

The Influence of Academic Stress on Academic Performance among University Students

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ABSTRACT

Stress can be broadly defined as the response of the body when one cannot adapt to a situation when they feel under pressure or tension. This may affect students' lives and significantly impact their academic performance. This study took place at universities in Malaysia and Indonesia. Data collection using random sampling method (or stratified sampling method), 200 students were involved in this study. Questionnaires consisting of the Perceived Stress Scale and Student Life Satisfaction Scale were used to collect data for this study. This study aimed to determine the relationship between stress and academic performance among university students. This data was measured using descriptive statistical techniques, analysis of the factors that cause stress, the chi-square test, and the multivariate analysis of variance (MANOVA) model. From the data that has been tested, researchers suggest that the level of stress and life satisfaction among university students is different. Students with high grades have lower stress levels than students who do not, and the majors they take, the stress level, and life satisfaction of students majoring in Management and majoring in Medicine are different.

Keywords: Academic Performance, Academic Stress, Indonesia, Malaysia, University Students

INTRODUCTION

Any type of change that causes physical, emotional, or psychological strain is referred to as stress. Stress is body's reaction to anything that demands your attention or action. It frequently causes irritability, fear, overwork, and frustration. You might feel physically exhausted, worn out, and helpless. Stress can be challenging to identify, but there are some indicators that you may be under too much pressure. Sometimes stress comes from an obvious source, but even minor daily stresses from work, school, family, and friends can harm mind and body.

Through the evolution of the world, school education has been playing a vital role to change one's life to be a better one. It acts as a turning point for each individual to move to the next stage of their education and further their career in the future. Hence, competition occurs in the current society among each other. However, a bad phenomenon happens, which is academic stress among university students as it is a crucial issue nowadays. In the dog-eat-dog world, students have to face a lot of tension in different aspects, especially those university students who are going to be fresh graduates entering society. One of the tensions would be academic stress. Academic stress could be broadly defined as the mental state of a student under a highly tense learning environment including the fear of the possibility of having to fail in academic performance. Appropriate stress could motivate oneself to be more prominent in his or her academic performance to reach the study goal. However, excessive academic stress brings detrimental consequences for both mental and physical problems such as depression, stress, and anxiety-related disorder.

Globally, for every five visits by patients to the doctor, it has been reported there are stress-related problems. We could observe that majority of people with stress suffered from strained relations with family (85%), sleeping disorders (76%), headaches (70%), and short-tempered (70%) as well (Kumar & Bhukar, 2013). Students from the tertiary education level indicated some signs of stress, which means that the transition of the school environment from high school to university brings a big impact on them from the aspect of social, academic, and psychological.

Besides that, another research showed a significant, weak but negative relationship between stress and academic achievement. Hence, it could be said that stress has always been a critical issue for undergraduate students to overcome it. There would be a strong association between achievement in academic performance. According to this study, academic stressors were the main sources of stress for undergraduate students, who were shown to be somewhat vulnerable to them. According to the results, medical students and students in their last years are more prone than other students to feel higher levels of stress (Elias, Ping, & Abdullah, 2011).

LITERATURE REVIEW

Academic Performance

Based on Sulla, Aquino, and Rollo (2022), after COVID-19, the significant changes experienced in the education sector have increased student demands. Furthermore, the concept of education has changed from offline to online also hybrid. According to Shahzadi and Ahmad (2011), academic performance and graduation value have become focus areas for higher education institutions. Investigating factors connected to student accomplishment is gaining growing attention in the higher education community (Kapadia et al., 2022). According to Lee (2017), Numerous recent studies have investigated the elements that affect student academic achievement. Therefore, according to Budu, Abalo, Bam, Budu, and Peprah (2019), some factors play an

essential role in increasing academic performance, including an important person's environment and support system.

Based on Budu, Abalo, Bam, Budu, and Peprah (2019), academic performance measures a student's accomplishments in several academic courses. Teachers and school officials evaluate achievement based on class performance, pass scores, and standardized test outcomes. According to Budu, Abalo, Bam, Budu, and Peprah (2019) research, the urgency of academic achievement for students is a solid final grade or grade point average (GPA); if their GPA is below 1.5, they are required to repeat the semester since they are deemed to have performed poorly. However, Elias, Ping, and Abdullah (2011) argue that in psychology, several factors affect a student's academic performance, including the pressure to achieve. According to Lee (2017), the level of stress that is obtained along with academic achievement. Another addition, according to Hitches, Woodcock, and Ehrich (2022), is the workload in carrying out assignments, academic self-perception of self-development, and, last but not least, the time restraint given to students.

Academic Stress Level

Based on research conducted by Lal (2014), students' stress level comes from the same source, particularly the learning load and doing assignments. According to Wilks's (2008) study, academic stress results from a mix of academic pressures that surpass an individual's adaptive capacities. In contrast to Wilks's (2008) findings, referring to Quincho et al. (2021) research, academic stress is a demand from factors that affect the learning and emotional well-being of future professionals, particularly in the faculty of health. These factors include academic burden, social aspects, family, and, most importantly, the psychological aspect.

Based on Khan, Altaf, and Kausar (2013), studies proposed that student academic stress at the end of the semester would be higher than at the beginning. According to the findings of Khan, Altaf, and Kausar (2013) research, there is no substantial difference between students at the beginning and end of the semester since students in the semester system are forced to be awake and active throughout the semester regarding learning performance. Ezekiel's (2021) research indicates that extreme school-related stress decreases our willingness to work and our general academic performance and can lead to a rise in dropout rates. Not to mention the negative health consequences, such as depression, insomnia, substance misuse, and anxiety. Therefore, according to Lee (2017), identifying the causes of stress is the most important aspect of stress management.

Subsequently, Lal (2014) added that educators must use various methods, not just one. Students are expected to get scheduled counseling sessions to eliminate factors that cause academic stress apart from a non-conducive learning environment.

Pressure to Perform

Based on Erkutlu & Chafra's (2006) research, the pressure to excel in exams or tests and the time allocated to the academic environment impact students' tension. In a further reference to Ezekiel's (2021) research, academic pressure is defined as the stress that students face due to their incapacity to enhance their performance at school and their anxiety that their achievements will become stagnant. According to Jhoselle Tus's (2020) research, the academic pressure students experience harms their social, physical, cognitive, and physiological health. It also increases the likelihood of students developing mental health conditions such as anxiety, depression, and insomnia.

Beilock & Ramirez (2011) claimed that it is the responsibility of educators to comprehend and identify the academic pressure sources that pupils are experiencing. On the other hand, educators are urged not to place academic pressure on students and to allow them to explore their hobbies and skills. Based on Ali et al. (2013) research, it is envisaged that educators will be able to give young people programs for time management, prioritization, and organization - so that when young people do get enormous academic burdens, they will know how to manage them.

According to the findings of Ibrahim (2015), academic pressure and stress caused by intense workload, extensive time spent studying, and high expectations harm young people's well-being and academic performance. Based on Shahzadi and Ahmad (2011), students must achieve optimally academically and socially in the education system if academic pressure and stress are to be decreased and effectively managed.

Perceived Workload

The workload can be broadly defined as the cost of completing job requirements for the human component of the man-machine system. The word 'cost' indicates the exhaustion of mental, cognitive, or response resources which means the inability to accomplish the additional tasks given and cause emotional tension or a decrease in performance (Hart & Wickens, 1990). The main task factors that affect how well people perform are those related to workload since they determine how people complete necessary tasks and how well they comprehend them. According to research, a greater workload requires alertness in an academic atmosphere as the workload has a certain impact on academic achievement to maximize the learning capacity of each student. It has been established that students who work have a heavier workload and perform worse academically than students who do not work (Kurata, Bano & Matias, 2015). There is another study by Young et al. (2013) that investigates how well-suited certain jobs are for handling stress during the command and control of an immersive, computer-based crisis. The study found that while there were no changes in the state of anxiety, the stress level and perception of workload were connected to the functions of each task.

In addition, a study was used to examine the correlation between stress, workload, time management, and academic achievement which was carried out by part-time postgraduate students at Universiti Utara Malaysia. Based on the findings, it is possible to conclude that workload and academic students' performance have a positive and substantial relationship. This can be explained by the fact that the workload had an impact on part-time academic students' performance since they are unable to manage their workload well and ended up failing to accomplish the assignments given. In short, we could say that workload does have an impact on part-time academic students' performance because they frequently feel weary while they still have to complete their assignments and prepare for finals owing to a busy day at work that prevents them from focusing on their academic work throughout the night. Consequently, they will fail to submit their high-quality assignments on time for evaluation. In this case, it will affect the performance of a student in that particular semester (Sallehuddin, Huzaidy & Rosli, 2019).

Student's Academic Self-perception

Academic self-perception is a person's conception of who they are, including any mental or physical traits that make them who they are. Such a perspective may contain genuine self-knowledge or varied degrees of distortion. It is also sometimes referred to as self-perception. The relationship between high school pupils' academic achievement and self-perception in that regard was examined in a study. The findings indicated a strong

correlation between the two factors, and academic self-perception is a good indicator of achievement in both math and literature (Josephine, Adom, & Solomon, 2014).

Furthermore, a different study is being conducted to determine the connection between psychological discomfort and academic self-perception by assessing the function of peer social support at the school of medicine. It was established that negative peer social support and psychological stress were both negatively connected with poor academic self-perception. In the study's medical students, psychological anguish, and a lack of social support from peers may combine to increase the chance of negative academic self-perception. Directly linked to the student's poor academic achievement is psychological anguish. Therefore, it is advised to promote peer social connection among students in order to break the negative cycle of stress and subpar academic performance (Yamada, Klugar, and Oborna, 2014)

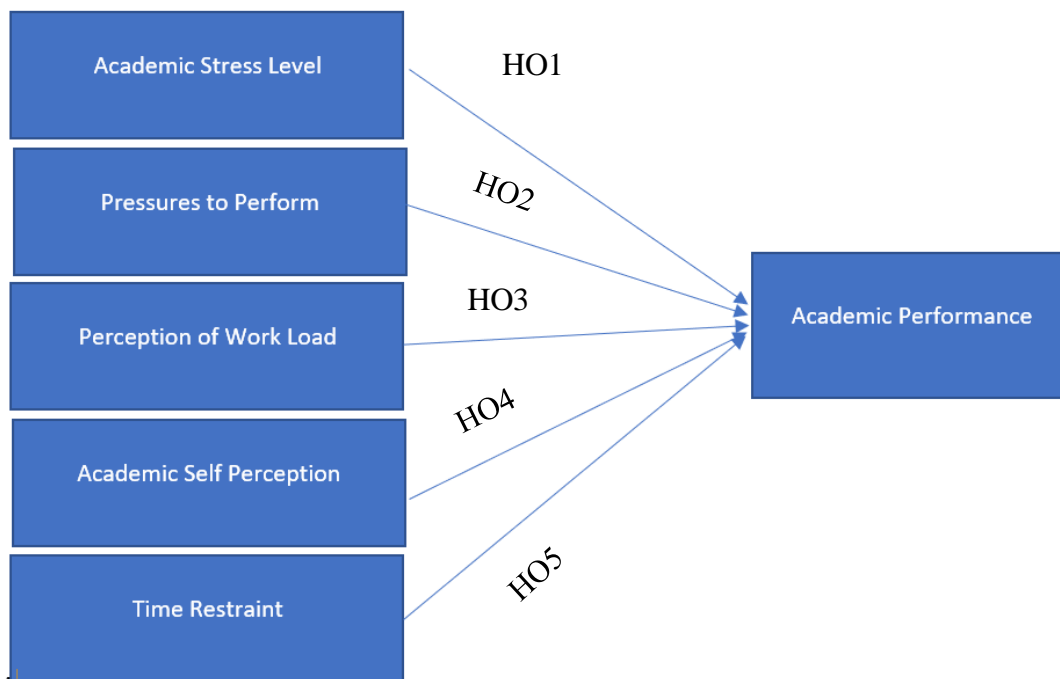
Based on Khalaila's (2015) research, the study examined the direct and/or indirect impacts of academic self-concept on academic accomplishment in order to ascertain if test anxiety has a negative impact on academic achievement that is offset by intrinsic drive. Through the findings, the outcome disclosed a direct correlation between better academic performance and a more positive self-concept. A better self-concept was found to be directly associated with higher academic performance. The intrinsic motivation and test anxiety were found to significantly mediate the relationship between academic success and self-concept. To add on, intrinsic motivation significantly reduced the negative consequences of test anxiety on academic performance. Both of them could be considered as mediators, and were found to be able to both indirectly and directly influence the relationship between academic success and academic self-concept. In addition, the results demonstrated that the intrinsic motivation reduced the negative effects of test anxiety and the achievement of each student. The outcomes made clear the importance of contextual and motivational factors for students' success through a host of mechanisms, mostly in nursing students as nursing education is a very demanding field of study always full with stressful and unexpected situations, similar like exams, clinical training in a simulation laboratory, and work in a hospital setting. (Khalaila, 2015).

Time Constraint

Time management is a collection of skills that you may use to make the most of your time and enhance your life quality. Usually, students do not manage their time wisely as needed to achieve their objectives. As a result, this study has determined the correlation between time constraints and the achievement of students in their academics of higher education in Nigeria. To determine the limitations of students' time management, hypotheses were developed. The findings showed that time management behaviors such as procrastination, prioritizing, and planning introduced a great influence on the academic achievement of the students. According to the findings, procrastination has a significant impact on academic performance, thus students should work hard to finish their assignments and other academic tasks on time to avoid missing deadlines. When it comes to returning to school for a new semester or session, signing up for courses, attending lectures, completing assignments, studying for tests, and preparing for exams on time, students' poor time management has some negative effects (Adebayo & Aduke, 2015)

Figure 1 illustrates the research model. A total of 5 hypotheses were formulated.

Figure 1. The Research Model



Hypothesis

Ho1: Undergraduate students' stress levels and academic achievement are positively related

Ho2: Pressures to perform and academic performance are positively related

Ho3: Perception of workload and academic performance are positively related

Ho4: Academic self-perceptions and academic performance positively related

Ho5: Time restraints and academic performance positively related.

RESEARCH METHOD

The data from the digital survey was analyzed using IBM SPSS Statistics software to determine the significance and dependability of each variable.

Sample and Procedure

In the middle of November 2022, researchers distributed a Google Form questionnaire via social media platforms such as WhatsApp, Messenger, and Telegram. Because digital questionnaires can be distributed to respondents all over Malaysia and Indonesia, they have increased the effectiveness and efficiency of the data collection process. It has no time limit and allows respondents to respond at any time. Then, as the coronavirus spread, the digital survey became more relevant because everyone is encouraged to avoid close contact. The survey mainly focused on 150 university students who have experience with academic stress on academic performance and different demographic characteristics. There are 35 universities were involved in this survey. The collected data will be analyzed with IBM SPSS Statistics software to determine the significance and dependability of each variable.

Measures

The Google Form questionnaire is divided into three sections: (A) Demographic characteristics; (B) Stress Test; (C) Stresses related to academic expectations; (D)

Stresses related to faculty work and examinations; (E) Stresses related to students' academic self-perceptions; (F) Stresses related to time restraint; and (G) Stresses related to workload. The 5-Point Likert Scale was used in sections (C) to (G) to allow respondents to indicate their level of agreement with a statement. The 1 to 5 Likert Scale represents strongly disagree to strongly agree. On the other hand, section B uses the rating scale from 0 to 4 to calculate the marks that the respondents obtained from the stress test.

RESULTS

The survey has been collected from 150 respondents around Malaysia and Indonesia of different nationalities via Google Form which contains seven sections: (1) demographic characteristic; (2) stress test; (3) stresses related to academic expectations; (4) stresses related to faculty work and examinations; (5) stresses related to workload; (6) stresses related to time constraint; and (7) stresses related to students' academic perceptions. The information in each statement is relevant to the study's critical analysis. The survey used social media to reach 150 people. All 150 questionnaires were completed.

Table 1. Research Model

		Mean	Count	Column N %
Age		21		
Nationality	Indonesian		41	27.30%
	Malaysian		109	72.70%
Origin Country?	Indonesia		40	26.70%
	Malaysia		110	73.30%
Gender	Female		68	45.30%
	Male		82	54.70%
Area of studies?	Arts		35	23.30%
	Business Administration.		21	14.00%
	Chemistry.		18	12.00%
	Construction		1	0.70%
	Economics.		24	16.00%
	Education.		2	1.30%
	Engineering		12	8.00%
	Finance		15	10.00%
	Management		10	6.70%
	Science		11	7.30%
	Social Science		1	0.70%
Year of study?	1		33	22.00%
	2		80	53.30%
	3		22	14.70%
	4		9	6.00%
	5		6	4.00%
Living arrangement?	In campus		93	62.00%
	Outside Campus		57	38.00%
Current CGPA?	0.00-1.99		3	2.00%
	2.50-2.99		11	7.30%
	3.00-3.49		55	36.70%
	3.50-4.00		81	54.00%
Are you satisfied with the learning environment now?	No		16	10.70%
	Yes		134	89.30%

Are you satisfied with your home environment now?	No		12	8.00%
	Yes		138	92.00%

Table 1 showed the summarized demographic information of the respondents. All the respondents are average 21 years old. There were 41 Indonesian, and 109 Malaysian answered the survey. Among the 150 respondents, there were 45.30% are females and the rest are male. 23.30% of the respondents studied arts almost 53.30% of them are year 2 university students. Most of them (62%) lived in the hostel allocated by the universities. Nearly half of the respondents (54%) got a 3.50-4.00 CGPA. It does indicate most of them got excellent results. There are 89.30% of them are satisfied with the learning environment now and 92% of them are satisfied with their home environment.

Table 2. Descriptive Statistics, Cronbach's Coefficients Alpha, and Zero-order Correlations for All Study Variables

	1	2	3	4	5	6
Academic Performance	0.627					
Pressure to Perform	.501**	0.606				
Self-Perception	-0.045	.251**	0.652			
Time Restraint	-.267**	-0.069	.638**	0.669		
Perception of Workload	.504**	.403**	-.426**	-.596**	0.788	
Academic Stress Level	0.038	.208*	-0.045	-.181*	.285**	0.603
Number of items	4	8	6	8	5	10
Mean	3.113	3.668	3.668	3.410	2.823	3.036
Standard Deviation	0.804	0.560	0.663	0.646	1.027	0.531

Note: N = 150; *p<0.05, **p<0.01, ***p<0.001 Diagonal entries in bold indicate Cronbach Alpha

The survey consists of 150 respondents of university students from Indonesia and Malaysia which is related to the factors of academic stress. There are 5 elements included in the scale. Pressure to perform, Self-Perception, Time Restraint, Academic Performance, Perception of workload, and Academic stress level. Pearson Correlation Analysis was used to detect the relationship between the variable. A zero-correlation coefficient shows that two continuous variables have no linear relationship (Malawi Med J, 2012). Table 2 shows that all factors persist at levels greater than 0.20. When Cronbach Alpha was used to test all variables, it found internal consistency values of 0.606, 0.652, 0.669, 0.788, and 0.603. The accepted value of Cronbach's alpha is 0.7; however, values above 0.6 are also accepted (Griethuijsen et al., 2015; Taber, 2018). Values less than 0.5 are indicative of poor reliability (Terry K.Koo, Mae Y Li, 2016). It showed that almost all the results are acceptable with high internal consistency. It is crystal clear that all of the factors are reliable.

Table 3. Regression Analysis

Hypothesis	Standardized Beta	P-Value
Pressure to Perform	0.349***	0
Self-Perception	0.087	0.367
Time Restraint	-0.095	0.321
Perception of Workload	0.389***	0.00
Academic Stress Level	-0.159*	0.02
F- Value	18.185	
R-Square	0.387	
Adjusted R-Square	0.366	

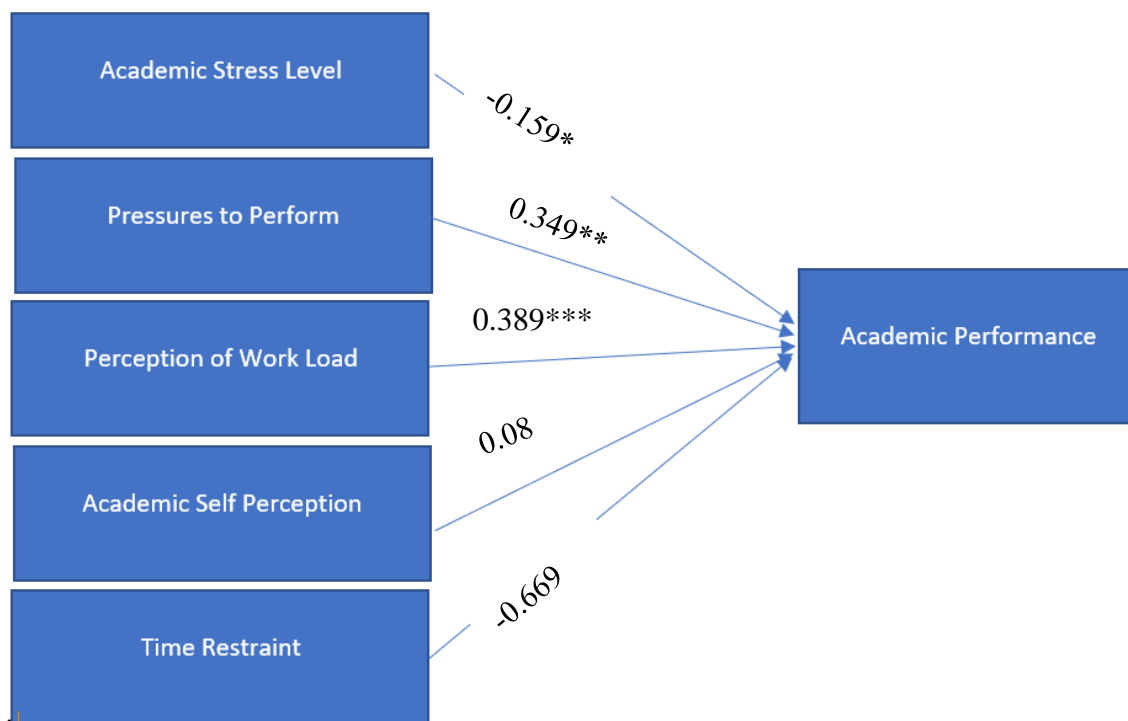
Note: N = 150; *p<0.05, **p<0.01, ***p<0.001. The dependent variable is Academic Performance

Table 3 shows that the dependent variable is Academic Performance, while Pressure to Perform, Self-Perception, Time Restraint, Perception of Workload, and Academic Stress level are the independent variables. The developed hypothesis was evaluated using regression analysis. The results showed that Pressure to Perform and Perception of Workload are highly significant and positively related to Academic Performance. As a result, H02 and H03 are accepted. The R-square value of the output is 0.387 which shows that 38.7% of Academic Performances were affected by Pressure to perform, Self-Perception, Time Restraint, Perception of workload, and Academic stress level.

On the contrary, self-perception does relate to Academic Performance with a low significant relationship so H04 is accepted. Next, Time Restraint shows a negative β relationship with Academic Performance thus H05 is rejected. Additionally, Academic Stress levels showed a significant negative relationship with the Academic Performance of a β value of -0.159^* therefore H01 is rejected. Below is a summary of the results using the proposed model.

DISCUSSION

Figure 2. Hypothesized Model



The variables that influenced academic stress on academic performance among university students had investigated in this study. The research output had proved that pressure to perform and perception of workload are highly significantly impacting the academic performance of the university students. Besides, self-perception had low significant impact on the academic performance of the university students. Therefore, this study found that pressure to perform, perception of workload and self-perception will directly affect the academic performance of the university students.

From the results of research, perception of workload was the most influential factor that affected the academic performance of the university students. This shows that high

workload of students tends to affect the students' academic performance due to increasing of stress level or lack of time. This can be also explained by the workload required to achieve the expected academic achievement must match the actual workload put forth by the students. Otherwise, students are more likely to experience stress, lose enthusiasm, and resort to studying in a more complicated manner (Gallego, 2016).

Next, the second most crucial factor affecting academic performance of the university students is pressure to perform. This had shown that the pressure of university students to perform well at school will increase stress and anxiety and then affect their academic performances. For example, university students will feel pressure from their parents, lecturers, or peers that expect them to achieve higher grades or academic success will cause stress and then affect their academic performance.

In addition, self-perception was a statistical factor that less influencing academic performance of university students. These results shown that students who are confident in themselves are more likely to be intrinsically motivated and to possess academic achievement (Jolly S. Mathew, 2017). The higher the self-perception of university students, the higher the positive impacts on their academic performance.

However, in this study also found that academic stress level and time restraint were not significantly impact on the academic performance of the university students. Thus, this can conclude that academic stress level and time restraint cannot directly affected the academic performance of the university students. It is crystal clear that the academic stress level has a negative relationship with the academic performance which means the lower the academic stress level, the higher the academic performance.

CONCLUSION

This study examines the relationship between independent variables (academic stress level, pressure to perform, perception of workload, academic self-perception, and time restraint) and dependent variables (academic performance). According to the findings, pressure to perform, perception of workload is strongly related to academic performance, while academic self-perception is weakly related to academic performance. As a result, hypotheses H2, H3, and H4 are accepted, while hypotheses H1 and H5 are rejected. The findings improved the understanding of the impact of academic stress on academic performance among university students. In conclusion, pressure to perform, perception of workload, and academic self-perception of the student all influenced academic stress and academic performance.

However, it has to be acknowledged that there are some limitations. First of all, the interview survey had a smaller sample size than typical survey-only studies. The findings might not be applicable to students at other universities since the sample was collected from a particular university, which brings us to our second point. Future studies may be conducted on a large scale with a sizable student population.

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DECLARATION OF CONFLICTING INTERESTS

The author(s) declare(s) that there is no conflict of interest.

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