ICONSPADU 2021
International Conference Sustainable Practices, Development and Urbanisation

EXPLORING THE IMPACT OF STRESSOR ON ACADEMIC PERFORMANCE AMONG HIGHER EDUCATION STUDENTS

Rohaiza Mohamad Idaris (a), Norliana Ahmad Shah (b)*, Mohamad Hanafi Azman Ong (c),
Siti Fatimah Abdullah (d)
* Corresponding Author

(a) Faculty of Business & Accountancy, Universiti Selangor, Shah Alam, Malaysia, rohaiza@unisel.edu.my
(b) Faculty of Business & Accountancy, Universiti Selangor, Shah Alam, Malaysia, norliana@unisel.edu.my
(c) Faculty of Computer and Mathematical Sciences, Universiti Teknologi MARA (Segamat Campus), Johor,
Malaysia, napieong@uitm.edu.my
(d) Faculty of Business & Accountancy, Universiti Selangor, Shah Alam, Malaysia, fatimah@unisel.edu.my

Abstract

Stress is a prevalent component in every individual's life, irrespective of race or cultural background. In the education line, many students experience stress during their academic years. It might have a favourable or negative impact on academic performance. Thus, this research is intended to look into the correlation between stress and academic performance among Higher Education Institutions students. The research also attempts to investigate each source of stress that affecting academic performance. A quantitative method in a form of a questionnaire has been used to collect and analyse the data using PLS-SEM software. The sample includes 284 students from different Higher Education Institutions in Selangor. The findings show that the relationship factor has the greatest impact on academic performance, followed by the factor body, mind, and feelings, campus life, and finally financial factors. Therefore, it is recommended for students to maintain a simple, relaxing study environment that is free from any disorganisation and disruption is one approach to lessen the amount of stress that students endure. On the other hand, practising optimism and optimistic thinking can also improve student's health, relationships, and academic performance.

Keywords: Academic performance, higher education institutions, pls-sem, stress

1. Introduction

The university years are an important part of a student and a major turning point in their academic's life. In today's highly opposing environment, students face several academic difficulties, such as challenging work assignments and projects, whilst also encountering other issues, for instance, financial difficulties. On a related note, based on the National Health and Morbidity Survey (2015), mental health issues have increased in prevalence among Malaysian adults from 11.2% in 2006 to 29.2% in 2015. Additionally, Al-Ani et al. (2015) found that many students suffer from severe clinical symptoms of depression (13.9%), anxiety (51.5%), and stress (12.9%). Academic and personal problems have been recognised as the most common sources of stress among students. Therefore, it is critical for undergraduate students to learn appropriate stress management practices. Meanwhile, universities must acknowledge the major impact that stress has on students and endeavour to provide supportive and calm educational environments.

1.1. Academic Performance

Academic performance is among several components of academic success. Students perform well at university are more likely to adjust to adulthood and achieve professional and financial success. Academic performance is defined as the degree to which a student, instructor or institution attains the educational goals they aim to achieve within a specified time (Habiba & Wirahadikusumah, 2020; Narad & Abdullah, 2016). Meanwhile, according to Ahmed et al. (2018), academic achievement refers to achievements in a school, college, or university; in class; or in a laboratory, library, or project, as measured by grade point average or examinations. The results of continuous assessments or examinations are used to measure these objectives.

1.2. Sources of Stress

In everyday life, stress can manifest itself in a variety of ways and it is a common problem that affects the lives of many students at some point. The issue of stress has long been studied and debated by many researchers thus it is crucial to understand how the university students deal with stress in their daily lives (Ramachandiran & Dhanapal, 2018). Serfraz et al. (2020) defined stress as a state of tension or tension caused by adverse or demanding circumstances. While students want to perform well academically, they may encounter circumstances and events that trigger stress while attempting to attain these objectives. These include academic failure, financial and health problems or the death of a close relative or friend. Furthermore, stress also affects students' physical and mental functioning, as well as the quality of their academic performance.

Devi and Mohan (2015) and Yikealo et al. (2018) a stressor is described as something that tests a person's adaptability or stimulates their body or mind. Several reasons can produce stress, including environmental, mental, physiological, and social aspects. An individual may react negatively or positively, depending on the intensity and severity of the stress condition, the person's personality, their cognitive assessment of the stress, and the social support they receive.

Additionally, Lin et al. (2019) reported that academic stress is an aspect of university students' lives that can affect their academic performance. Such students may be exposed to many problems concerning, for example, their family, finances, peer relations and campus life. Student performances are affected differently, depending on the stressors and the level of stress.

1.2.1. Campus Life

Numerous researchers have listed completing tough tasks, excessive competitiveness among students, a lack of self-confidence, a strained connection with professors and family concerns as stressors at the academic level. According to Serfraz et al. (2020), several factors contribute to stress among university students, such as difficult assignments, unfavourable timing (for example, those experienced by both students and lecturers during the pandemic while taking online classes), lecturer bias and difficult course syllabuses. Furthermore, students are likely to face one or more stresses that will put their ability to adapt to the test, such as adjusting to a new environment or balancing a busy schedule, meeting new people, becoming more independent and managing various other issues (Aafreen et al., 2018). As a result, pressure builds, potentially harming the students' health. Rather than improving their efficiency, it reduces their productivity (Olowookere et al., 2015).

Meanwhile, Mishra (2018) revealed that students reported high levels of stress at university, particularly when they needed to prepare for exams and competitions, as well as understand their subject, within a short time. Likewise, students were disposed to high pressure for many reasons: university life's transitory nature, feelings of solitude, tiredness, lack of social support, concerns about grades, forming new friendships, acclimating to a new city, and a slew of other unexpected adjustments (Muna & Atinkut, 2018). As a result, earning a university degree frequently means students experience considerable pressures because they may need to study, take assignments and tests, work in laboratories and read. In addition to the stress of managing all these tasks, students often need to find time for extracurricular activities (Stankovska et al., 2018).

According to Essel and Owusu (2017), many academic factors have been identified as stressors, increased class workload, lower grades, lengthy hours of study, language difficulty, procrastination, tests, absent lecturers, and irritation due to misconceptions are only some of the issues that students face. Furthermore, other stresses, such as feelings of inadequacy, a lack of enthusiasm to learn, and the difficulty of assignment, could be sources of the pressures that induce impulsive melancholy, anxiety, and stress (Kamberi et al., 2018).

Meanwhile, among medical students, a strong link has been identified between exam performance and stress, particularly throughout the para-clinical and clinical years. In these years, the pressure due to the good performance of peers was also a key source of stress. According to a survey, 33 per cent of medical college students in Pakistan experienced stress, which harmed their exam performance (Tariq et al., 2020).

Additionally, in a Nigerian university, final-year students reported much higher levels of academic stress compared to middle- and first-year students. This could be attributed to the higher workload of the final year, which involves research and project writing in most faculties (Aihie & Ohanaka, 2019).

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1.2.2. Body, Mind and Feeling

The term health is often used to refer to the state of one's body and mind. Mindfulness was described by Ramasubramanian (2017) as a non-judgmental awareness of one's current lived experience. Used in educational contexts, mindfulness activities can be valuable tools with which a student can develop adaptive coping skills and academic success. Indirectly, these activities reduce university students' stress levels. According to the World Health Organization (WHO), well-being is a situation in which a someone acknowledges one's capacity and is able to deal with the stresses of everyday life, work efficiently and productively, and give back to the community. Meanwhile, according to Banyan (2015), academic success is influenced by psychological elements like emotional intelligence, motivation, anxiety and depression.

Stress, on the other hand, has a negative impact on students' physical and mental health. Loss of energy, high blood pressure, depression, difficulty concentrating, irritability and anxiousness are all signs of stress. Students who are stressed are more likely to become demotivated, unproductive, unsafe at work and vulnerable to deviant behaviours such as drug misuse and violence (Kio et al., 2018). Furthermore, stress can cause anxiety, sleep disturbances and interpersonal issues. The majority of stressed students reported low self-esteem and high depression (Baste & Gadkari, 2014), anxiety, diabetes, asthma, ulcers and/or headaches (Muna & Atinkut, 2018).

University students must operate in complex physical, psychosocial and socio-cultural environments that involve different degrees of challenges. Ramachandiran and Dhanapal (2018) conducted research determine the stressors that Generation Y and Z students at a Malaysia private institution perceive. The results clearly revealed that 88% of respondents stated that their studies were the primary source of their stress, with 78% admitting to experiencing moderate stress. Among the latter, 36% students had BMIs that fell into the overweight/obese category. Additionally, the study indicated that 54% of the students had experienced sleeping disorders.

Another study was undertaken at Ambo University on a group of 343 undergraduate students. Due to the transitional nature of college/university life, psychological distress, drowsiness, loss of self - esteem, anxiousness, concerns about their grades, making new acquaintances, adjusting to a new environment, and many other unforeseen changes, the findings revealed that college students were predisposed to stress. (Muna & Atinkut, 2018).

However, the findings of a study involving 288 undergraduate students at UUM identified three strong determinants as stress factors: social, academic, and environmental conditions. Stress management programmes for young adults were also found to be in high demand as a means to combat mental illness (Ahmed et al., 2019).

1.2.3. Relationship

One element that contributes to stress is the relationship issues that students confront, both at university and at home. It cannot be overstated how important it is for society and the economy to involve healthy and productive relationships (Serfraz et al., 2020). Every parent wants his or her child to perform well academically and, to be the finest among his or her peers, ideally. These expectations might not

always take the student's abilities into consideration. As a result, parents set higher expectations on their children, which can lead to stress (Mishra, 2018). Similarly, Essel and Owusu (2017) claimed that unrealistic parental expectations are a major source of stress among students.

Alternatively, Serfraz et al. (2020) and Mofatteh (2021) claimed that teacher-student relationships, whether direct or indirect, lead to stress among university students. However, this relationship is influenced by different assumptions. Mentors expect their students to be attentive, efficient and diligent, as well as able to meet deadlines. Meanwhile, students want teachers to be pleasant, unbiased and available at all times (Essel & Owusu, 2017).

The finding of a survey conducted by Ishii et al. (2018) at Tsukuba University in Japan revealed various risk factors among students, including irregular family visits, a lack of social interaction, gender issue for example (being female), fear of receiving poor grades, and underlying mental health disorders are just few of the factors.

1.2.4. Financial

Student finances have been identified as a factor that contributes to stress, since most university students have a stronger sense of financial responsibility than they did previously. Financial problems are not always simple to address for students from low socioeconomic backgrounds, which causes them to feel pressurised and stressed. According to Heckman et al. (2014), about 71% of the respondents faced financial stress based on the Ohio Student Financial Wellness Survey that was conducted at ten colleges and universities across Ohio and involved 5729 respondents.

Anxiety has been shown to be closely linked to financial stress and associated with academic stress. A study conducted by Sundarasen et al. (2020) among 983 respondents from public and private universities across all states in Malaysia showed that the stressors most often mentioned were financial pressures. Students were concerned about their inability to meet their university-related financial obligations due to the loss of family income or the loss of opportunities to work and self-finance their studies. According to Letkiewicz (2016), financial stress is associated with worse academic performance, especially in terms of grade point averages (GPA), as well as overspending and higher student debt. Besides, financial stress is thought to affect the academic and career self-efficacy of lower-income university students (White & Perrone-McGovern, 2017).

2. Problem Statement

Numerous studies have been conducted to identify academic performance factors in the higher education context. Thus, academic performance is crucial in generating high-quality graduates who become excellent leaders and professionals within the country, as well as being responsible for their economic and social success. However, indirectly, the problems mentioned above lead to stress among university students. A high level of stress will negatively influence student learning (Adom et al., 2020). Low self-esteem and sadness have been reported by the majority of pressured students. (Baste & Gadkari, 2014).

Financial obligations, scholarship requirements, family-related demands, in-class competitiveness, examinations, time management, and course-related stress are all frequent academic stressors for students. (Ramachandiran & Dhanapal, 2018; Ramli et al., 2018). Financial stress research remains scarce, list the citation to the past papers on the majority paper focusing on the short-term impact. According to the American College Health Association-National College Health Assessment (2015), students' concerns included academic work (63.1%), finances (36%), personal relationships (33%), sleeping problems (32.7%), other social contacts (32.4%), and family issues (30.9%). Similarly, students identified finances as the second most stressful or demanding issue they experienced during their college years, according to the National College Health Assessment.

Furthermore, according to the Hj Ramli et al. (2018) most Malaysian students experience excessive stress due to cultural pressures to graduate with the excellent grades that should allow them to secure a better job. High levels of stress among undergraduates can impair their academic performance and negatively impact their mental and physical health (Mori, 2000).

This data reveals the sources of stress among students. However, the effect of stressors on student academic performance has yet to be fully investigated. As a result, the current narrative review examines how different forms of stress affect student academic performance.

3.   Research Questions

Research questions are critical in resolving any issue. In order to meet the research objectives, the following research questions were created:

    i.   Which factors are associated with stress among private university students?

    ii.   Which stress factors have the greatest influence on academic performance?

4.   Purpose of the Study

The following are the objectives of this research:

    i.   To determine the factors that associated with stress among private university students.

    ii.   To determine which stress factors have the greatest influence on academic performance.

5.   Research Methods

In general, a quantitative analysis and survey methodology was utilised for the purpose of this research. Both methods can be considered effective since the aim of this study was to explore the impact of selected independent variables on the dependent variable. By using a standardised questionnaire, this was utilised to measure the research's target variables. The variables were measurable as quantitative in nature (Creswell, 2014). The target population was undergraduate students at several private universities in the Klang Valley. A total of 284 respondents from five selected private universities in Selangor participated in this study, all of whom gave complete answers since the researcher collecting data in person to ensure all the questions were answered (Saunders et al., 2009).

In this study, four independent variables (campus life, body, mind and feeling, relationship and financial) and one dependent variable (academic performance), which consists of 29 items, were used to

explore the topic. A six-point Likert scale was used, ranging from 1 as "Strongly Disagree" to 6 "Strongly Agree". Furthermore, Structural Equation Modeling with the Partial Least Squares (i.e. PLS-SEM) estimation multivariate data technique was being used as a data analysis tool. This was because the sample size was considered relatively small and the intention was to explore the effect of these selected independent variables on the dependent variable (Hair et al., 2017; Ong & Puteh, 2017). The significance test was computed using the Bootstrapping method with this statistical method (Hair et al., 2012; Henseler & Chin, 2010). Here, 5000 sample replications were computed, as suggested by Hair et al (2017) for obtaining reliable outcomes for the empirical t-statistics and Bias Corrected and Accelerated (i.e. BCa) bootstrap.

6. Findings

6.1. Respondent Profiles

Table 1 indicates that most respondents in this study were female (63%) students. As for the financial support used to continue studying, the majority of the students used an education loan (62.3%) as their primary means of financial support. However, some had scholarships (8.8%) and 28.9% used other resources of financial support in order to continue study. In terms of part-time employment, the descriptive analysis indicated that only 29.2% of the students who participated in this study worked part-time.

Table 1. Respondents Profile

	Respondents Profile	Frequency	Percentage
Gender	Male	105	37.0
	Female	179	63.0
Financial Support	Education Loan	177	62.3
	Scholarship	25	8.8
	Others	82	28.9
Working Part-time	Yes	83	29.2
	No	201	70.8

6.2. Measurement Model Analysis

Referring to Table 2, all the indicators fulfil the minimum threshold value of 0.70 factor loading (Hair et al., 2017), except for the BMF4 indicator. However, this indicator was maintained in the analysis since the loading values were above 0.60 (Hair et al., 2017). In addition, the Average Variance Explained (AVE) for each construct was above 0.50 (Hair et al., 2017), while both reliability tests (Composite Reliability and Cronbach's Alpha) for each targeted construct were also above 0.60 (Hair et al., 2017; Hair et al., 2010). This confirmed that each variable had good unidimensionality and convergent validity.

In terms of discriminant validity, each latent variable was totally discriminant to one another (Refer to Table 3). The HTMT ratio test analysis showed that each latent variable was totally discriminant to each other because each ratio value, as reported in Table 3, was below 0.90 (Henseler et al., 2015).

Hence, the indicators used to measure the targeted constructs were fully used for each respective construct.

Table 2. Convergent Validity for Measurement Model

Indicator	Loading	AVE	γ	α
Campus Life				
I cannot pay attention in class (CL1)	.768**			
I study but have trouble passing tests/assignments (CL2)	.742**			
I do not understand what my lecturer teacher (CL3)	.726**	.568	.887	.849
I am not sure if I am to do well in school (CL4)	.727**			
I always get nervous in exams (CL5)	.811**			
I cannot stay awake in class (CL6)	.743**			
Financial				
I cannot get the money I need to pay for the course fee (FIN1)	.756**			
I feel pressured because it costs a lot of money to pursue my study at this university (FIN 2)	.747**			
My parents controls how much money I spend (FIN3)	.791**	.549	.880	.835
I have trouble managing my money (FIN4)	.731**			
I am financially responsible for someone else (FIN5)	.715**			
I chose not to purchase required academic materials due to cost (FIN6)	-703**			
Body, Mind and Feelings				
I do not know how to eat right (BMF1)	.735**			
I do not know what to do for exercise (BMF2)	.834**			
I am tired and sleeping more/less than normal (BMF3)	.831**	.582	.893	.857
I feel a lack of confidence (BMF4)	.694**			
I do not want to things that I used t like to do (BMF5)	.714**			
I find it hard to express my feelings (BMF6)	.759**			
Relationship				
I have trouble getting along with other student (REL1)	.807**			
I have conflicts with other students (REL2)	.880**			
I am fighting with my partner/parents (REL3)	.854**	.695	.932	.912
A family member/friend has been sick or died (REL4)	.806**			
My parents treat other siblings better than they treat me (REL5)	.827**			
I have a conflict with my lecturer (REL6)	.826**			
Academic Performance				
I am on time for my classes (AP1)	.793**			
I understand more difficult content (AP)	.752**	.613	.888	.841
I put to use what I have learnt (AP3)	.816**			
I find out what is wrong and correct it (AP4)	.825**			
I know the objectives of the course subjects (AP5)	.722**			

Note: AVE = Average Variance Explained; γ = Composite Reliability; α = Cronbach's Alpha; [a]Reverse coding item;**$p < 0.01$.

Table 3. HTMT Discriminant Analysis for Measurement Model

	CL	FIN	BMF	REL	AP
CL	-				
FIN	.448	-			
BMF	.126	.443	-		
REL	.575	382	.308	-	
AP	.528	.571	.488	.603	-

Note: CL = Campus Life; FIN = Financial; BMF = Body, Mind, and Feelings; REL = Relationship; AP = Academic Performance.

6.2.1. Structural Model Analysis

In terms of coefficient of determination, around 45.9% of the variance explained could be related to how the set of independent variables affected academic performance. Referring to Table 4, the four independent variables had relatively minor effects on (f^2), and predictive relevance (q^2) to, academic performance. In terms of the cause-effect analysis, campus life (β = 0.222, t = 4.723, 95% CI BCa = (0.133, 0.307)); financial (β = 0.200, t = 3.387, 95% CI BCa = (0.070, 0.301)); body, mind and feelings (β = 0.266, t = 5.717, 95% CI BCa = (0.173, 0.350)); and relationship (β = 0.273, t = 4.004, 95% CI BCa = (0.127, 0.403)) had significantly positive effects on academic performance. This was because all the t-statistics for the targeted paths were above 1.96, while the confidence interval of the bootstrapping analysis did not include zero. Figure 1 and Figure 2 illustrate the PLS-SEM analysis.

Table 4. Structural Model Analysis

Path	β	t-statistic	95% BCaBootstrap	f^2	q^2	Remark
CL$\rightarrow$ AP	0.222	4.723**	(0.133, 0.307)	.059	.019	Small
FIN$\rightarrow$ AP	0.200	3.387**	(0.070, 0.301)	.053	.012	Small
BMF$\rightarrow$ AP	0.266	5.717**	(0.173, 0.350)	.102	.053	Small
REL$\rightarrow$ AP	0.273	4.004**	(0.127, 0.403)	.090	.042	Small

Note: CL = Campus Life; FIN = Financial; BMF = Body, Mind, and Feelings; REL = Relationship; AP = Academic Performance; β = Standardized Beta Coefficient; f^2 = Effect Size; q^2 = Predictive Relevance; [a]The bootstrap samples was 5000 samples; **p <0.01.
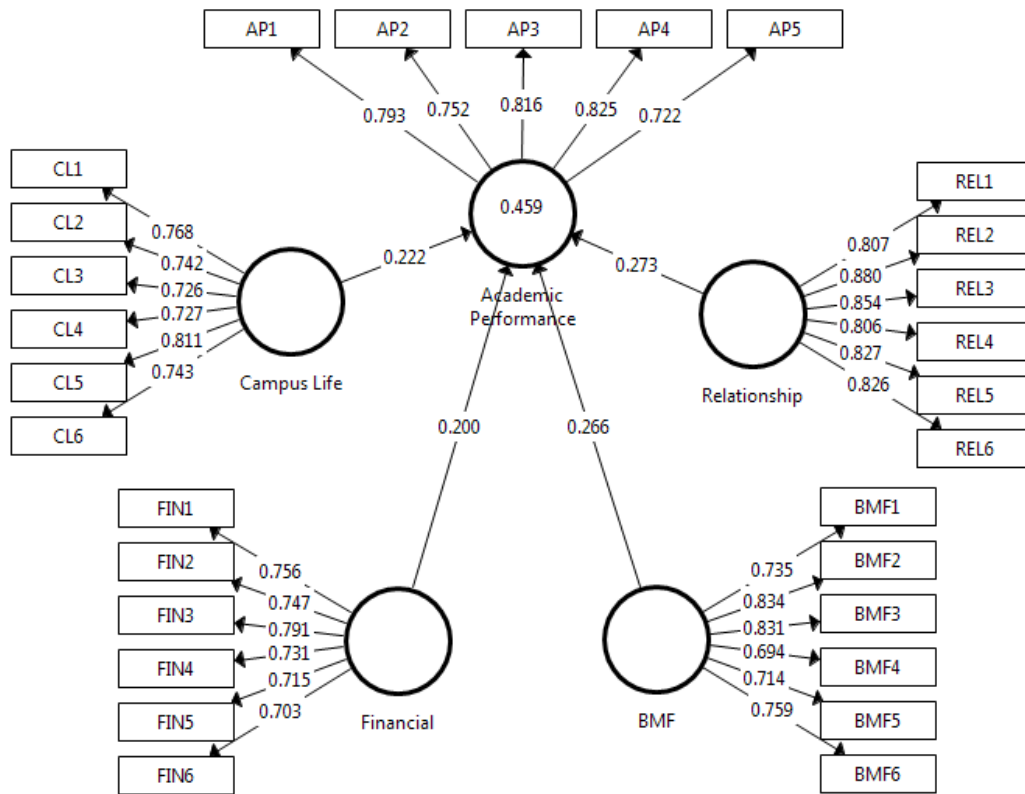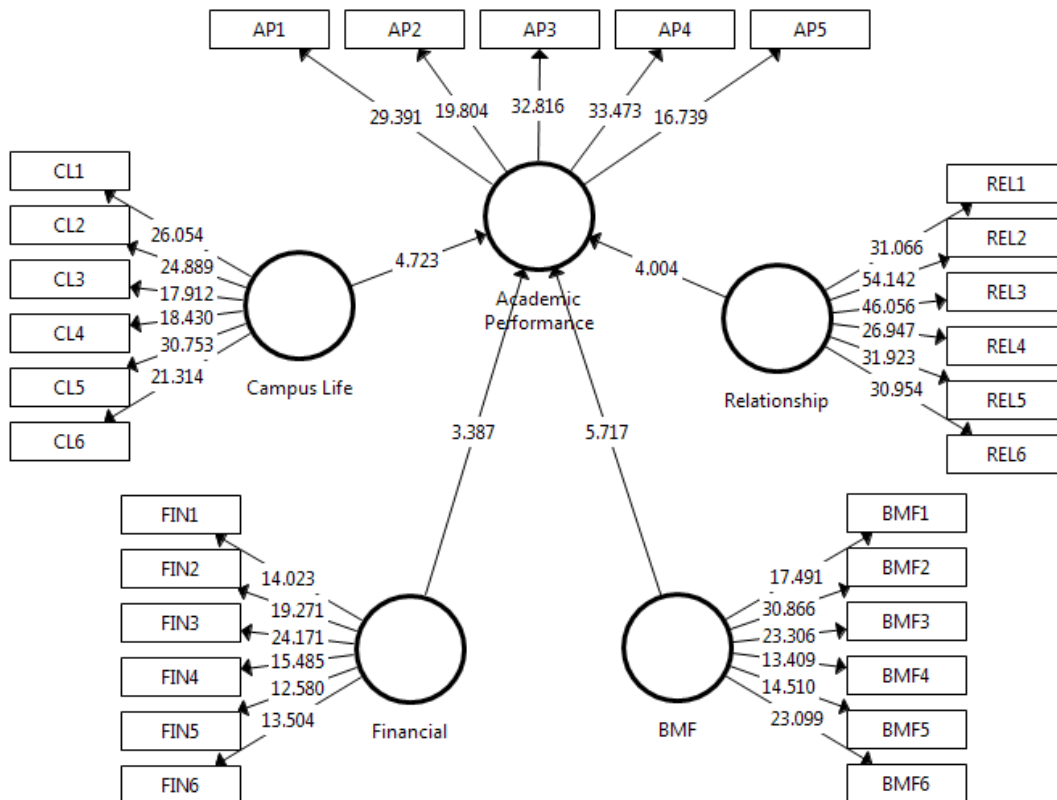
Figure 1. Structural Model Analysis

Figure 2. Bootstrapping Analysis

7. Discussion of Findings

This research discovered a link between stressors and student academic performance. This suggests that a high level of anxiety is linked to poor academic performance. This indicates that a high level of stress is associated with lower academic performance. This result is consistent with the studies by Lin et al. (2019), Ramachandiran and Dhanapal (2018), and Ramli et al. (2018), Tariq et al. (2020), which confirmed that stress factors like family, finances, peers and campus life can affect students' academic performance. Moreover, excessive stress among students has been shown to diminish their study efficacy, leading to unhealthy habits and harmful long-term effects, such as absenteeism, poor academic performance and dropping out of school (Aafreen et al., 2018).

Furthermore, students experience difficulty passing tests or assignments, are unable to pay attention in class and become unsure about their ability to succeed at university. They also face the additional burden of managing these tasks, whether they be studying, assignments, tests, laboratory work or reading. This is supported by the research by Aafreen et al. (2018), Mishra (2018) and Serfraz et al. (2020), who stated that a variety of factors contribute to stress among university students, including difficult assignments, the need to understand the subject within a short time and finding time for extracurricular activities (Stankovska et al., 2018), in addition to managing numerous other issues. Hence, students must be able to manage their time effectively in order to feel more comfortable and focused. They can divide their work into important and non-important activities, as well as urgent and non-urgent tasks.

Furthermore, the variance analysis results showed that 45.9% were explained by the effects of this set of stressors on academic performance. According to the findings, the relationship component had the greatest influence on academic performance, accounting for 27.3% of the total. Differences in relationships will result in changes in academic performance. Meanwhile, the body, mind and feelings aspect determined 26.6 % of academic achievement. Furthermore, campus life contributed 22.2%, although financial variables accounted for only 20% of the impact on academic performance. It has been proven that some students have strained relationships with their friends and parents, and they might be burdened with excessive responsibilities at home. This is supported by previous studies by Essel and Owusu (2017), who noted that a major source of stress among students is unrealistic parental expectations. Additionally, lecturer-student relationships, whether direct or indirect, may also lead to stress among university students (Mofatteh, 2021; Serfraz et al., 2020). Therefore, positive communication and listening skills are essential for strengthening relationships because they allow people to share their views and feelings openly and politely without being judged.

From the perspective of body, mind and feelings, the results revealed that students experience a lack of confidence due to excessive pressure. This makes students feel depressed (Baste & Gadkari, 2014) and suffer from sleeping disorders Ramachandiran and Dhanapal (2018), Thus, students must take care of their bodies by maintaining a regular routine of eating healthy meals, getting enough sleep, meditation or listening to music. This would help students to manage their body, mind and feelings.

Additionally, financial stress was associated with lower academic performance as many students cannot pay their course fees or experience financial stress because of the high costs of pursuing their

studies. This is consistent with research by Heckman et al. (2014), Letkiewicz (2016), Sundarasen et al. (2020), and White and Perrone-McGovern (2017). Often, a student decides to drop out of university due to financial difficulties. Fortunately, more students may break this cycle and complete their degrees with the support of financial aid, cost-cutting measures and prompt intervention.

8. Conclusion

It can be concluded that academic performance will be enhanced if the average campus life rating was high. Similarly, academic performance will also improve if the average ratings of other independent variables (i.e. financial; body, mind and feelings or relationships) were high.

Thus, it is important to create intervention strategies like workshops, programmes or courses to help students manage stress (Beiter et al., 2015). Furthermore, it is recommended that students maintain a simple, relaxing study environment that is free from any disorganisation and disruption. This is one method for lowering stress levels. that students endure. On the other hand, practising optimism and optimistic thinking can also improve student's health, relationships and academic performance.

8.1. Practical Implications

The results of this study will provide valuable information on stress and academic success for students, lecturers and other researchers. On the other hand, achieving academic excellence will help students deal with stress effectively.

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