Academic stress and life satisfaction as social sustainability among university students

Balan Rathakrishnan[1], Soon Singh Bikar Singh[1], Azizi Yahaya[1], Mohammad Rahim Kamaluddin[2], Fauziah Ibrahim[2], Zaizul Ab Rahman[3]

[1]Faculty of Psychology and Education, Universiti Malaysia Sabah, Sabah, Malaysia
[2]Faculty of Social Sciences and Humanities, Universiti Kebangsaan Malaysia, Selangor, Malaysia
[3]Research Centre for Theology and Philosophy, Faculty of Islamic Studies, Universiti Kebangsaan Malaysia, Selangor, Malaysia

Article Info

ABSTRACT

This study was conducted to determine the relationship between academic stress and life satisfaction among university students in Sabah, Malaysia. A total of 400 students were selected as respondents and data were collected using questionnaires. Academic stress was measured using the Perception of Academic Stress Scale (PAS), which has four subscales: i) Performance stress; ii) Workload perception of workload and examinations; iii) Academic self-perception; and iv) Time constraints. Meanwhile, the Satisfaction with Life Scale was used to study student's life satisfaction. The data obtained were analyzed using Pearson correlation and t-test. The results showed that performance stress is negatively associated with life satisfaction, while academic self-perception is positively associated with life satisfaction. The result also showed that perception of workload and examinations and time constraints not associated with life satisfaction. All in all, academic self-perception and performance stress have an association with life satisfaction.

Corresponding Author:

Balan Rathakrishnan
Faculty of Psychology and Education, Universiti Malaysia Sabah
UMS Road, 88400 Kota Kinabalu, Sabah, Malaysia
Email: rbhalan@ums.edu.my

1. INTRODUCTION

The term "life satisfaction" refers to a judging process in which people evaluate the quality of their lives based on their own set of criteria [1]. A comparison of one's perceived life circumstances with a self-imposed standard or set of standards is presumably made, and the person reports high life satisfaction to the extent that situations meet these criteria. As a result, life satisfaction is a conscious cognitive assessment of one's life, with the criteria for judgment set by the individual. Life satisfaction can indicate positive experiences that have shaped a person's life. These experiences have the ability to inspire people to pursue and achieve their objectives.

The study of life satisfaction among university students is an aspect that needs to be given attention. Recent studies have shown that students' anxiety levels and life satisfaction are closely related [2]. The results of the study found that students with low anxiety scores had higher life satisfaction compared to those with high scores. Meanwhile, Bear and Minke [3], who found that higher academic performance, self-esteem, parental relationships and good interpersonal relationships had higher levels of life satisfaction. The study also found that satisfaction with life at a high level was negatively correlated with poor attitudes toward stress, depression and anxiety.

Stress among students has become common in the learning environment, whether in school or university. Stress exists because of the existence of a cause to that stress [4]. The stress experienced by students will certainly affect academic performance coupled with various other factors. University students, particularly those in their last year, stress increases as the pressure to get good grades is also becoming more important. This is because it is critical to achieving good grades to ensure employment opportunities after graduation. Therefore, this study is important to examine how the stress experienced by college students affects their life satisfaction and their social sustainability such as happiness in college life.

There is no doubting that academic stress has a role in the challenges that university students experience. This is because most university students will have a different academic experience than they did in high school. Some students experience culture shock due to their inability to adjust to the university's learning and teaching structure and the way of life with the social environment at the university [5]. In addition, in order to graduate, students are required to achieve a predetermined minimum passing level. Students who cannot adapt to the surrounding conditions immediately will result in a decrease in the level of self-wellbeing, a decline in academic performance, and an increase in psychological stress [6], [7].

As a result, academic progress in the first year significantly impacts total academic Grade Point Average (GPA) accomplishment in the following year [8]. Stress is the most prevalent concern among students, although it is well-known that stress is unavoidable as this is a common occurrence in an individual's daily life. According to Bojuwoye [9], stress among students in higher education can be grouped into several categories such as stress related to studies, examinations, financial problems, university transition and stress linked to being in different countries. In addition, academics, tests, competition to obtain good grades, time pressures, professors and the environment were all shown to be sources of stress in similar research by Archer and Lamnin [10].

Men and women react differently when faced with stressful situations. According to Girdano and Everly [11], women will emit the hormone oxytocin, which responds to stress, when described in functioning. In contrast to males who release testosterone when stressed and do not have a relaxing effect, oxytocin production in women provides relaxing and stress coping. There have not been many studies that look at gender differences in stress. Nonetheless, Matheny *et al.* [12] conducted a stress study among US and Turkish colleges using the Perceived Stress Scale (PSS) found no significant differences in stress experienced by male and female students.

The objectives of this study were: i) To identify the level of academic stress and life satisfaction among students of public university in Sabah; ii) To study the relationship between academic stress and life satisfaction among students of public university in Sabah; and iii) Comparing differences in academic stress and life satisfaction by gender category. This study is important in order to understand life satisfaction among students so that student can focus in academic and also focus on their stress and life satisfaction. The most importance is students need to have balance between their life satisfactions and minimize their stress level.

2.   LITERATURE REVIEW

Studies on the relationship between academic stress and life satisfaction of university students in Malaysia are still lacking, where previous studies have focused more on the relationship between stress and academic achievement [13], [14] and between emotional intelligence, basic psychological needs [15], [16] and social support [17], [18] with self-wellbeing. Therefore, a study that measures the relationship between academic stress and life satisfaction of university students should be conducted so that this study can be a basis for any intervention measures or strategies to ensure the level of stress and student life satisfaction is given due attention.

The Bottom-up theory is the most relevant explanation for life satisfaction in this study. The idea focuses on life satisfaction as a result of satisfaction in various aspects of one's life [19]. According to the idea presented, one finds satisfaction in various aspects of life, including work, relationships, family and friends, personal development, health, and fitness. One's total life satisfaction is made up of our contentment with one's lives in this area and their social sustainability [20].

The appropriate theory for stress is general adaptation theory or known as General Adaptation Syndrome (GAS) by Selye [21]. This theory is based on three basic stages of development that occur during stress, namely: i) The stage of readiness and alertness (alarm reaction); ii) The stage of resistance); and iii) The stage of exhaustion). Stress among students has become common in the learning environment, whether in school or university. Stress exists because of the existence of a cause to that stress [4]. The stress experienced by students will certainly affect academic performance coupled with various other factors. University students, particularly those in their last year, stress in-creases as the pressure to get good grades is also becoming more important. This is because it is critical to achieving good grades to ensure employment opportunities after graduation. Therefore, this study is important to examine how the stress experienced by college students affects their life satisfaction and their social sustainability such as happiness in college life.

Stress has become a part of human life and can be detrimental to health, mind and body. According to Robotham and Julian [22], Hans Selye addressed the issue of "stress" in 1936, defining stress as "the body's non-specific response to the urge for change. According to research by Mewburn, Cuthbert, and Tokareva [23] which featured medical students in their third and fourth years at American universities, female students suffered more stress and challenges than male students in doctoral studies. The environment of regular evaluation of their studies, the competitive atmosphere, and the excessive workload cause persons with a student doctoral degree to endure considerable stress.

Through the concept of General Adaptation Syndrome (GAS) states that the process occurs starting from the first stage, the source of stress that affects the body (general) [24]. Then make adjustments to deal with the cause (adaptation) in the second stage. If the individual is able to adapt to the cause, then stress can be avoided. On the other hand, if the adjustment measures cannot be done, adrenaline will be secreted into the blood and cause fatigue. Then it will go to the third stage, where the individual experiences some form of a stress response.

"The assessment of satisfaction with life is a cognitive judgmental process" [25]. Through such expressions, it can be understood that the process occurs when a person changes the good aspects and the bad aspects of their life. According to selected criteria, life satisfaction is defined as a broad assessment or view of a person's quality of life [1]. Life satisfaction is categorized as happiness if it is the happiness of achievement, i.e., 'good life.' In contrast, negative assessments of life satisfaction are associated with depression and unhappiness. Happiness is needed as part important element of social sustainability among students.

3. RESEARCH METHOD

Figure 1 shows the research framework used in this study. Three variables have been used for this research study, that is antecedent variable (gender), independent variable (academic stress: performance stress, perception of workload and examinations, academic self-perception, time constraints), and dependent variable (life satisfaction). The design of this study has used a quantitative approach using the survey method. A set of questionnaires was distributed to respondents for the study's data collection. The questionnaires were typed into a Google Form. Hence, WhatsApp, Facebook, and Telegram were used as social media to look for respondents.

The subjects of this study were selected through simple random sampling who are public university students in Sabah. The participants in this study were 400 public university students involving almost all faculties. The calculation of the total sample size was based on the total population of 1,500 students and for this, Krejcie and Morgan [26] sample size method was used. The study was conducted at the main campus of Universiti Malaysia Sabah in Kota Kinabalu, Sabah, Malaysia. The entire study received ethical approval from the Ethical Board of University Malaysia Sabah. Furthermore, prior to data collection, informed consent was obtained from each respondent and they were assured with anonymity and confidentially of data. Information concerning students' demographic characteristics consisting of questions regarding student matrix number, faculty, gender, age, and current year of study was obtained. The questionnaire was comprised of two instruments, namely the Perception of Academic Stress (PAS) Scale and the Satisfaction with Life Scale.

Student background
(Gender)

Level of academic stress
(Performance stress, Perception of workload and examinations, Academic self-perception, Time constraints)

Life satisfaction

Figure 1. The conceptual model between independent variable and dependent variable

The Perception of Academic Stress Scale (PAS) by Bedewy and Gabriel [27] was used to measure stress. The questionnaire contained 18 items that measured the academic stress of university students and were divided into four subscales, which are performance stress (five items), workload and examinations perception (four items), academic self-perception (four items) and time constraints (five items). Measurements were through five Likert scales from 1 (very untrue) to 5 (very true). High scores indicate high levels of academic stress. The reliability value of academic stress is 0.70. A scale between 0-23 indicates that the level of perceived academic stress is low, a scale between 24-48 indicates that the level of perceived academic stress is moderate, and a scale between 49-72 indicates that the level of perceived academic stress is high.

The Satisfaction with Life Scale by Diener *et al*. [28] was used to study students' life satisfaction. The SWLS is a reliable scale that consists of five statements that reflect a positive assessment of the quality of life. Respondents rated their agreement with each on a seven-point ordinal scale. The alpha coefficient for SWLS is from .79 to .89. Measurements for the SWLS study tool used a seven-point Likert scale on which scale 1 indicating (strongly disagree). In contrast, scale 7 represented (strongly agree) and scale 4 showing (not sure). The total score for the exam is calculated by adding the scores for each of the SWLS research tool's items. There were no negative items in the SWLS study instrument.

The data obtained were processed using the Statistical Package for Social Science (SPSS) version 27. Descriptive data were collected in this study. Furthermore, Pearson correlation was used to test H_1, which is to study the relationship between academic stress and life satisfaction among students of public university in Sabah. In addition, to compare the differences in academic stress and life satisfaction by gender category, a T-test was conducted for H_2 to see whether there is any difference in academic stress and life satisfaction when separated into gender groups.

4. RESULTS AND DISCUSSION

4.1. Analysis of respondents' data

Table 1 shows the background analysis of respondents at public university in Sabah in percentage and frequency. The table shows the number and percentage of respondents' data by gender, age, year of study and faculty. The total number of respondents is 400 students. 163 males and 237 females were involved as respondents with the age range between 19 to 24 years old. The age range is divided into two which 19-21 with a total of 128 respondents, and 22-24 with a total of 272 respondents. The respondents involved in the study are students that have been studying for one to four years. The total respondents that have been studying for one and two years are 68 and 128 respectively, while the total respondents that have been studying for three to four years are 148 and 56. There were eight faculties involved in the study, including Fakulti Psikologi & Pendidikan (FPP), Fakulti Kejuruteraan (FKJ), Fakulti Komputeran & Informatik (FKI), Fakulti Perniagaan, Ekonomi & Perakaunan (FPEP), Fakulti Sains & Sumber Alam (FSSA), Fakulti Sains Sosial & Kemanusiaan (FSSK), Fakulti Sains Makanan & Pemakanan (FSMP) and Fakulti Perubatan & Sains Kesihatan (FPSK). The number of respondents involved from FPP, FKJ, FKI and FPEP are 92, 44, 40 and 68 respectively, while the number of respondents involved from FSSA, FSSK, FSMP and FPSK is 40, 52, 20 and 44.

Table 1. Distribution of number and percentage of respondents

Respondent's data		Frequency	Percentage (%)
Gender	Male	163	40.75
	Female	237	59.25
Age	19-21	128	32
	22-24	272	68
Year of Study	1	68	17
	2	128	32
	3	148	37
	4	56	14
Faculty	FPP	92	23
	FKJ	44	11
	FKI	40	10
	FPEP	68	17
	FSSA	40	10
	FSSK	52	13
	FSMP	20	5
	FPSK	44	11

4.2. Academic stress and student well-being levels

Table 2 shows the level of academic stress of students, divided into three: Low, medium, and high levels. This calculation is based on a study by Aiken and West [29] that is Mean±SD. The results of the study reported that 70% of students had high levels of academic stress. This was followed by 30% of students reporting having moderate levels of academic stress. No students were reported to have low levels of academic stress. Overall, the findings of this study show that most students have a high level of academic stress. High academic stress scores indicate that students experience stress in the aspects of "performance stress", "perception of workload and examinations", "perception of academic self", and "time constraints".

Table 3 shows the levels of student life satisfaction: very dissatisfied, dissatisfied, slightly dissatisfied, neutral, slightly satisfied, satisfied and very satisfied. This calculation is based on the study of Cummins [30]. It is the sum of each item and uses the formula Mean±SD.

Table 2. Academic stress

Academic stress	Frequency	Percentage (%)
Low (18-42)	0	0
Moderate (43-61)	120	30
High (62-90)	280	70

Table 3. Student life satisfaction

Student life satisfaction	Frequency	Percentage (%)
Very dissatisfied (5-9)	0	0
Dissatisfied (10-14)	8	2
Slightly dissatisfied (15-19)	92	23
Neutral (20)	56	14
Slightly satisfied (21-25)	172	43
Satisfied (26-30)	60	15
Very satisfied (31-35)	12	3

4.3. Results of analysis based on hypothesis

4.3.1. There is a significant relationship between performance stress and student life satisfaction level

This academic stress refers to mental or emotional pressure. Table 4 shows a value of $r=-0.208$ and $p<0.05$, indicating has association between "performance stress" and student life satisfaction. As a result, there is a negative association between "performance stress and student life satisfaction. It shows whenever performance stress increase, life satisfaction will be reduced. The study results showed no significant relationship between "perception of workload and examinations" with student life satisfaction because of the value of $r=0.046$ and $p>0.05$. This shows no significant association between "perception of workload and examinations" and life satisfaction.

Table 4. The relationship between "performance stress", "perception of workload and examinations" and student life satisfaction

Variable	Student life satisfaction	
	r	p
Performance stress	-0.208	0.038
Perception of workload and examinations	0.046	0.652

p<0.05

The test findings show a significant and positive relationship between "academic self-perception" and student life satisfaction because of the value of $r=0.014$ and $p=0.245$. This indicates associated positive that shows that whenever "academic self-perception" increase life satisfaction among student increase. This shows a quite low correlation between both variables. In other words, whether student life satisfaction is high or poor is determined by "academic self-perception". A study conducted by Mohammad and Sa'odah [31] supports this study by saying that a self-perception allows a person to have such a high life satisfaction.

"Time constraints" in this study refers to having a limited amount of time to complete assignments, courses, learning subjects, and syllabi, as well as having a limited amount of relaxation time. The tests conducted show no significant relationship between "time constraints" and student life satisfaction because of the value of $r=0.139$ and $p=0.166$. A p-value of more than 0.05 indicates no significant positive correlation between the two related variables. The study's findings show that "time constraints" do not affect a student's life satisfaction.

The findings of this study support the study of Amat and Mahmud [32] that a person's life happiness is unaffected by time limitations. This is because a student may occupy their time with a variety of activities or work. Like a worthwhile activity, the time constraints cannot be compared to the worthwhile activities performed. Table 5 shows the relationship between "academic self-perception," "time constraints" and student life satisfaction.

Table 5. The relationship between academic self-perception, time constraints, and student life satisfaction

Variable	Student life satisfaction	
	r	p
Academic self-perception	0.245	0.014
Time constraints	0.139	0.166

p>0.05

4.3.2. There is a significant difference between academic stress and gender

The findings of the research for academic stress by gender of respondents are shown in Table 6. According to a T-test, the study's findings revealed no significant difference in academic stress between male and female students. The t-value for comparing male and female students' levels of academic stress is t=0.429, with a significant level of p>0.05. This significance level was greater than 0.05 (p>0.05). Therefore, the null hypothesis (H_2) is rejected. As a result, there is no significant difference between life satisfaction or academic stress.

Table 6. Differences in academic stress based on gender

Variable	N	Min	Sd.	t	p
Male	163	64.94	4.383	0.429	0.190
Female	237	63.61	5.113		

Table 7 shows the results of the study for life satisfaction and gender. The study's findings showed no significant difference in life satisfaction between male and female students. The t-value for comparing the life satisfaction level for male and female students is t=0.714 and the significant level is p>0.05. This significance level was greater than 0.05 (p>0.05). Therefore, the null hypothesis (H_2) is rejected. So, there is no significant difference in life satisfaction between male and female students.

Table 7. Differences in life satisfaction based on gender

Variable	N	Min	Sd.	t	p
Male	163	21.40	3.131	0.714	0.944
Female	237	21.46	4.043		

4.4. The relationship between academic stress and student life satisfaction

In response to the study question on students' levels of academic stress, it was discovered that most students' levels of academic stress are at a high level of 70%, with a total of 280 students. The remaining students are at the intermediate level, accounting for up to 30% of the total. This is because they are still students. Students are subjected to various high expectations from parents and lecturers as well as "time constraints" to complete assignments or limited leisure time, which they believe causes them stress.

Student life satisfaction, the data showed that most students were slightly satisfied with their life satisfaction which represented 43%. At the level of slightly dissatisfied with 23%, at the level of satisfied with a total of 15%, at the level of very satisfied with 3% and at the level of dissatisfied with a total of 2%. This might be because students who still maintain the label of students believe they have not yet accomplished what they want and what is regarded as significant in their lives.

The main outcome is performance stress and academic self-perception have an association with life satisfaction. The results indicate that performance stress has a negative association with life satisfaction. Whenever performance stress reduces, life satisfaction will be increase automatically. It is also related to social sustainability, where performance stress is associated negatively with life satisfaction.

The Bottom-up theory is the most relevant explanation for life satisfaction in this study. The idea focuses on life satisfaction resulting from satisfaction in various aspects of one's life [19]. According to the idea presented, one finds satisfaction in various aspects of life, including work, relationships, family and friends, personal development, health, and fitness.

4.5. The differences in academic stress between male and female students

Based on the t-test that has been done, this study found no significant difference for the academic stress of male and female students. It shows that by stress level not significance difference. By nature, university student in public university in Sabah been exposed some method of stress management. This is can been related to GAS theory that everyone regardless their gender. This theory is based on three basic stages of development that occur during stress, namely: i) The stage of readiness and alertness (alarm reaction); ii) The stage of resistance; and iii) The stage of exhaustion. Through the concept of GAS states that the process occurs starting from the first stage, the source of stress that affects the body (general) [24]. Then make adjustments to deal with the cause (adaptation) in the second stage. If the individual is able to adapt to the cause, then stress can be avoided. On the other hand, if the adjustment measures cannot be done, adrenaline will be secreted into the blood and cause fatigue. Then it will go to the third stage, where the individual experiences some form of a stress response. Furthermore, university students also have their counselling center whereby any issue related to their academic can be refer to their professional counselling [16].

4.6. The differences in Life satisfaction between male and female students

While in terms of life satisfaction study, the t-test also showed no significant relationship between life satisfaction between male and female students. This is because, across age and regional groups, the direction of gender differences in life satisfaction was unpredictable. The Bottom-up theory is the most relevant explanation for life satisfaction in this study. The idea focuses on life satisfaction as a result of satisfaction in various aspects of one's life [19]. According to the idea presented, one finds satisfaction in various aspects of life, including work, relationships, family and friends, personal development, health, and fitness. One's total life satisfaction is made up of our contentment with one's lives in this area and their social sustainability [33], [34].

5. CONCLUSION

From the studies that have been conducted, the conclusions of the findings are most students at public university in Sabah have a high level of academic stress (70%) The level of life satisfaction felt by most male and female students at public university in Sabah is slightly satisfied. There was no significant relationship between academic stress on items "perception of workload and examinations" and "time constraints" with student life satisfaction. In contrast, on items "performance stress" and "academic self-perception," it was seen that there was a significant relationship with the level of student life satisfaction. This study concluded that "performance stress" and "academic self-perception" are the factors that most influence students' level of life satisfaction in each year of study. Students need to reduce performance stress so their life satisfaction will increase and they will be happier in campus life and the education system in the university. The student also needs to increase their academic self-perception with life satisfaction. Each student needs to positively relate their academic stress more positively in order to increase their life satisfaction.

REFERENCES

[1]   D. C. Shin and D. M. Johnson, "Avowed happiness as an overall assessment of the quality of life," *Social Indicators Research*, vol. 5, no. 1–4, pp. 475–492, 1978, doi: 10.1007/BF00352944.
[2]   A. Paschali and G. Tsitsas, "Stress and life satisfaction among university students-a pilot study," *Annals of General Psychiatry*, vol. 9, no. S1, 2010, doi: 10.1186/1744-859x-9-s1-s96.
[3]   G. G. Bear and K. M. Minke, *Children's needs III: Development, prevention, and intervention*. National Association of School Psychologists, 2006.
[4]   K. J. Reddy, K. R. Menon, and A. Thattil, "Academic stress and its sources among university students," *Biomedical and Pharmacology Journal*, vol. 11, no. 1, pp. 531–537, 2018, doi: 10.13005/bpj/1404.
[5]   B. Rathakrishnan, S. Singh, and A. Yahaya, "Perceived Social Support, Coping Strategies and Psychological Distress among University Students during the COVID-19 Pandemic: An Exploration Study for Social Sustainability in Sabah, Malaysia," *Sustainability*, vol. 14, no. 6, p. 3250, 2022, doi: 10.3390/su14063250.
[6]   A. L. Dwyer and A. L. Cummings, "Stress, Self-Efficacy, Social Support, and Coping Strategies in University Students," *Canadian Journal of Counselling*, vol. 35, no. 3, pp. 208–220, 2001.
[7]   B. Rathakrishnan, S. A. Rahim, S. Singh, B. Singh, and J. R. Jaafar, "Job Preferences among Marginalized and Non-Marginalized Youth in Malaysia," *International Journal of Indian Psychology*, vol. 4, no. 2, 2017, doi: 10.25215/0402.097.
[8]   M. G. Wintre and M. Yaffe, "First-year students' adjustment to university life as a function of relationships with parents," *Journal of Adolescent Research*, vol. 15, no. 1, pp. 9–37, 2000, doi: 10.1177/0743558400151002.
[9]   O. Bojuwoye, "Stressful experiences of first year students of selected universities in South Africa," *Counselling Psychology Quarterly*, vol. 15, no. 3, pp. 277–290, 2002, doi: 10.1080/09515070210143480.
[10] J. Archer and A. Lamnin, "An investigation of personal and academic stressors on college campuses," *Journal of College Student Personnel*, vol. 26, no. 3, pp. 210–215, 1985.
[11] D. Girdano and G. Everly, *Controlling stress and tension*. Pearson, 1986.

[12]   K. B. Matheny *et al.*, "Coping resources, perceived stress, and life satisfaction among Turkish and American university students," *International Journal of Stress Management*, vol. 9, no. 2, pp. 81–97, 2002, doi: 10.1023/A:1014902719664.

[13]   H. Elias, W. S. Ping, and M. C. Abdullah, "Stress and academic achievement among undergraduate students in Universiti Putra Malaysia," *Procedia - Social and Behavioral Sciences*, vol. 29, pp. 646–655, 2011, doi: 10.1016/j.sbspro.2011.11.288.

[14]   B. Rathakrishnan and S. George, "Gambling in Malaysia: an overview," *BJPsych International*, vol. 18, no. 2, pp. 32–34, 2021, doi: 10.1192/bji.2020.55.

[15]   B. Rathakrishnan, S. S. Bikar Singh, M. F. Ghazali, A. Yahaya, N. H. Mohammed, and M. R. Kamaluddin, "Motivation Factors Attributed to Engaging in Online Studies Amongst Public University Students," *Proceedings of International Conference on Emerging Technologies and Intelligent Systems (ICETIS 2021)*. Lecture Notes in Networks and Systems, vol 299. Springer, Cham, 2022, doi: 10.1007/978-3-030-82616-1_20.

[16]   B. Rathakrishnan *et al.*, "Smartphone Addiction and Sleep Quality on Academic Performance of University Students: An Exploratory Research," *International Journal of Environmental Research and Public Health*, vol. 18, no. 16, p. 8291, 2021, doi: 10.3390/ijerph18168291.

[17]   M. A. Zakaria, F. Yusof, and S. Deraman, "Hubungan Sokongan Sosial dan Pengertian Hidup Dalam Kalangan Pelajar di Kolej Kemahiran Tinggi Mara, Masjid Tanah," *Jurnal Sains Sosial: Malaysian Journal of Social Sciences*, vol. 4, no. 1, pp. 44–53, 2019, [Online]. Available: https://www.kuim.edu.my/journal/index.php/JSS/article/view/485.

[18]   B. Rathakrishnan *et al.*, "Homesickness and socio-cultural adaptation towards perceived stress among international students of a public university in Sabah: An exploration study for social sustainability," *Sustainability (Switzerland)*, vol. 13, no. 9, 2021, doi: 10.3390/su13094924.

[19]   B. Headey, R. Veenhoven, and A. Wearing, "Top-down versus bottom-up theories of subjective well-being," *Social Indicators Research*, vol. 24, no. 1, pp. 81–100, Feb. 1991, doi: 10.1007/BF00292652.

[20]   B. Parasuraman, A.Satrya, B.Rathakrishnan, and B. Muniapan, "Analysing the relationship between unions and joint consultation committee: case studies of Malaysian and Indonesian postal industries," *International Journal of Business and Society*, vol. 10, no. 1, pp. 41–58, 2009.

[21]   H. Selye, "The general adaptation syndrome and the diseases of adaptation," *Journal of Allergy*, vol. 17, no. 6, pp. 358–398, Nov. 1946, doi: 10.1016/0021-8707(46)90159-1.

[22]   D. Robotham and C. Julian, "Stress and the higher education student: A critical review of the literature," *Journal of Further and Higher Education*, vol. 30, no. 2, pp. 107–117, 2006, doi: 10.1080/03098770600617513.

[23]   I. Mewburn, D. Cuthbert, and E. Tokareva, "Experiencing the progress report: An analysis of gender and administration in doctoral candidature," *Journal of Higher Education Policy and Management*, vol. 36, no. 2, pp. 155–171, 2014, doi: 10.1080/1360080X.2013.861054.

[24]   H. Selye, "Stress and the general adaptation syndrome," *British Medical Journal*, vol. 1, no. 4667, pp. 1383–1392, 1950, doi: 10.1136/bmj.1.4667.1383.

[25]   W. Pavot and E. Diener, "Review of the Satisfaction with Life Scale," *Psychological Assessment*, vol. 5, no. 2, pp. 164–172, 1993, doi: 10.1037//1040-3590.5.2.164.

[26]   R. V Krejcie and D. W. Morgan, "Determining sample size for research activities," *Educational and Psychological Measurement*, vol. 30, no. 3, pp. 607–610, Sep. 1970, doi: 10.1177/001316447003000308.

[27]   D. Bedewy and A. Gabriel, "Examining perceptions of academic stress and its sources among university students: The Perception of Academic Stress Scale," *Health Psychology Open*, vol. 2, no. 2, 2015, doi: 10.1177/2055102915596714.

[28]   E. Diener, R. A. Emmons, R. J. Larsem, and S. Griffin, "The Satisfaction with Life Scale," *Journal of Personality Assessment*, vol. 49, no. 1, pp. 71–75, Feb. 1985, doi: 10.1207/s15327752jpa4901_13.

[29]   L. E. Toothaker, L. S. Aiken, and S. G. West, "Multiple Regression: Testing and Interpreting Interactions," *The Journal of the Operational Research Society*, vol. 45, no. 1, p. 119, Jan. 1994, doi: 10.2307/2583960.

[30]   R. A. Cummins, "Instruments Assessing Quality of Life," *Assessing Adults with Intellectual Disabilities: A Service Providers' Guide*, pp. 119–137, 2008, doi: 10.1002/9780470773697.ch9.

[31]   M. A. Johari and S. Ahmad, "Persepsi tekanan akademik dan kesejahteraan diri di dalam kalangan pelajar universiti di Serdang, Selangor," *EDUCATUM Journal of Social Sciences*, vol. 5, no. 1, pp. 24–36, 2019, doi: 10.37134/ejoss.vol5.1.4.2019.

[32]   S. Amat and Z. Mahmud, "Hubungan antara Ketegasan Diri dan Kepuasan Hidup dalam Kalangan Pelajar Institusi Pengajian Tinggi," *Jurnal Pendidikan Malaysia*, vol. 34, no. 2, pp. 49–65, 2009, [Online]. Available: http://journalarticle.ukm.my/223.

[33]   A. Beckstein, B. Rathakrishnan, P. B. Hutchings, and N. H. Mohamed, "The Covid-19 Pandemic and Mental Health in Malaysia: Current Treatment and Future Recommendations," *Malaysian Journal of Public Health Medicine*, vol. 21, no. 1, pp. 260–267, 2021, doi: 10.37268/MJPHM/VOL.21/NO.1/ART.826.

[34]   S. S. Bikar, B. Rathakrishnan, M. R. Kamaluddin, N. Che Mohd Nasir, and M. A. Mohd Nasir, "Social sustainability of post-disaster: How teachers enable primary school students to be resilient in times of ranau earthquake," *Sustainability (Switzerland)*, vol. 13, no. 13, 2021, doi: 10.3390/su13137308.

BIOGRAPHIES OF AUTHORS

Balan Rathakrishnan 🆔 SC P is an associate professor of the Faculty of Psychology and Education, University Malaysia Sabah, where he specializes in the Youth and Community Development program. In 2013, he won the World Inventor Award from Korea in the field of research and education in the category for social sciences. His research focuses on youth, creativity, innovation, and interventions into youth social problems. He is a member of the Malaysian Psychology Association. Dr. Balan obtained his M.A. and Ph.D. (Psychology) from the National University of Malaysia (UKM). He can be contacted at email: rbhalan@ums.edu.my.

Soon Singh Bikar Singh ⓘ 🕲 SC Ⓟ is a senior lecturer of Geography Education of the Faculty of Psychology and Education, University Malaysia Sabah (UMS), Malaysia. He holds a Ph.D. in Geography Education (Macquarie University, Sydney), an M.Ed. in Educational Psychology (University of Malaya), a B.A. (Hons) in Geography (University of Malaya), and a teacher training certificate (Malay study). He has seven years of experience teaching in primary schools, eight years teaching in secondary schools, and is currently a lecturer at UMS. His research interests are in mixed methods research, geographical education, applying geography information systems (GIS) in teaching geography, creativity in teaching and learning, motivation, and learning styles. He has also written a number of book chapters. He can be contacted at email: soonbs@ums.edu.my.

Azizi Bin Hj. Yahaya ⓘ 🕲 SC Ⓟ is a social psychologist and associate professor of the faculty of Pyshology and Education, Universiti Malaysia Sabah. His specialization on youth and community development, social psychology and devian behavior. He can be contacted at email: azizi.yahaya@ums.edu.my.

Mohammad Rahim Kamaluddin ⓘ 🕲 SC Ⓟ is a criminologist and an associate professor of the Faculty of Social Sciences and Humanities at the National University of Malaysia (UKM). He is the program coordinator for Policing Studies (a collaborative program between UKM and Royal Malaysia Police). Dr. Rahim is also the founder and president of the Malaysian Criminological and Correctional Association. His specialization is in criminology and his research interests include criminal psychology, social ills, forensic criminology, violence, and crime prevention, as well as psychometrics and profiling. He can be contacted at email: rahimk@ukm.edu.my.

Fauziah Ibrahim ⓘ 🕲 SC Ⓟ received PhD degree in Community Development from Universiti Putra Malaysia. She currently works as a lecture at Centre for Research in Psychology and Human Well-Being, Faculty of Social Sciences and Humanities, Universiti Kebangsaan Malaysia. Her research interest includes drug relapse, community development and crime prevention. She can be contacted at email: pkpkm@ukm.edu.my.

Zaizul Ab. Rahman ⓘ 🕲 SC Ⓟ qualified with a Doctor of Philosophy (PHD) from Universiti Malaya (UM) in the field of Human Development (Islamic Jurisprudence and Philosophy). He furthered his education in post-doctoral studies under the supervision of Professor Shaun Gregory, University of Durham, United Kingdom and Dr Muzammil Quraishi, University of Salford, United Kingdom. He is currently pursuing further education at the level of Doctor of Higher Education (EdD) in the field of Personality and Mental Health at the Faculty of Education, UKM. He is currently senior lecturer at the Centre of Jurisprudence and Philosophy Studies (Pusat Kajian Usuluddin dan Falsafah (PKUF), Faculty of Islamic Studies, Universiti Kebangsaan Malaysia. He can be contacted at email: zaizul@ukm.edu.my.