



INTERNATIONAL JOURNAL OF
EDUCATION, PSYCHOLOGY
AND COUNSELING
(IJEPC)

www.ijepec.com



ACADEMIC STRESS AND ANXIETY AMONG
UNDERGRADUATE STUDENTS IN MALAYSIA

Ho Meng Chuan¹, Lee Chye Ying², Pang Khong Yun³, Ooi Pei Boon⁴, Keoy Kay Hooi^{5*}

¹ Faculty of Social Sciences and Liberal Arts, UCSI University, Malaysia
Email: HoMC@ucsiuniversity.edu.my

² Faculty of Social Sciences and Liberal Arts, UCSI University, Malaysia
Email: 1002057490@ucsiuniversity.edu.my

³ Faculty of Social Sciences and Liberal Arts, UCSI University, Malaysia
Email: 1001851264@ucsiuniversity.edu.my

⁴ School of Medical and Life Sciences, Sunway University, Malaysia
Email: peiboono@sunway.edu.my

⁵ Institute of Computer Science and Innovation
Email: keoykh@ucsiuniversity.edu.my

* Corresponding Author

Article Info:

Article history:

Received date: 10.05.2022

Revised date: 24.05.2022

Accepted date: 30.05.2022

Published date: 15.06.2022

To cite this document:

Ho, M. C., Lee, C. Y., Pang, K. Y., Ooi, P. B., & Keoy, K. H. (2022). Academic Stress and Anxiety Among Undergraduate Students in Malaysia. *International Journal of Education, Psychology and Counseling*, 7 (46), 98-109.

DOI: 10.35631/IJEPC.746009

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Abstract:

Following the recent reopening of most universities in Malaysia, undergraduate students have shown high concerns in terms of academic stress and anxiety with the sudden transition from two years of online learning to a physical environment. Furthermore, students experience an increase in test anxiety due to the long-lost feeling of taking physical examinations and being in a hall with lecturers and other students, especially if the tests are used for evaluation with a pass or fail grade. In this study, we aim to investigate the relationship between academic stress and anxiety among undergraduate students in Malaysia. The cross-sectional study recruited participants using an online questionnaire which included demographics, questions assessing Academic Expectations of Stress Inventory (AESI), and Cognitive Test Anxiety Scale (CTAS). A total of 109 participants responded to the survey. The Pearson's correlation showed that academic stress moderately correlated with anxiety ($r = 0.772, p < 0.01$). The Partial Least Squares (PLS) regression test showed academic stress was positively predicting anxiety ($\beta = 0.781, p < 0.01$).

Keywords:

Academic Stress, Academic Anxiety, Undergraduate Students, Malaysia

Introduction

Today's undergraduate students face more complicated issues than ever before (Malik, 2018). One particular area of concern for students in higher education nowadays is academic stress and anxiety on the ability to thrive in a new study environment during the Coronavirus Disease 2019 (COVID-19) pandemic (Clabaugh, Duque, & Fields, 2021). Academic anxiety refers to the feelings of uneasiness and worry about activities related to a particular subject in school or academic context (Hasty et al., 2020). Generally, stress is defined as a “particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources” (Lazarus & Folkman, 1984, p. 19). Unpredictability and a perceived lack of control can contribute to stress perception too (Alsulami et al., 2018).

Studying in an online format can be described as a whole new experience for most students (D'Amato, 2021). This lack of experience may be aggravated by difficult home conditions, such as a loss of access to educational resources (e.g., laptops, stable network access, and reference books) and disruptions in the home learning environment (Wang et al., 2020). Initial research indicates that at-home distractions (e.g., distractions from family members and additional responsibilities such as taking care of siblings) pose as potential challenges for university students who are learning from home during the COVID-19 pandemic (Son et al., 2020). These factors are likely to cause significant academic stress and anxiety due to the uncertainty over the duration of the lockdown.

In addition, common stressors in university, regardless of remote or physical learning, include increased academic requirements (i.e., taking courses with demanding workloads) (Yang, 2021), being in an unfamiliar environment, changes in family relations and social life, and exposure to new concepts and temptations. Some of the notable problems specific to university students are pressure of time, fear of failure, struggle to establish self-identity, pressure of academic expectation from parents (Desk, 2020), and tough competition among students (Christine, 2018). Other than that, going to university can be a stressful life event as they negotiate changes in lifestyle, community and relationships, and the emotional problems such as feeling inadequacy and constant anxiety (Alsubaie, Stain, Webster & Wadman, 2019).

After studying remotely from the year 2020, the Minister of Higher Education, Datuk Seri Noraini Ahmad (2021) announced the decision to reopen all higher education institutions under all phases of the National Recovery Plan with the effort to allow students to return to their campuses once they have been fully vaccinated, as announced by the Prime Minister, Datuk Seri Ismail Sabri Yaakob on 22 August 2021 (MoHE, 2022). Although hybrid learning which involves ‘in-person and online courses’ is still applicable, some universities encourage fully vaccinated students to return to campus for more effective learning. In the post-epidemic era, students are gradually returning to their campuses, but what is the emotional adjustment of university undergraduates after pressure from the epidemic and long-term home isolation?

Following the recent reopening of most universities in Malaysia, students have shown high concerns in terms of academic stress and anxiety with the sudden transition from two years of online learning to a physical environment (Sandra & Amy, 2022). It is uncertain whether the undergraduate students are mentally, emotionally, and financially well prepared for major changes in their classroom learning styles, and more importantly, will their academic stress and anxiety escalate once they officially return to their campus?

Numerous concerns were raised on the issue of undergraduates returning to campus. Based on a public poll by UCSI University (2021), the results showed that 79.4% of Malaysian students were unwilling to return to campus as they were concerned with their safety even though strict Standard Operation Procedure (SOP) was adhered to. Besides, students may face an increase in test anxiety after two years of online exams with a sudden shift to physical exams and the long-lost feeling of being in a hall with lecturers and other students, especially if the tests are used for evaluation with a pass or fail grade, rather than for formative or instructional purposes (Roos, 2021). Moreover, there may be underlying concerns such as stigma against students who have been sick or just a sneeze in the classroom might attract frowns from other students. Also, how can the students re-engage with their studies after isolating at home for two years? These are the unspoken discrimination and worries that might cause academic stress and anxiety in students. For others, especially international students, separation from home can also be a source of stress and anxiety because of uncertainty in a new country (Orygen, 2020). Although some stress is essential for individual growth, too much stress can overwhelm a student and impair their ability to cope (Zhao, 2019).

Students with high academic stress have reported many problems such as depression, anxiety, behavioral problems, and irritability (Huang et al., 2018). In line with this, the prevalence of suicidal ideation was found to be 21% among 50,054 university students, with 4.2 percent of them having attempted suicide (Sivertsen et al, 2019). This is accurate with a survey of the prevalence and correlates of suicidal ideation among university students in Malaysia, which found a strong link between suicidal thoughts, depression, and anxiety in this study (Mazelan & Lee, 2022). Although certain levels of stress can motivate students to perform at their best, it can have detrimental consequences for both the student and the institution when it is not handled efficiently due to the absence of resources to deal with the stress (Reddy, Menon & Thattil, 2018).

Additionally, high academic anxiety is correlated with poor academic performance. One proposed mechanism for this relationship is that academic anxiety promotes learning avoidance behaviors, which in turn, limits students' learning and development opportunities (Hasty et al., 2020). Students with higher test anxiety procrastinated more than those with lower test anxiety when preparing for an upcoming examination or a major assignment (Putwain, 2019; Von der Embse, N et al., 2018; Yang, Asbury & Griffiths, 2018). These studies suggest that higher levels of academic or test anxiety are linked to greater avoidance in the classroom and in the context of high-stakes examination. Therefore, current study aims to examine the impact of academic anxiety and stress among undergraduate students in Malaysia.

Research Objectives

This study first examines the current level of academic stress and anxiety among undergraduate students in Malaysia. Second, the study determines whether there is a significant relationship between academic stress and anxiety. Third, the predictive power of academic anxiety and stress towards undergraduate students in Malaysia is studied.

Research Methodology

Research Design

This study used quantitative methods, specifically survey research.

Research Samples

The sample population of this study was undergraduate students in Malaysia, enrolled in private universities. The sampling method used in this study is a combination of convenience and snowball sampling. A total of 109 samples participated in this study.

Research Instrument and Procedures

A Google Form survey was distributed to students at the UCSI University via an online psychology major's community. Participation was voluntary and not compensated.

The survey took roughly 15 minutes to complete. The measures for this study were administered in the following order: demographics, questions assessing Academic Expectations of Stress Inventory, and Cognitive Test Anxiety Scale (CTAS).

Academic Expectations of Stress Inventory (AESI)

The Academic Expectations of Stress Inventory (AESI) is an applied research tool used by scientists and practitioners to assess the impact of students' expectations and their supervisors' expectations (parents/teachers) in causing or increasing academic stress. The AESI developed by Ang and Huan (2006) consisted of 13 items and 2 components of expectations of self and expectations of others (parents/teachers).

Higher scores indicate higher perceived academic stress.

Cognitive Test Anxiety Scale (CTAS)

The Cognitive Test Anxiety Scale (CTAS) is a 27-item questionnaire designed to evaluate test anxiety's cognitive indicators during the preparation and performance phases of the learning test cycle. The CTAS was developed by Cassady and Johnson (2002).

Higher scores indicate higher test anxiety.

Results

Descriptive Statistics

A total of 109 participants took part in this study. The response rate was 100%, where 63.1% were males while 38.8% were females. The mean ages for males and females were 24.38 ± 1.56 years and 22.43 ± 1.28 years, respectively. The mean, standard deviation, skewness, and kurtosis of the variables are shown in Table 1. Table 2 shows the listwise reported CGPA achieved by the participants; however, 12 participants did not report their CGPA score in the survey.

Table 1
The Descriptive Statistics Information

Variables	Mean	Std. deviation	Skewness	Kurtosis
Academic stress	33.95	8.55	-0.794	0.660
Anxiety	76.30	18.05	-0.882	0.762

Table 2CGPA (n = 97)

CGPA scores	Frequency (n)	Percentage (%)
1.99 < CGPA < 3.00	26	23.5
2.99 < CGPA < 3.50	53	48.5
CGPA > 3.49	18	16.3

Composite Reliability and Average Variance Extracted

According to Ramayah et al. (2018), the AVE of each construct should be greater than 0.40, which indicates that the construct will explain 40% of the variance of its items. Our data managed to meet this criterion. Besides that, the researcher needed to achieve 60% of CR and 70% of Cronbach's alpha to justify the construct reliability, and similarly, our data fulfilled this criterion as shown in Table 3.

Table 3Reliability test

Variables	Items	Scale	Loadings	AVE	CR	Cronbach's alpha
Academic stress	AS1	Reflective	0.832	0.73	0.961	0.954
	AS2		0.866			
	AS3		0.856			
	AS4		0.881			
	AS5		0.858			
	AS6		0.843			
	AS7		0.889			
	AS8		0.812			
	AS9		0.852			
Anxiety	CTAS1	Reflective	0.780	0.66	0.98	0.978
	CTAS2		0.759			
	CTAS3		0.781			
	CTAS4		0.678			
	CTAS5		0.780			
	CTAS6		0.842			
	CTAS7		0.797			
	CTAS8		0.805			
	CTAS9		0.829			
	CTAS10		0.803			
	CTAS11		0.859			
	CTAS12		0.861			
	CTAS13		0.863			

CTAS14	0.860
CTAS15	0.879
CTAS16	0.846
CTAS17	0.824
CTAS18	0.839
CTAS19	0.847
CTAS20	0.732
CTAS21	0.790
CTAS22	0.818
CTAS23	0.832
CTAS24	0.804
CTAS25	0.778

Correlation Test

We used the Pearson correlation test and found that academic stress was moderately correlated with anxiety ($r = 0.772$, $p < 0.01$).

Table 4
Correlation test

Variables	1	2
Academic stress	-	.772**
Anxiety	.772**	-

Note. ** $p < 0.01$

Partial Least Square (PLS) Regression Test

We used the SmartPLS software to conduct the bootstrap procedure with 5000 resamples on the data. As seen from Table 5, academic stress was positively predicting anxiety ($\beta = 0.781$, $p < 0.01$). This relationship had a substantial effect size with adjusted R squared of more than 0.26 and f squared of more than 0.4 (Cohen, 1988).

Table 5
PLS Regression

	Std. beta	Std. error	t-value	Adj. R square	f square	Effect size
academic Stress -> Anxiety	0.781	0.043	18.108**	0.606	1.562	Substantial

Note. ** $p < 0.01$

Predictive Relevancy

We used the PLS Predict (Shmueli, 2016) to identify the prediction power of the models. Shmueli et al. (2019) suggested that researchers can use the root mean square error (RMSE) to determine the prediction power of the endogenous construct's indicators by comparing the difference of RMSE generated by the PLS algorithm and that generated by the linear regression

(LM). In addition, those indicators with positive value of Stone-Geisser predictive relevance (Q^2) indicate a better predictor. In Table 7, all the indicators except for CTAS1 had a lower RMSE in the PLS analysis. Therefore, the items were interpreted as having medium predicting power with low prediction error.

Table 6
Predictive power

Items	Q^2_{predict}	PLS	Benchmark	Difference
CTAS1	0.332	0.634	0.603	-0.031
CTAS2	0.287	0.604	0.606	0.002
CTAS3	0.403	0.689	0.765	0.076
CTAS4	0.480	0.735	0.812	0.077
CTAS5	0.391	0.820	0.906	0.086
CTAS6	0.266	0.711	0.787	0.076
CTAS7	0.451	0.702	0.713	0.011
CTAS8	0.432	0.749	0.783	0.034
CTAS9	0.285	0.709	0.783	0.074
CTAS10	0.388	0.703	0.725	0.022
CTAS11	0.315	0.650	0.657	0.007
CTAS12	0.416	0.716	0.72	0.004
CTAS13	0.553	0.658	0.703	0.045
CTAS14	0.290	0.603	0.637	0.034
CTAS15	0.316	0.580	0.607	0.027
CTAS16	0.346	0.677	0.752	0.075
CTAS17	0.415	0.730	0.811	0.081
CTAS18	0.439	0.631	0.685	0.054
CTAS19	0.341	0.756	0.836	0.080
CTAS20	0.385	0.682	0.749	0.067
CTAS21	0.391	0.812	0.822	0.010
CTAS22	0.364	0.674	0.795	0.121
CTAS23	0.565	0.696	0.757	0.061
CTAS24	0.351	0.780	0.887	0.107
CTAS25	0.454	0.776	0.833	0.057

Note. Benchmark is assessed by LM.

Discussion

The current study aims to determine the level of academic stress and anxiety. The result indicates that the level of academic stress and anxiety of the participants are above average. The result is consistent with several contemporary studies (Aihie & Ohanaka, 2019; Fuente et al., 2020; Joseph et al., 2020; Zhan et al., 2021). This points to a potential risk of psychological disorders and suggests that academic and psychosocial performance will deteriorate throughout the uncertainties during the pandemic (Hamaideh et al., 2021). Online learning is still in its developing stage in Malaysia as most of the tertiary education still relies on the conventional teaching method which is face-to-face teaching. Due to the pandemic, academic stress and anxiety may be caused by a combination of overburdening academic online assignments and

sessions, loneliness of online learning, and COVID-19 outbreak (Debowska et al., 2020; Rogowska, Kuśnierz & Ochnik, 2021; Werner et al., 2021).

In normal circumstances, academic work is a source of anxiety and stress for students (Burgstahler & Stenson, 2019; Hsu & Goldsmith, 2021; Miron, 2018). Nevertheless, the global apprehension and anxiety caused by COVID-19 may have exacerbated students' psychological state. Students without access to the necessary information technology to complete their online academic obligations are more likely to experience depression, anxiety, and stress. This has additionally been demonstrated by the negative connections of sadness, tension, and anxiety with students' income levels, implying that their financial status has an impact on their psychological well-being.

Lee, Jeong and Kim (2021), who highlighted issues regarding anxiety among undergraduate students, had suggested other factors that could be related to students' anxiety over their grades and graduation-related matters. Their study reported that 88% of students had moderate to severe stress, with 44% had moderate to severe anxiety. As such, these main findings are quite alarming because mental health is intimately linked to students' well-being, academic outcomes, and retention.

Despite the high prevalence of mental health problems, the current study also aims to examine the relationship between academic stress and anxiety among university students during the pandemic. The present study reported that stress is strongly correlated to anxiety among university students during the pandemic. According to Konstantopoulou et al., (2020), the findings of their study showed that stress is strongly correlated to anxiety as well, thus, the result of this study is in line with their study. This is consistent with several contemporary studies which reported that anxiety and stress are often frequently interrelated with one another (Zhan et al., 2021). Anxiety and stress have the same 'fight, flight, or freeze' reaction, and physical feelings. Fawaz and Samaha (2020) highlighted that the heavy workload caused a substantial number of students to develop different types of psychological issues, such as anxiety and depression symptoms, due to the abrupt move to the exclusive use of e-learning instruction method. In addition, the commencement of physical classes in the respective colleges and universities was postponed during the pandemic to limit the spread of the disease. Undergraduates were required to change the way they normally study and interact with their socialization agents in schools, resulting in restricted physical interaction. This may lead to a lack of social support and impact their learning progress and employment challenges as well as exacerbating their stress and anxiety (Zhan et al., 2021). The Malaysian government has advocated an endemic, and most students have been allowed to "return to normal"; however, some students who returned to campus under the influence of the epidemic still require time and effort to get in the right frame of mind for learning. As a result, it is important to note that there are still issues with the students' mental health that must be addressed.

Implications

As COVID-19 only started a few years ago and there is little research on this topic, this study will be able to help those who are trying to conduct research on stress and anxiety. Therefore, this study can fill the gap of very few past studies and become one of the research that will help future researchers on such topics.

Other than that, the government can use this research to understand what is happening to undergraduates nowadays in order to prevent different types of psychological disorder among students. The government will be able to take measures to help the population of Malaysia once they have gained an understanding. Malaysian undergraduates will also benefit from this study as they will be able to understand what is happening after reading the study. This allows them to improve their life and take measures to change their course of life.

Conclusion

In conclusion, the psychological stress and anxiety levels of undergraduate students are generally high during the pandemic and endemic, and it would result in clinical depression symptomatology and mood disorder. During the ongoing pandemic, the relevant authorities in tertiary education and Ministry of Higher Education should pay close attention to the mental health of students. In addition, universities should increase psychological surveillance and conduct comprehensive and in-depth health education and promotional activities. Nonetheless, our research did not look at countermeasures, and effective intervention strategies need to be researched further.

References

- Aihie, O. N., & Ohanaka, B. I. (2019). Perceived academic stress among undergraduate students in a Nigerian University. *Journal of Educational and Social Research*, 9(2), 56–66. <https://doi.org/10.2478/jesr-2019-0013>
- Alsubaie, M. M., Stain, H. J., Webster, L. A. D., & Wadman, R. (2019). The role of sources of social support on depression and quality of life for university students. *International Journal of Adolescence and Youth*, 24(4), 484–496. <https://doi.org/10.1080/02673843.2019.1568887>
- Alsulami, S., Al Omar, Z., Binnwejim, M. S., Alhamdan, F., Aldrees, A., Al-Bawardi, A., ... Alhabeeb, M. (2018). Perception of academic stress among health science preparatory program students in two Saudi universities. *Advances in Medical Education and Practice*, 9, 159–164. <https://doi.org/10.2147/AMEP.S143151>.
- Burgstahler, M. S., & Stenson, M. C. (2019). Effects of guided mindfulness meditation on anxiety and stress in a pre-healthcare college student population: A pilot study. *Journal of American College Health*, 68(6), 666–672. <https://doi.org/10.1080/07448481.2019.1590371>
- Christine M. (2018). New forms of competition in higher education, *Socio-Economic Review*, 16(3), 657–683. <https://doi.org/10.1093/ser/mwy033>
- Clabaugh, A., Duque, J. F., & Fields, L. J. (2021). Academic Stress and Emotional Well-Being in United States College Students Following Onset of the COVID-19 Pandemic. *Frontiers in psychology*, 12, 628787. <https://doi.org/10.3389/fpsyg.2021.628787>
- D'Amato, P. (2021, April 8). *Coronavirus accelerates higher education's trend toward distance learning*. The Hechinger Report. <https://hechingerreport.org/coronavirus-accelerates-higher-educations-trend-toward-distance-learning/>
- Debowska, A., Horeczy, B., Boduszek, D., & Dolinski, D. (2020). A repeated cross-sectional survey assessing university students' stress, depression, anxiety, and suicidality in the early stages of the COVID-19 pandemic in Poland. *Psychological Medicine*, 1–4. <https://doi.org/10.1017/s003329172000392x>
- Desk, I. T. W. (2020). *Parent's expectations and academic pressure: A major cause of stress among students*. India Today. <https://www.indiatoday.in/education->

- today/featurephilia/story/parent-s-expectations-and-academic-pressure-a-major-cause-of-stress-among-students-1743857-2020-11-25
- Fawaz, M., & Samaha, A. (2020). E-learning: Depression, anxiety, and stress symptomatology among Lebanese University students during COVID-19 quarantine. *Nursing Forum*, 56(1), 52–57. <https://doi.org/10.1111/nuf.12521>
- Fuente, J., Amate, J., González-Torres, M. C., Artuch, R., García-Torrecillas, J. M., & Fadda, S. (2020). Effects of levels of self-regulation and regulatory teaching on strategies for coping with academic stress in undergraduate students. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.00022>
- Hamaideh, S. H., Al-Modallal, H., Tanash, M., & Hamdan-Mansour3, A. (2021). Depression, anxiety and stress among undergraduate students during COVID-19 outbreak and "Home-quarantine". *Nursing Open*, 9(2), 1423–1431. <https://doi.org/10.1002/nop2.918>
- Hasty, L. M., Malanchini, M., Shakeshaft, N., Schofield, K., Malanchini, M., & Wang, Z. (2020). When anxiety becomes my propeller: Mental toughness moderates the relation between academic anxiety and academic avoidance. *British Journal of Educational Psychology*. doi:10.1111/bjep.12366
- Huang, J., Nigatu, Y. T., Smail-Crevier, R., Zhang, X., & Wang, J. (2018). Interventions for common mental health problems among university and college students: A systematic review and meta-analysis of randomized controlled trials. *Journal of psychiatric research*, 107, 1-10. <https://doi.org/10.1016/j.jpsychires.2018.09.018>
- Hsu, J. L., & Goldsmith, G. R. (2021). Instructor strategies to alleviate stress and anxiety among college and University STEM Students. *CBE—Life Sciences Education*, 20(1). <https://doi.org/10.1187/cbe.20-08-0189>
- Joseph, N., Nallapati, A., Machado, M. X., Nair, V., Matele, S., Muthusamy, N., & Sinha, A. (2020). Assessment of academic stress and its coping mechanisms among medical undergraduate students in a large Midwestern University. *Current Psychology*, 40(6), 2599–2609. <https://doi.org/10.1007/s12144-020-00963-2>
- Klassen, R. M., Ang, R. P., Chong, W. H., Krawchuk, L. L., Huan, V. S., Wong, I. Y. F., & Yeo, L. S. (2009). A cross-cultural study of adolescent procrastination. *Journal of Research on Adolescence*, 19, 799–811. <https://doi.org/10.1111/j.1532-7795.2009.00620.x>
- Kumaraswamy, N. (2013). Academic stress, anxiety and depression among college students: A brief review. *International review of social sciences and humanities*, 5(1), 135-143.
- Lazarus, R. S., & Folkman, S. (n.d.). The Stress Concept and in the Life Sciences. In *Stress, appraisal, and coping* (pp. 19). essay, Springer.
- Li, M., Xu, Z., He, X., Zhang, J., Song, R., Duan, W., Liu, T., & Yang, H. (2021). Sense of coherence and mental health in college students after returning to school during COVID-19: The moderating role of Media Exposure. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.687928>
- Malik, R. S. (2018). Educational challenges in 21st century and sustainable development. *Journal of Sustainable Development Education and Research*, 2(1), 9-20. <https://doi.org/10.17509/jsder.v2i1.12266>
- Maniam, T., Marhani, M., Firdaus, M., Kadir, A. B., Mazni, M. J., Azizul, A., Salina, A. A., Fadzillah, A. R., Nurashikin, I., Ang, K. T., Jasvinder, K., & Noor Ani, A. (2014). Risk factors for suicidal ideation, plans and attempts in Malaysia — results of an epidemiological survey. *Comprehensive Psychiatry*, 55. <https://doi.org/10.1016/j.comppsy.2013.08.004>

- Mazelan, M. A. F. B., & Lee Jun Choi. (2022). The Prevalence and Correlates of Suicidal Ideation among University Students: A Survey. *Journal of Cognitive Sciences and Human Development*, 8(1), 157-174. <https://doi.org/10.33736/jcshd.4374.2022>
- Miron, J. (2018). Perceived stress, anxiety and depression among undergraduate students. <https://doi.org/10.26226/morressier.5b681765b56e9b005965c249>
- Ministry of Higher Education (MoHE) (2022, February 23). Kemasukan Pelajar Institusi Pendidikan Tinggi (Ipt) Secara Fizikal Bagi Sesi Akademik Tahun 2021/2022 Bermula Pada Mac 2022. <https://www.mohe.gov.my/en/broadcast/faq/soalan-lazim-kemasukan-pelajar-institusi-pendidikan-tinggi-ipt-secara-fizikal-bagi-sesi-akademik-tahun-2021-2022-bermula-pada-mac-2022?highlight=WzEsOSwyMDIxXQ>
- Orygen.(2020).International students and their mental health and physical safety. <https://internationaleducation.gov.au/International-network/Australia/InternationalStrategy/EGIPProjects/Documents/ORYGEN%20-%20International%20Student%20Mental%20Health%20and%20Physical%20Safety%20June%202020.pdf>
- Putwain, D. W. (2019). An examination of the self-referent executive processing model of test anxiety: Control, emotional regulation, self-handicapping, and examination performance. *European Journal of Psychology of Education*, 34, 341–358. <https://doi.org/10.1007/s10212-018-0383-z>
- Prihadi, K. D., Wong, C., Chong, E. Y., & Chong, K. Y. (2020). Suicidal Thoughts among University Students: The Role of Mattering, State Self-Esteem and Depression Level. *International Journal of Evaluation and Research in Education*, 9(3), 494-502. 10.11591/ijere.v9i3.20587
- Reddy, K. J., Menon, K. R., & Thattil, A. (2018). Academic stress and its sources among university students. *Biomedical and Pharmacology Journal*, 11(1), 531-537. <https://dx.doi.org/10.13005/bpj/1404>
- Rogowska, A., Kuśnierz, C., & Ochnik, D. (2021). Changes in stress, coping styles, and life satisfaction between the first and second waves of the COVID-19 pandemic: A longitudinal cross-lagged study in a sample of university students. *Journal of Clinical Medicine*, 10(17), 4025. <https://doi.org/10.3390/jcm10174025>
- Roos, A. L., Goetz, T., Voracek, M., Krannich, M., Bieg, M., Jarrell, A., & Pekrun, R. (2021). Test anxiety and physiological arousal: a systematic review and meta-analysis. *Educational Psychology Review*, 33(2), 579-618. <https://doi.org/10.1007/s10648-020-09543-z>
- Sandra M. Chafouleas & Amy. (2022, January 31). *Students are returning to school with anxiety, grief and gaps in social skills – will there be enough school mental health resources?* The Conversation. <https://theconversation.com/students-are-returning-to-school-with-anxiety-grief-and-gaps-in-social-skills-will-there-be-enough-school-mental-health-resources-165279>
- Sinniah, A., Maniam, T., Oei, T. P., & Subramaniam, P. (2014). Suicide Attempts in Malaysia from the Year 1969 to 2011. *The Scientific World Journal*, 2014, 1–13. <https://doi.org/10.1155/2014/718367>
- Sivertsen, Børge & Hysing, Mari & Knapstad, Marit & Harvey, Allison & Reneflot, Anne & Lønning, Kari & O'Connor, Rory. (2019). Suicide attempts and non-suicidal self-harm among university students: prevalence study. *BJPsych Open*. 5(2), 1-8. 10.1192/bjo.2019.4.

- Son, C., Hegde, S., Smith, A., Wang, X., & Sasangohar, F. (2020). Effects of COVID-19 on college students' mental health in the United States: Interview survey study. *Journal of Medical Internet Research*, 22(9). <https://doi.org/10.2196/21279>
- UCSI Poll Research Centre. (2021, October 1). *Physical Classes Found To Be More Effective Than Online Classes*. <https://www.ucsipoll.org.my/poll-finding/physical-classes-found-to-be-more-effective-online-classes>
- Von der Embse, N., Jester, D., Roy, D., & Post, J. (2018). Test anxiety effects, predictors, and correlates: A 30-year meta-analytic review. *Journal of Affective Disorder*. <https://doi.org/10.1016/j.jad.2017.11.048>
- Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., McIntyre, R. S., Choo, F. N., Tran, B., Ho, R., Sharma, V. K., & Ho, C. (2020). A longitudinal study on the mental health of general population during the COVID-19 epidemic in China. *Brain, behavior, and immunity*, 87, 40-48. <https://doi.org/10.1016/j.bbi.2020.04.028>
- Werner, A. M., Tibubos, A. N., Mülder, L. M., Reichel, J. L., Schäfer, M., Heller, S., Pfirrmann, D., Edelmann, D., Dietz, P., Rigotti, T., & Beutel, M. E. (2021). The impact of lockdown stress and loneliness during the covid-19 pandemic on mental health among university students in Germany. <https://doi.org/10.31234/osf.io/9s54k>
- Yang, C., Chen, A., & Chen, Y. (2021). College students' stress and health in the COVID-19 pandemic: The role of academic workload, separation from school, and fears of contagion. *PloS one*, 16(2), <https://doi.org/10.1371/journal.pone.0246676>
- Yang, Z., Asbury, K., & Griffiths, M. D. (2018). An exploration of problematic smartphone use among Chinese university students: Associations with academic anxiety, academic procrastination, self-regulation and subjective wellbeing. *International Journal of Mental Health and Addiction*, 17(3), 596–614. <https://doi.org/10.1007/s11469-018-9961-1>
- Zhan, H., Zheng, C., Zhang, X., Yang, M., Zhang, L., & Jia, X. (2021). Chinese college students' stress and anxiety levels under covid-19. *Frontiers in Psychiatry*, 12. <https://doi.org/10.3389/fpsy.2021.615390>
- Zhao, Y. (2019). *Cognitive Test Anxiety, Self-Efficacy, and Performance on the Praxis Core Academic Skills for Educators Examination* (Doctoral dissertation, University of Kansas). https://kuscholarworks.ku.edu/bitstream/handle/1808/31542/Zhao_ku_0099D_16950_DATA_1.pdf?sequence=1&isAllowed=y