# Psychological well-being impacts among university students on online learning during the COVID-19 pandemic

# Nor Shafrin Ahmad<sup>1</sup>, Aziah Ismail<sup>1</sup>, Zuhda Husain<sup>2</sup>

<sup>1</sup>School of Educational Studies, Universiti Sains Malaysia, Pulau Pinang, Malaysia <sup>2</sup>Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, Terengganu, Malaysia

#### ABSTRACT **Article Info** During the COVID-19 pandemic, universities in Malaysia implemented Article history: online learning. This long-time remote learning is very challenging to some Received Oct 7, 2021 university students. The purpose of this study was to identify the effect of Revised May 18, 2022 psychological well-being on depression, anxiety, and stress of university Accepted Jun 21, 2022 students on online learning during the COVID-19 pandemic. The quantitative data were collected from 325 students from a university in the northern part of Peninsular Malaysia. The survey was conducted online through Google Keywords: Forms. Two instruments used were Depression, Anxiety, Stress Scale (DASS-21) and the psychological well-being scale (PWBS-8). The data were Anxiety analyzed using descriptive and inferential methods. The study found that COVID-19 34.9% of the students were depressed, 60.9% anxious, and 32% stressed. The Depression study found that 23% of the variability in psychological well-being (PWB) Psychological well-being affected university students' depression, anxiety, and stress. This finding Stress demonstrates the magnitude of burden that university students now bear during online learning. Therefore, higher education institutions can play a fundamental role in assisting students to cope with their depression, anxiety, and stress. Authorities should also prioritize determining appropriate student facilities and resources. Structured programmes for distress reduction and blended learning are suggested for use in teaching and learning.

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## **Corresponding Author:**

Nor Shafrin Ahmad School of Educational Studies, Universiti Sains Malaysia 11800 Minden, Penang, Malaysia Email: sham@usm.my

#### **INTRODUCTION** 1.

COVID-19's pandemic has heightened awareness of the mental health of various affected populations. It also creates new stressors, such as fear and worries for oneself or loved ones, restrictions on physical movement and social activities due to quarantine, and drastic and abrupt lifestyle changes. A recent review of virus outbreaks and pandemics identified stressors such as fears, frustration, boredom, insufficient supplies, insufficient information, financial loss, and stigma [1]. For most quarantine or isolation at home is an unpleasant experience for humans because it restricts their freedom, instilling fear of job loss, boredom, separation from others, fear of diseases, depression, and anxiety [2], [3]. More than 40% of respondents reported experiencing moderate to severe distress during the early stages of the COVID-19 pandemic. While the study's findings were not representative of the general population's mental health, they could be used to improve psychological intervention and education-based mental health prevention [4].

When the teaching medium is switched from face-to-face to online learning during the pandemic, university students are believed to be affected psychologically. According to a recent report, university students suffered from post-traumatic stress disorder, anger, fear, sadness, nervousness, and emotional disturbances

during the COVID-19 outbreak [1], [5]–[9]. Additionally, university students expressed concern about their academic grades and potential graduation delays [9]. Besides online learning, psychological adjustment occurs because of the changes in academic, social, and emotional challenges connected with the move from high school to higher education [10]. Increased academic stress, reduced academic assistance, social segregation during the transition period, and the possibility of long-term financial debt are all associated with higher levels of education [11]. University students' academic performance may suffer because of constant pressure [12]. It is also necessary to maintain a healthy distance from family and friends [5].

Psychological well-being theory states that an individual's psychological health is determined by how they operate spheres of life [2]. A person should have positive interpersonal relationships, an appreciation for the environment, acceptance of themselves and their past, a life objective, a desire to grow, and the ability to make their own choices [13]. Psychological well-being is difficult to comprehend due to the interchangeability of various terms [14]. As a result, of the varied interpretations of these concepts, modifications in the measuring of psychological dysfunction have developed, as well as difficulties in appreciating mental health and wellbeing [14]. Regardless of disagreements, psychological well-being has been recognized as a multifaceted concept [15]. Self-acceptance, personal growth, life purpose, positive interpersonal relationships, environmental mastery, and autonomy have been identified as six dimensions of psychological well-being [10], [16] has identified six dimensions of psychological well-being: autonomy, environmental mastery, personal growth, positive relationships with others, life purpose, and self-acceptance. All these psychological well-being (PWB) concepts, according to [16] theory, are necessary for individuals to actualize and maintain a fully functioning self.

According to the 2015 National Health and Morbidity Survey, the prevalence of mental health disorders has increased among Malaysian adults from 10.7% in 1996 to 11.2% in 2006 to 29.2% in 2015 [17]. Malaysian students are also affected, with one in every ten incidents reported in 2011 and one in every five reported in 2016 [18]. Students at universities are a distinct group of individuals undergoing significant change. This stage of life marks the passage from childhood to adulthood, and it can be one of the most trying times in a person's life. A study of Malaysian undergraduate students discovered a high prevalence of moderate to severe depression (13.9% to 29.3%), anxiety (51.5% to 55.0%), and stress (12.9% to 21.6%) [19], [20]. As a result, addressing these concerns is critical for enhancing students' mental health. According to the Centre for Collegiate Mental Health's 2019 Annual Report [5], anxiety remains the most prevalent problem (62.7% of 82,685 respondents) among students who completed the Counselling Centre Assessment of Psychological Symptoms, with clinicians reporting that anxiety remains the most common diagnosis for students seeking services at university counseling. Over the last eight years, Texas A&M University has seen an increase in students seeking treatment for anxiety disorders, consistent with the national trend. In 2018, slightly more than half of the students stated that they sought assistance primarily for anxiety-related reasons. Despite increased demand for mental health services at post-secondary institutions, only a small proportion of students who commit suicide contact their institution's counseling center [11], possibly due to the stigma associated with mental illness. The negative stigma associated with mental health diagnosis and treatment has been linked to decreased treatment adherence and, in some circumstances, treatment discontinuation [12].

Depression and anxiety are common, severe, and debilitating mental problems. Certain conditions have a disproportionate impact on adolescents and students [15], [21]. Due to academic and psychosocial pressures, university students were at risk of developing depression [22] said that adolescents and young adults are predisposed to depression, possibly due to the workload. Numerous university students face high levels of stress, which has a detrimental effect on their performance [23], [24]. They appear to be psychologically impacted by stress, displaying symptoms such as anxiety, hopelessness, worry, and tension [25]. Although the prevalence of anxiety among university students varies according to prior research, most of the studies appear to indicate a high prevalence [26], [27]. High levels of anxiety impair concentration and memory, resulting in misinterpretation of information or blocking of memory and recall, thereby impairing academic performance [28].

To ensure the continuity of education for students during the COVID-19 pandemic, e-learning, blended (or hybrid) learning, and online learning are all phrases that describe how technology is being used in education and training during the COVID-19 pandemic. Online education can be used independently or as part of a fully online program with enhanced instructional components [29]. It benefits both students and teachers because it provides a range of benefits, including increased flexibility, convenience, and cost savings associated with education [30]. Online learning, on the other hand, had a detrimental impact on certain students.

There is no perfect method for determining the generational span; nonetheless, the literature indicates a range of 15 to 18 years and a difference of three to four years, [31], [32]. Education is generally classified into four generations: baby boomers (those born between 1946 and 1964), Generation X (those born between 1965 and 1982), millennials (those born between 1982 and 2000), and Generation Z (those born between 2000 and 2012) make up the four generations. Due to the infancy of technology, baby boomers received an education

via traditional educational methods. The competitive, self-disciplined, and idealistic nature of baby boomers has had a profound effect on their learning and, consequently, on their teaching methods [31], [33]. Generation X is technologically more sophisticated than the baby boomer generation. They tend to be resourceful, problem-solvers, and realism searchers who value autonomy and a good work-life balance all else [34]. Generation Y (millennials) students are perceived as more self-assured, team-oriented, and receptive to new ideas than prior generations. Because of this, they are impulsive and need quick gratification. Generation Z is regarded as multimodal learners due to their independence in the classroom and their ability to succeed with digital resources [35]. According to previous study [36], the average age of current students falls between millennials and Generation Z [37], while faculty members fall between baby boomers and Generation X [36].

People of different generations have distinct perspectives, attitudes, and motivations, making it difficult for them to interact, learn, and educate one another. Thus, it is vital to address the teaching and learning styles of these two categories of teachers and students in medical education [26]. Generation Y and Z students have distinct experiences, and traditional teaching methods are ineffective for them, while generation X and baby boomer instructors have a lesser level of technology sophistication [38]. Although the acceptance of online teaching and learning is influenced by age disparities, the majority of students appear to prefer face-to-face learning. According to previous research [20], students suffer from depression because of the workload and pressure of online learning. As a result, hybrid or blended learning is one of the options available during the COVID-19 pandemic. Another challenge with online learning is that universities will need to re-examine their curriculum, learning outcomes, and assessment methodologies for online courses programs, as they should differ from those taught in a face-to-face classroom setting [39]. Challenges with online learning and mental health issues among university students during the COVID-19 pandemic necessitate immediate action for the university to provide psychological interventions. Support systems established through a participative intervention should benefit students' well-being, satisfy their needs, and consider students' cultural, or organizational, and social circumstances, as well as the pandemic's context and consequences [40].

Apart from enhancing students' and teachers' digital skills, it has become increasingly clear that teaching in higher education should foster active learner-centered learning, particularly in online contexts. In terms of asynchronous and synchronous teaching formats, teachers must make an extra effort to ensure that students have sufficient opportunities to interact with not only the learning content but also with teachers and their peers. Online teaching and learning environments support self-paced study and support flipped learning arrangements, adaptability to individual needs, collaborative tasks such as wikis or blogs, and automated assessments [41]. There is also important for all stakeholders in the education industry to recognize the urgent need for a comprehensive policy to identify and manage the purpose of this study is to gain a better understanding of the psychological well-being of depression, anxiety, and stress among university students. From the findings, it will provide an overview in obtaining the most effective interventions for managing specific vulnerable symptoms that occurred during online learning. As a result, effective planning for appropriate psychological services targeted at controlling and reducing the load of psychological disorders faced by university students is possible.

It is important to pay more attention to the psychological impacts on students of COVID-19 or any future pandemics. Policies and standard operating procedures (SOPs) should be in place to educate students about the causes and consequences of pandemics in a straightforward, supportive manner that avoids causing undue anxiety and distress. Efforts should also be directed toward developing novel methods for maintaining social attachment among students while adhering to public health guidelines for containing the pandemic's spread [42]. Due to preventive measures such as social isolation and complete quarantine, which appear to be beneficial to well-being, basic psychological needs may be difficult to meet [1]. Changes in the satisfaction of three fundamental psychological needs impacted well-being [43]. The greatest effect on well-being was discovered to be the satisfaction of the need for competence, particularly when people were able to work in the way they did prior to the pandemic. Further analysis revealed that participants who had more contact with others via the internet or phone reported higher levels of well-being. Autonomy satisfaction was not consistently associated with well-being; however, the need for relatedness, and particularly competence, remained constant.

# 2. RESEARCH METHOD

An online self-administered survey was used to collect data from 325 university students from one of the universities in the northern part of Peninsular Malaysia. Students were instructed on the purpose of the study and ensured of the privacy of their responses prior to the assessment. The survey was conducted online through Google Forms utilizing a three-section questionnaire. The first section contains socio-demographic data about the individual, including gender, ethnic origin, educational attainment, and year of study. Additionally, the depression anxiety stress scale (DASS-21) was used in the second section to assess depression, anxiety, and stress levels [3]. The respondents completed a ranked Likert scale (1=Never, 2=Rarely,

3=Frequently, and 4=Very Frequently). Meanwhile, the third section used the psychological well-being scale (PWBS-8) [44], [45] to assess the participants' psychological well-being. A six-point Likert scale is used, with responses ranging from 1 (strongly disagree) through 2 (disagree), 3 (somewhat disagree), 4 (slightly agree), 5 (agree), and 6 (strongly agree) (strongly agree). The clearance of distribution for the online survey was approved by the administration of the faculty involved.

The statistical analysis used was IBMSPSS version 27 (Statistical Package for Social Science) version 27 for Windows. Descriptive and inferential statistics and regression tests were computed. Categorical data will be reported as a percentage and a frequency. The demographic profile of students will be analyzed using descriptive and frequency statistics to determine the sample's characteristics, mean scores on exposure items, and rates of psychological well-being, depression, anxiety, and stress. Additionally, demographic characteristics were compared between groups using the mean difference test. The Pearson correlation test was also used in this study to examine the possibility of a correlation between students' gender and DASS-21 scores, with a p=.05 considered statistically significant. On the other hand, this study used the analysis of regression to identify the effect of psychological well-being on depression, anxiety, and stress. It can determine the strength of effect between variables and forecast their future relationships.

## 3. RESULTS AND DISCUSSION

Descriptive analysis statistics were used to determine the mean and standard deviation of the data. The mean scores and standard deviations were interpreted to determine the level of PWB, depression, anxiety, and stress associated with demographic characteristics (gender, ethnic origin, and educational attainment) (DASS). Additionally, the linear regression test investigated the relationship between PWB and depression, anxiety, and stress symptoms in university students. The first section of this section contains preliminary demographic data as shown in Table 1, the second section contains DASS severity scores for university students as shown in Tables 2 and 3, and the third section contains significant findings regarding psychological well-being in terms of depression, anxiety, and stress as shown in Table 4.

#### 3.1. Students profile

The following table summarises the demographic characteristics of the students (n=325) and the differences in group mean comparisons. Female students account for 269 (82.8%) of total students, according to the results. Additionally, most of the students can be classified as Malay ethnic 218 (67.1%). Most students obtained academic credentials up to the certificate 163 (50.2%) level. The compare mean test determined correlations between demographic characteristics and psychological well-being on depression, anxiety, and stress symptoms. The results indicated a significant relationship between demographic characteristics of academic qualifications and psychological well-being and depression, with p-values of .022 and .013, respectively, at a 95% confidence interval of .05.

Table 1. Demographic profile variables and between-group mean comparisons						
Demographic profile vs		n (%)	Psychological well-being	Depression	Anxiety	Stress
PWB and DASS			Mean (SD)			
			t=1.069	t=-1.862	t=-1.607	t=-1.710
Condor			p=.286	p=.064	p=.109	p=.088
Genuer	Male	56 (17.2%)	39 (6.229)	11.59 (4.229)	10.73(.471)	12.39 (.589)
	Female	269 (82.8%)	38.04 (6.052)	12.75 (4.235)	11.64 (.237)	13.51 (4.470)
			F (3,321)=0.224	F (3,321) =0.465	F (3,321)=	F (3,321)=
					.177	.465
			p=0.880	p=.707	p=0.912	p=.707
Ethnicity	Malay	218 (67.1%)	38.21 (6.108)	12.62 (4.174)	11.56 (3.860)	13.34 (4.365)
	Chinese	48 (14.8%)	37.69 (6.987)	12.17 (4.455)	11.50 (3.989)	13.33 (5.317)
	India	37 (11.4%)	38.76 (5.941)	12.16 (4.400)	11.16 (3.700)	13.49 (4.141)
	Others	22 (6.8%)	38.41 (3.813)	13.27 (4.453)	11.14 (3.707)	12.77 (4.331)
			F (1,323)=0.808	F (1,323)=6.286	F	F
Asadamia					(1,323)=1.494	(1,323)=6.286
Academic			p=.022***	p=.013***	p=0.223	p=0.172
quantication	Degree	162 (49.8%)	38.26 (4.97)	13.14 (4.213)	11.74 (3.764)	13.66 (4.200)
	Others	163 (50.2%)	38.16 (7.035)	11.96 (4.219)	11.22 (3.903)	12.98 (4.717)

Note: \*\*\* p<.05 significant at 95% confidence interval  $\alpha$ =.05

#### 3.2. Severity of depression, anxiety, and stress

As shown in Table 2, anxiety was positively correlated with depression (r=.767, p=.000) and stress (r=.828, p=.000), while depression was positively correlated with stress (r=.790, p=.000) and anxiety (r=.767,

p=.000). According to gender, Table 3 illustrates the severity of DASS symptoms as measured by DASS-21 scale scores. Anxiety was the most prevalent type of psychological distress among participants, accounting for 198 (60.9%), depression accounted for 128 (39.4%), and stress accounted for 104 (32.0%). Overall, 37.5% of students had moderate to severe depression symptoms, while 60.9% and 32.0%, respectively, had extremely severe to severe anxiety and stress symptoms. Males and females differ significantly in stress severity (p=.024), but there are no statistically significant differences between males and females in terms of depression or anxiety severity (p=.066).

Table 2. Correlation between depression, anxiety, stress, and gender

Variables	Gender	Depression	Anxiety	Stress	
Gender	1	.103 (p=0.064)	.089 (p=0.109)	.095 (p=0.088)	
Depression	.103 (p=0.064)	1	.767 (p=0.000***)	.790 (p=0.000***)	
Anxiety	.089 (p=0.109)	.767 (p=0.000***)	1	.828 (p=0.000**)	
Stress	.095 (p=0.088)	.790 (p=0.000***)	.828 (p=0.000***)	1	
Note: Correlation is significant at the $*** n < 05$ level (2 tailed)					

Note: Correlation is significant at the \*\*\* p<.05 level (2-tailed)

Table 3. Severity levels of depression, anxiety, and stress among education students according to gender

Condition	Numbers (%)			and a value	
Condition	Male	Female	All	χ <sup>2</sup> , p-value	
Depression					
Normal	-	-	-		
Mild	-	-	-	$w^{2}(2) = 0.66 = 5.422$	
Moderate	28 (23.0%)	94 (77.0%)	122 (37.5%)	$\chi^2(2) = .000, p = 3.433$	
Severe	9 (10.7%)	75 (89.3%)	84 (25.8%)		
Extremely Severe	19 (16.0%)	100 (84.0%)	119 (36.6%)		
Anxiety					
Normal	-	-	-		
Mild	-	-	-	$w^{2}(2) = 0.66 = -5.422$	
Moderate	13 (29.5%)	31 (70.5%)	44 (13.5%)	$\chi^2(2) = .000, p = 3.422$	
Severe	13 (29.5%)	70 (84.3%)	83 (25.5%)		
Extremely Severe	30 (15.2%)	168 (84.8%)	198 (60.9%)		
Stress					
Normal	6 (19.4%)	25 (80.6%)	31 (9.5%)		
Mild	14 (31.8%)	30 (68.2%)	44 (13.5%)	(2) = 11218 = 024***	
Moderate	9 (12.5%)	63 (87.5%)	72 (22.2%)	$\chi^{2}(2) = 11.218, p = .024 \cdots$	
Severe	20 (19.2%)	84 (80.8%	104 (32.0%)		
Extremely Severe	7 (9.5%)	67 (90.5%)	74 (22.8%)		

Notes: \*\*\* p<.05 significant at 95% confidence interval  $\alpha$ = .05

Depression (PHQ9): 0-4=normal; 5-6=mild; 7-10=moderate; 11-13=severe; 14+=extremely severe Depression (PBAI): 0-3=normal; 4-5=mild; 6-7=moderate; 8-9=severe; 10+=extremely severe

Depression (PSS): 0-7=normal; 8-9=mild; 10-12=moderate; 13-16=severe; 17+=extremely severe

## 3.3. Psychological well-being on depression, anxiety, and stress

Regression analysis was used to examine the PWB that influences depression, anxiety, and stress as shown in Table 4. All models (DV-IV relationship) have a p-value of .000. To summarise, the model explained, 23% of the variability in PWB through its effect on depression, anxiety and stress. PWB is associated with the practicality dimension of depression, anxiety, and stress symptoms for university students.

Table 4. Psychological	well-being on d	epression, and	xiety, and	l stress
			,	

	Variables Model variable	Standard beta model 1	
_	PWB	.000***	
	$\mathbb{R}^2$	.230	
	Adjusted R <sup>2</sup>	.228	
	R <sup>2</sup> change	.230	
	F value	96.713	
	F change	96.713	
	Sig. F change	.000***	
	Durbin Watson	1.854	
		B 4 6 6 11 + 10 ++ 0	

Dependent variable: DASS; Note: \* p<.10, \*\* p<.01, \*\*\* p<.05

This study aimed to examine the psychological well-being, depression, anxiety, and stress of university students at one of the universities in the northern part of Peninsular Malaysia. The 60.9% of respondents were found to be experiencing anxiety; meanwhile, most respondents (39.4%) have been

diagnosed with depression. The 32.0% of respondents indicated that they deal with stress. The DASS-21 is frequently used clinically to investigate the psychology symptomatology associated with scores normal values for psychological distress [19]. Females reporting higher levels of anxiety and stress than males in a descriptive analysis of gender differences in depression, anxiety, and stress among students [46] discovered a link between anxiety and fearfulness in adolescent females who report higher levels of fearfulness and anxiety symptoms than males. Additionally, the finding indicated a significant positive correlation between psychological wellbeing and depression, anxiety, and stress. In other words, if students were able to improve their psychological wellbeing scores, they might be able to decrease their depression, anxiety, and stress. The finding implied that if sources of stress continued to be prevalent among students, there would be future psychological problems [47].

There was a larger prevalence of depression and anxiety in the current study's participants than in a previous one [48] on Baccalaureate nursing students in Hong Kong, which found that 35.8% of them had depression, 37.3%, had anxiety, and 41.1% had stress. Risk of these factors included socio-demographic characteristics like age, year of study, the incidence of any family relationship crisis, financial difficulties, and self-perceived mental health; lifestyle factors, such as exercise, lack of time for leisure and quiet time, sleep problems; and work-related factors, including clinical specialty. Meanwhile, a study conducted by [16] on students from Punjab University in Chandigarh achieved much better results than those found in this study in all four dimensions. Students reported being depressed at a rate of 59.2%, nervous at a rate of 86.5%, and stressed at a rate of 52.7%. In psychological research, stress has been indicated to have affected people's health and well-being [21]. Meanwhile, academic stress is the primary cause of psychological suffering and a decline in psychological well-being among university students [15]. The empirical evidence in this study indicated that the primary factors contributing to increased depression, stress, and anxiety among university students occurred during the COVID-19 pandemic. Academic pressure, satisfaction with online learning, remote online learning, and uncertainty about their academic performance, graduation, and future career prospects remained the most significant effects on university students.

This finding concerns the increased risk of psychiatric morbidity, as it demonstrates the magnitude of the burden students currently faced. Students' psychological health is critical for success and a brighter future. Individuals, according to self-determination theory (SDT), have three fundamental psychological needs: competence, autonomy, and relatedness. It is not difficult to see some overlap between Ryff's six dimensions of psychological well-being and SDT's three basic needs [49]. While Ryff's definitions of autonomy and positive relations with others corresponded to the basic needs of autonomy and relatedness, the definitions of environmental mastery (i.e., how well respondents managed their life situations), purpose in life (i.e., the extent to which respondents felt their lives had meaning, purpose, and direction) and personal growth (i.e., the extent to which they were making use of their talents and potential) seemed to have reflected the need of competence which referred to "feeling effective in one's ongoing interactions with the social environment and experiencing opportunities to exercise and express one's capacities". This may account for a portion of the high correlations between Ryff's model's three subscales. Future research may seek to answer this question empirically.

Numerous factors, including a sense of incompetence and a lack of motivation using online medium, unstable internet connections, and the difficulty of online classwork, may act as stressors, precipitating depression, anxiety, and stress. As a result, authorities should place a high premium on establishing stress management programs, including expanding counseling activities and providing adequate facilities and resources. The targeted groups should participate in a sharing session on study techniques and a workshop on coping skills. By enhancing mentor/mentee programs, lecturers can assist students in overcoming academic difficulties [42], [50]. A detailed discussion with students who are experiencing difficulties will assist them in releasing the tension, motivating them to make a greater effort in their online studies. When a student is overburdened, it can result in emotional distress and physical and mental exhaustion. Students worldwide are stressed by a variety of academic and non-academic factors, including environmental, sociocultural, and psychological factors during the COVID-19 pandemic. All these factors placed significant pressure on students, resulting in a sense of burnout because of academic stress [51]. Students were unmotivated and incapable of adapting to their new learning environment. It is possible to conclude that most students needed more time to adjust to and adapt to the new norm of online learning. While online learning is recommended for its flexibility, accessibility, affordability, and opportunities for life-based education, it is recommended that the university equip students with independent study skills and recruit competent, creative, and committed academics to enhance online teaching and learning. The pandemic has compelled schools and higher education institutions to relocate teaching and learning classes from physical classrooms to a variety of online platforms that help prevent infection spread and ensure effective learning continues [52].

# 4. CONCLUSION

The study discovered that most respondents, who were in one of the universities in the northern part of Malaysia had experienced depression and stress, with the prevalence of anxiety and depression symptoms being particularly high during the ongoing COVID-19 pandemic and online learning. The findings of this study indicated an urgent need for support in terms of psychological well-being for university students who suffered from depression, anxiety, or stress. Academic pressures such as online teaching and learning, online assignments, and examinations were students' primary sources of stress. As a result, universities must play a critical role in assisting students in increasing their psychological well-being to adapt to the challenges inherent in the new norms of university life. Additionally, the university's student support services, particularly its counseling services, need to be enhanced. Investigating the causes and solutions to mental health disorders from an ecological perspective, which encompasses personal, interpersonal, familial, social, and other factors affecting the student both inside and outside the university might provide a complete picture of the issue. Students might require assistance in engaging in individual and group activities to cope with university-related stressors.

The apparent prevalence of anxiety and stress among undergraduates, even in a setting with free counseling, was particularly concerning. Thus, campus initiatives and outreach programs should encourage students to seek help for anxiety and other mental health problems. This study also confirmed the previously postulated proclivity of females to be associated with distress. Gender roles and contextual factors may contribute to undergraduates' increased vulnerability to depression, anxiety, and stress. Additional research will be required to elucidate the causal role and nature of these associations in the future. Prospective studies could also examine additional possible determinants of increased susceptibility to depression, anxiety, and stress in students to address any gaps in our understanding of these issues. The goal is to reduce risk factors and strengthen protective factors in university students to improve their overall well-being throughout their lives.

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# **BIOGRAPHIES OF AUTHORS**



Nor Shafrin Ahmad D S S D is an Associate Professor in Counseling Psychology at the School of Educational Studies, Universiti Sains Malaysia. Her main research interests are crisis and trauma, mental health, sexual counseling, school counseling, and child and adolescent counseling. She actively published books, chapters in several education-related books, articles for local and international journals. She also developed an adolescent anger instrument and RPSD crisis intervention model. She can be contacted at email: sham@usm.my.



Aziah Ismail D 🔀 🖾 D is an Associate Professor for Educational Management at the School of Educational Studies, Universiti Sains Malaysia. Her main research interests are in educational management and policy, human resource development, higher education policy, management and development, and educational research. Her current research activities are in the fields of school leadership and human resource management in educational organizations. Her work has been published in both local and international journals. She can be contacted at email: aziah@usm.my.



**Zuhda Husain D S S D** is a Senior Lecturer at the Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu. She specializes in teaching group counseling, consultation in counseling, and substance abuse counseling. She's also promoting Rehabilitation Counselling Module. Other research interests were drugs addictions, substance abuse counseling, group counseling, and expressive arts therapy. She has published articles in international and local journals. She can be contacted at email: zuhda@umt.edu.my.