.

Table 2. Measurement Model Evaluation

Variables	Cronbach Alpha	Dijkstra & Henseler's rho_A	CR	AVE
Academic anxiety	0,944	0,945	0,956	0,692
Mindfulness	0,968	0,969	0,973	0,691
Self-Compassion	0,931	0,931	0,951	0,771
Resilience	0,941	0,944	0,949	0,630

Table 2 exhibits the scores of validity and reliability, indicating that all values of Cronbach's alpha, Dijkstra & Henseler's rho_A, and composite reliability are greater than 0.7. Furthermore, the achieved AVE values are all greater than 0.5. A value of CA > 0.70 is deemed satisfactory, although some research considers a lower value (0.60) for studies employing new constructs. Similarly, a value of composite reliability > 0.70 is regarded as acceptable (Hair et al., 2017). A good value for AVE is > 0.50. Higher AVE values indicate that the construct is more reliable and valid, as the indicators within the construct are more correlated with each other and more related to the variability of the construct (Hair et al., 2017).

Assessing discriminant validity can also be achieved by evaluating the Heterotrait-Monotrait Ratio (HTMT) values. HTMT measures the degree of correlation between two different constructs (heterotrait) compared to the correlation between two indicators of the same construct (monotrait) (Hair et al., 2017). The value of HTMT should be < 0.9 to ensure discriminant validity (Hair et al., 2017). Table 3 shows that all scores are < 0.9, meeting the criteria for discriminant validity.

Table 3. Heterotrait-Monotrait Ratio (HTMT)

	1	2	3	4
Academic anxiety				
Mindfulness	0.635			
Resilience	0.611	0.781		
Self-compassion	0.728	0.738	0.678	

Structural Model

The evaluation of the structural model in SmartPLS can be done by examining various statistical values that are generated, including R-Squared (R^2), Q^2, Effect Size (f^2), t-statistic value, and p-value for each path coefficient (Hair et al., 2017). The t-statistic value and p-value for each path coefficient should also be noted. When conducting a statistical analysis, a high t-statistic value and a low p-value (p-value <0.05) suggest a significant relationship between exogenous variables and endogenous variables (Hair et al., 2017).

Table 4. Direct, Indirect, and Total Effect of the Variables

Path	Direct effect		Total effect		Indirect effect	
	β	p-values	B	p-values	β	p-value
Mindfulness → Academic Anxiety	-0.279	0.000**	-0.279	0.000		
Mindulness → Resilience	0.145	0.000**	0.322	0.000		
Resilience → Academic Anxiety	-0.302	0.000**	-0.302	0.000		
Self-Compassion → Academic Anxiety	-0.484	0.000**	-0.484	0.000		
Self-Compassion → Resilience	0.231	0.000**	0.511	0.000		
Mindfulness → Resilience → Academic Anxiety					0.088	0.000**
Self-Compassion → Resilience → Academic Anxiety					0.105	0.000**

Significant at p < 0.05, **significant at p < 0.01

Table 4 depicts the direct and indirect effects among the research variables. All hypotheses were accepted, indicating that mindfulness, self-compassion, and resilience have a direct impact on

academic anxiety. The indirect testing also indicates that the impact of mindfulness and self-compassion on academic anxiety is significantly mediated by resilience. Table 4 also shows several negative relationships, such as mindfulness, self-compassion, and resilience with academic anxiety, which means that the higher the students' ability to focus attention, show compassion and appreciation, and resilience to psychological pressure, the lower the perceived academic anxiety will be. Figure 2 provides an overview of the effect between research variables.
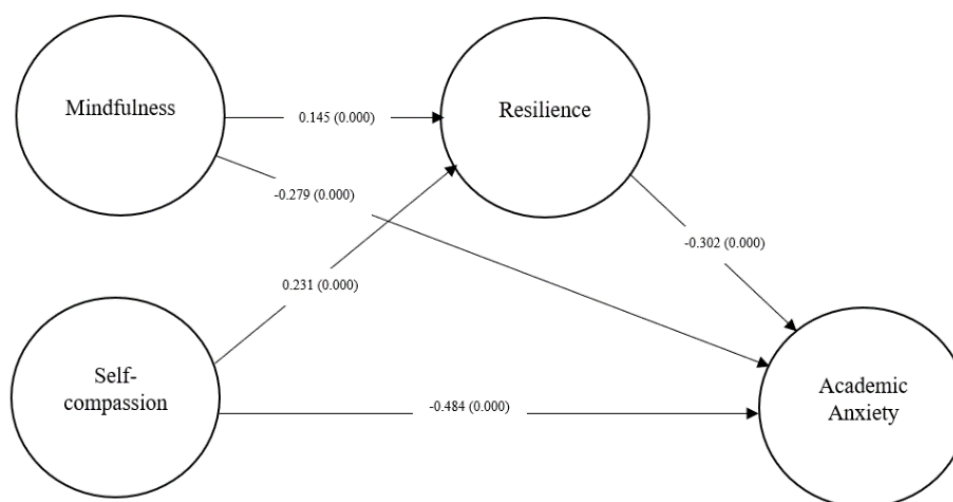

Figure 2. Summary of the Relationship Between Variables

DISCUSSION

Academic anxiety is a common problem that cannot be ignored by students if they want to achieve academic success. It is normal to experience low levels of anxiety, but severe anxiety can lead to significant problems. In particular, academic anxiety can have negative consequences over time. When academic performance declines, the level of anxiety associated with certain academic tasks will increase, and vice versa (Huberty & Dick, 2006). When academic anxiety is not effectively addressed, it can lead to serious, severe, and long-term consequences for students. These consequences may include developing a dislike for certain subjects or teachers, procrastinating on assignments, lying to parents, completing work in a careless manner, skipping classes, avoiding socializing with peers or friends, and even dropping out of school (Mahato & Jangir, 2015). Academic anxiety can also adversely affect academic performance (Ariafar & Fatemipour, 2013; Macher, Paechter, Papousek, & Ruggeri, 2014). A study on procrastination-related anxiety and found a significant association between anxiety and perceptions of threat, danger, and emotion-focused coping (Lay, Edwards, Parker, & Endler, 1989). Studies on students have revealed a significant and positive correlation between procrastination and anxiety, with a larger proportion of anxiety being linked to academic tasks like writing, studying, and reading (Onwuegbuzie, 2014). Academic procrastination is a form of maladaptive coping strategy that is closely related to high levels of anxiety in academic contexts (Rothblum, Solomon, & Murakami, 1986). Findings from a study of 475 students in China revealed that academic anxiety has an effect on academic procrastination (Yang, Asbury, & Griffiths, 2019).

Hypothesis testing in this study showed that mindfulness directly affects academic anxiety. Several studies have demonstrated the efficacy of Mindfulness-based stress reduction (MBSR) in reducing symptoms of depression, anxiety, and stress among student populations in South Korea (Song & Lindquist, 2015), as well as mindfulness-based therapy (Hofmann, Sawyer, Witt, & Oh,

2010) and Mindfulness-based meditation (Bamber & Kraenzle Schneider, 2016; Kang, Choi, & Ryu, 2009). Similar to these findings, studies show that mindfulness is effective in reducing academic anxiety (Breedvelt et al., 2019). There is a positive relationship between psychological flexibility and mindfulness, and when examined separately, both variables demonstrate a negative correlation with anxiety (Masuda & Tully, 2011). The effect of mindfulness is not only effective in reducing anxiety, but also in some other psychological conditions, such as stress (Weinstein, Brown, & Ryan, 2009). Some of these studies indicate that mindfulness practice can help reduce levels of academic anxiety in students. Engaging in mindfulness practice can assist individuals in becoming more conscious of their thoughts and emotions, enabling them to cultivate the capacity to deal with academic pressure and anxiety more effectively.

Self-compassion also significantly affects academic anxiety. In an academic context, self-compassion can help individuals reduce self-criticism, which can worsen academic anxiety (Waite, Knight, & Lee, 2015). Conversely, by developing self-compassion, one can learn to appreciate oneself and overcome failures and mistakes more easily. Self-compassion can serve as a meaningful concept for students and as something they can apply to help overcome depression or anxiety (Boyraz, Legros, & Berger, 2021). A study reveals that self-compassion and Islamic spiritual orientation have a significant negative impact on academic anxiety among students. The decrease in academic anxiety through self-compassion and Islamic spiritual orientation can be attributed to positive changes in self-perception (Ningrum, Purwanto, & Mulawarman, 2021). Specifically, self-compassion is associated with the severity of social anxiety (Werner et al., 2012). On a broader level, interventions aimed at cultivating self-compassion have been shown to result in significant increases in self-compassion, attention, and optimism (Smeets, Neff, Alberts, & Peters, 2014).

Hypothesis testing also proves that mindfulness directly affects resilience. Studies have shown that mindfulness directly affects resilience (Bajaj & Pande, 2016; Chamberlain et al., 2016). Additional research has shown that increased resilience is associated with greater mindfulness, higher adaptive coping strategy scores, lower maladaptive coping strategy scores, and a decrease in psychological stress (A. M. Pidgeon & Pickett, 2017). A study conducted on African-American students revealed a positive correlation between mindfulness and resilience (Freligh & Debb, 2019). Research has indicated that students who have higher levels of nonjudgmental and nonreactive mindfulness, as well as self-compassion, tend to have higher scores of resilience. These findings suggest that practicing and developing these qualities of mindfulness and self-compassion can help strengthen students' ability to cope with challenges and adversity (McArthur et al., 2017). Previous research has demonstrated that academic self-efficacy and mindfulness are important predictors of resilience when using regression models (A. Pidgeon & Keye, 2013). Furthermore, mindfulness also affects the formation of individual prosocial behavior (Donald et al., 2019).

Self-compassion has also been proven to directly affect resilience. Self-compassion affects resilience by providing emotional support to oneself when facing difficulties, reducing fear and anxiety, and increasing confidence (Zessin, Dickhäuser, & Garbade, 2015). By treating oneself with kindness and understanding, individuals can reduce pressure and stress that can affect their mental health (Zessin et al., 2015). This can help individuals remain calm and focused on solutions when facing life challenges. It has been discovered that self-compassion positively correlates with job-related resilience. Research has shown that individuals who practice self-compassion are better able to handle job-related stress and have a greater ability to recover from setbacks or failures at work (Lefebvre, Montani, & Courcy, 2020). Other studies demonstrate conclusively that self-compassion is associated with greater resilience (Kotera, Ting, & Neary, 2021; Nery-Hurwit, Yun, & Ebbeck,

2018). According to research, self-compassion rather than awareness is a better predictor of anxiety (Van Dam, Sheppard, Forsyth, & Earleywine, 2011).

The hypothesis testing in this research showed that academic anxiety is significantly affected by resilience. Individuals who have high levels of resilience are more likely to have the capability to overcome academic anxiety. They are able to handle academic pressures and challenges better and can recover faster from academic failures or setbacks. Individuals with high resilience have better emotional regulation skills, which can help reduce perceived anxiety. Numerous studies have shown a substantial correlation between the two factors. Anxiety and resilience in personal ability were found to be negatively correlated (Poudel-Tandukar et al., 2019). Several studies have reported a correlation between resilience and symptoms of anxiety and somatization during the COVID-19 (Ran et al., 2020). Similar findings were demonstrated an inverse relationship between resilience and anxiety (Shechter et al., 2020). Studies conducted on health workers during the COVID-19 pandemic have reported a significant negative association between resilience skills and symptoms of Generalized Anxiety Disorder (GAD). Additionally, the findings of multiple regression analysis revealed that resilience skills contributed 14.4% of the variance in GAD symptoms (Peñacoba et al., 2021).

This research investigated the role that resilience plays as a mediator in the connection between academic anxiety, mindfulness, and self-compassion, and it showed that there was a significant connection between all three factors. The mediating effect of resilience means that students who develop higher levels of resilience through mindfulness and self-compassion practices are better able to cope with academic pressure, leading to a reduction in academic anxiety levels. Previous research has explored how resilience may mediate the relationship between mindfulness, self-compassion, and academic anxiety. A relevant study found that resilience mediated the relationship between these variables (Pérez-Aranda et al., 2021). Furthermore, several other studies have demonstrated the mediating role of resilience on various variables. Resilience was found to mediate the association between mindfulness and mental health outcomes (Charbonneau, 2019). Furthermore, the relationship between mindfulness and life satisfaction was found to be mediated by resilience in several studies (Bajaj & Pande, 2016). The research results indicated that there was a significant direct relationship between mindfulness and quality of life, and also an indirect relationship through the mediation of resilience (Nery-Hurwit et al., 2018).

There are several limitations to this research. Firstly, the measurement was only conducted online, so the process cannot be well-controlled. The concepts studied are psychological aspects that are owned and felt by students, so an assessment by an expert is needed. Secondly, the respondents of this study are limited to one university. In addition, the distribution of respondents is not evenly spread across several faculties. Thirdly, the hypothesis testing is still limited to testing the effect between variables. The researcher did not test the correlation between dimensions and multivariate analysis to see differences in research variables based on demographic characteristics. Fourthly, the variables included in the structural model are still limited. In future research, several other variables that have a direct effect on academic anxiety or variables that have mediating effects on academic anxiety can be added.

CONCLUSION

Academic anxiety is a common issue experienced by students. It can be a serious problem, as it can disrupt their academic performance and even impede their progress in completing their studies.

This study reveals that academic anxiety is directly affected by mindfulness, self-compassion, and resilience. The analysis also indicates that resilience has a significant mediating effect among these relationships.

This study has important implications for the prevention and management of academic anxiety experienced by students. University leaders need to be aware of and address these issues, including by maximizing counseling services in higher education institutions. According to a related study, some strategies for managing academic anxiety include using psychological counseling center services and practicing physical activity and relaxation techniques (AlKandari, 2017). Given that resilience has a significant mediating effect and can be modified, intervention efforts for academic anxiety can be made by enhancing students' resilience, mindfulness, and self-compassion. Studies have shown that mindfulness- and self-compassion-based therapies are effective in managing academic anxiety (Frostadottir & Dorjee, 2019; Takahashi et al., 2019). In the therapy process provided to students experiencing academic anxiety, peer and family involvement should also be considered. This is based on a study that showed that social support is needed in the intervention process (Aune, Juul, Beidel, Nordahl, & Dvorak, 2021; Mallinckrodt, 2000).

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