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A Study on Perceived Stress Among First Year University Students in Malaysia during Movement Control Order

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Abstract

As the number of COVID-19 cases keep fluctuating, the Ministry of Higher Education in Malaysia had ordered all lessons should be conducted remotely in 2020 but exceptions were also given to certain needs. New first-year students were greatly affected as they did not get the chance to experience the university life. Thus, this study aims to analyse the perceived stress level among the first-year students due to remote teaching and learning. The total of 272 students from 6 faculties and three different education levels namely pre-diploma, diploma, and degree from a tertiary education institution in Penang, Malaysia participated in this study. A survey was developed using Google Form which later disseminated through WhatsApp and Telegram. The demographic and perceived stress data were analysed using frequencies and percentages of each item to see its trend and pattern. The conclusion was made based on the Perceived Stress Scale (PSS). The findings are alarming since 249 from 272 students (91.5%) were categorised in high stress level, followed by moderate stress (7.7%) and low stress (0.7%).

Keywords: COVID-19, Remote Learning, Tertiary Education, Public University Perceived Stress.

Introduction

In December 2019, a new type of coronavirus was identified in Wuhan, China (World Health Organization, 2020), which now known as COVID-19. Since then, the virus spread rapidly and globally (Wu et al., 2020). Researchers are actively experimenting to find the treatment to end the virus (Kupferschmidt and Cohen, 2020; Elengoe, 2020). To date, World Health Organization (WHO) had reported more than 750 million confirmed cases, with deaths almost 7 million cases (World Health Organization, 2023). There are 11 COVID-19 vaccines are

listed in WHO Emergency Use Listing which are manufactured by Pfizer/Biotech, AstraZeneca, SK Bio, Serum Institute of India, Sinovac and a few others (World Health Organization, 2023).

During the early phase of COVID-19, Malaysia implemented Movement Control Order (MCO) to curb the disease (Shah et al., 2020). Another way to prevent the disease from spreading, Malaysia Government through The National COVID-19 Vaccination Program has distributed vaccines to protect the citizens by three phases (Elnaem et al., 2021). Two dossess of vaccine are required to ensure the protection (Chiu et al., 2021). Since the first phase of MCO until the eighth phase, COVID-19 has affected Malaysia's higher education sector especially in teaching and learning (Sia and Adamu, 2020). Thus, educational institutions are instructed to move their traditional face to face teaching and learning to online distance learning (Othman et al., 2020).

Teaching and learning scenario changed dramatically since online education has taken place. There are many online platforms available for teachers to flip their class either using Learning Management Systems (LMS), Massive Open Online Course (MOOC) or the straightforward video conference platforms (Rahman et al., 2021). There are positive and negative sides to online learning. On the positive side, this situation gives more spaces for lecturers to express their creativity in remote teaching and learning implementation. However, mental stress, lack of infrastructure, and less flexibility to interact among students and lecturers are some of challenges faced by educational institutions (Sia and Adamu, 2020; Khojasteh et al., 2021). In another study, Allam et al., 2020 found that the students' level of motivation and self-dependent learning are at low level. On the performance perspective, Zuraira et al (2021) conducted a research to compare the students' performance from synchronous and asynchronous online learning approaches. From the study, they found that synchronous online learning approach give a better result for students' academic performance.

Recent studies have shown that the pandemic has impacted individual's physical, mental, emotional, and social well-being. Son et al (2020) showed that tertiary students in the United States are at increased risk for experiencing adverse mental health outcomes during COVID-19. AlAteeq et al (2020) revealed significant gender differences in the psychological response to the pandemic among students in Saudi Arabia. According to a research conducted by Cao et al (2020), due to the pandemic, approximately 24.9% of university students in China suffered from anxiety.

During the COVID-19 pandemic, it is very challenging for the university students, especially the new students who started their first semester in October 2020. New students have to complete the registration online and also face to face classes were not permitted. This is because the Ministry of Higher Education had advised educational institutions to execute teaching and learning remotely (The Ministry of Higher Education, 2020). Thus, this study aims to analyse the perceived stress level among the first-year students due to remote teaching and learning during the COVID-19 pandemic in Malaysia.

Literature Review

In the words of the World Health Organization (WHO), a pandemic is described as the widespread of a certain illness throughout the world or across international borders,

impacting a large number of people (Kelly, 2011). COVID 19 is a newly found infectious coronavirus that spreads by droplets of bodily fluids from one person to another. The virus initially appeared in December of this year and was detected in the Chinese city of Wuhan. In January 2020, it was labelled a public health emergency of international concern by the World Health Organization. The majority of countries, including Malaysia, have placed rigorous safeguards on their residents in order to restrict the spread of the disease (Shah et al., 2020). With the closure of public gathering places, travel bans, and curfews in force, the country converted its in-person educational system to virtual learning.

The COVID-19 pandemic has spread fast around the world, resulting in an outbreak of acute infectious pneumonia among those infected (Bao et al., 2020). This widespread infection placed great strain on the general public, senior citizens, healthcare and medical workers, and educators (Pan et al., 2020; Radwan & Radwan, 2020; Radwan et al., 2020). As a result, proactive measures such as wearing gloves and face masks, avoiding crowds, and practising good hand hygiene are critical for minimising COVID-19 infections (Liang, 2020). Apart from the possibility of infection-related death, this crisis has imposed intolerable psychological stress on persons worldwide (Xiao, 2020), affecting all facets of life. While the measures used to contain the COVID-19 pandemic were justifiable, they substantially impacted the emotional, economic, and political well-being of people worldwide. Fear of infection, the danger of infecting family members and loved ones, prolonged quarantine, anxiety for the death of a relative, concerns about educational advancement, and other fears have all increased considerably. As a result, COVID-19 has the potential to have a devastating effect on people's minds, particularly students worldwide.

Students worldwide report experiencing elevated levels of perceived stress and anxiety (Talwar et al., 2017; Evans et al., 2018; Gao et al., 2020;). Perceived stress is a subjective measure of how stressful an individual's life is at present, regardless of how genuinely stressful it may be. Individuals who experience prolonged periods of heightened stress are at risk of developing a variety of chronic medical and mental ailments, including cardiovascular disease, hypertension, depression, and anxiety disorders (Liu et al., 2017; Hoying et al., 2020). Given the protracted development of many chronic diseases and the (usually) young age of the student population, mental health disorders are a more immediate worry. Anxiety and anxiety disorders are significantly more prevalent than depression among undergraduate and graduate student groups (Gao et al., 2020). For example, in Malaysia, 45% of undergraduate students were identified as having moderate or severe anxiety, while 14% were classed as having moderate or severe depression (Talwar et al., 2017). In a recent longitudinal study, Chinese students suffered from anxiety more than depression throughout the course of four years of undergraduate school (Gao et al., 2020). According to other studies, one-quarter of Taiwanese students identified as anxious (Boumosleh & Jaalouk, 2017), while over 40% of Irish students identified severe anxiety. Additionally, 41% of American graduate students reported experiencing moderate or severe anxiety (Evans et al., 2018). According to these examples, high levels of felt stress and anxiety are definitely a global phenomenon among college students.

Increased perceptions of stress and anxiety can result in insufficient and poor-quality sleep (Kim & Dimsdale, 2007). Inadequate and poor-quality sleep are independent risk factors for a wide variety of chronic diseases (Patel, 2009). They may be a mechanism by which stress

and anxiety have a detrimental effect on health outcomes. The negative connections between sleep length and quality and experienced stress are widely established (Choi et al., 2018; Herawati & Gayatri, 2019). The literature suggests a temporal relationship between perceived stress and sleep (Kim & Dimsdale, 2007; Eliasson et al., 2010). That is, higher stress occurs prior to sleep disturbances. This association is corroborated by intervention studies that reveal that raising participants' stress results in decreased sleep quality (Kim & Dimsdale, 2007; Eliasson et al., 2010), whilst lowering stress results in enhanced sleep quality (Eliasson et al., 2010). Stress appears to reduce restorative sleep phases, such as slow-wave sleep and rapid eye movement sleep; it also appears to minimise sleep efficiency and increase awakenings (Kim & Dimsdale, 2007). As with felt stress, the association between sleep quality and length and anxiety has been extensively investigated (Johnson et al., 2006; Feng et al., 2014; Oh et al., 2019), and, as with perceived stress, increased anxiety often precedes trouble sleeping (Johnson et al., 2006). Taken together, these studies provide evidence that increased perceived stress and anxiety frequently result in insufficient or poor-quality sleep.

Because of this, this study explores stress among students in teaching and learning at the tertiary level in Malaysia when they are subjected to movement control orders (MCO). As a precaution against the spread of COVID-19, all educational sectors were ordered to conduct online classes as a precaution. Because students come from a diverse range of socioeconomic backgrounds, it is critical to investigate their perceptions of stress throughout the MCO. In the study, their demographic background has a significant impact on their perceptions, which is crucial to note. Some of them are from wealthy households, while others are from low-income homes. The study setting is completely different from their previous surroundings, which has an impact on their mental health.

Methodology

Population and Sampling

This study was conducted in a tertiary education institution in Penang, Malaysia, which involved 272 students from 6 faculties and three different education levels: pre-diploma, diploma, and degree. The six faculties involved are Faculty of Mechanical Engineering, Faculty of Civil Engineering, Faculty of Electrical Engineering, Faculty of Pharmacy, Faculty of Chemical Engineering and Faculty of Business and Management.

Instrumentation

This study adopted a questionnaire by (AlAteeq et al., 2020). Google Form was used to create a link for the survey and disseminated via WhatsApp and Telegram in week 12 of the semester. The survey has seven questions on socio-demographic such as age, gender, education, and living area, followed by ten items to assess the respondents' stress perception. The responses were evaluated using the 5-point Likert scale representing 1 for never to 5 for very often. In addition, the qualitative question regarding emotion during the pandemic is included at the end of the questionnaire. It categorised respondents into three types of emotions; positive, negative, or mixed.

Data Analysis

Reliability Analysis

The questions' reliability was tested using Cronbach's Alpha ranging from zero to one, where zero showing complete unreliability and a value of one representing perfect reliability.

Table 1
Range of Cronbach's Alpha

No	Coefficient of Cronbach's Alpha	Reliability Level
1	More than 0.90	Excellent
2	0.80 – 0.89	Good
3	0.70 – 0.79	Acceptable
4	0.60 – 0.69	Questionable
5	0.50 – 0.59	Poor
6	Less than 0.50	Unacceptable

Source: Adopted from George and Mallery (2003)

Descriptive Analysis

The demographic and perceived stress data were analysed using frequencies and percentages of each item to see its trend and pattern. The score for item 1 to 10 in perceived stress was calculated for each respondent to determine their stress level. The conclusion was made based on the Perceived Stress Scale (PSS) Cohen et al (1983), where the total mean scores of 0 to 13 are considered low stress, 14 to 26 indicate moderate stress, and 27 to 40 indicate high stress.

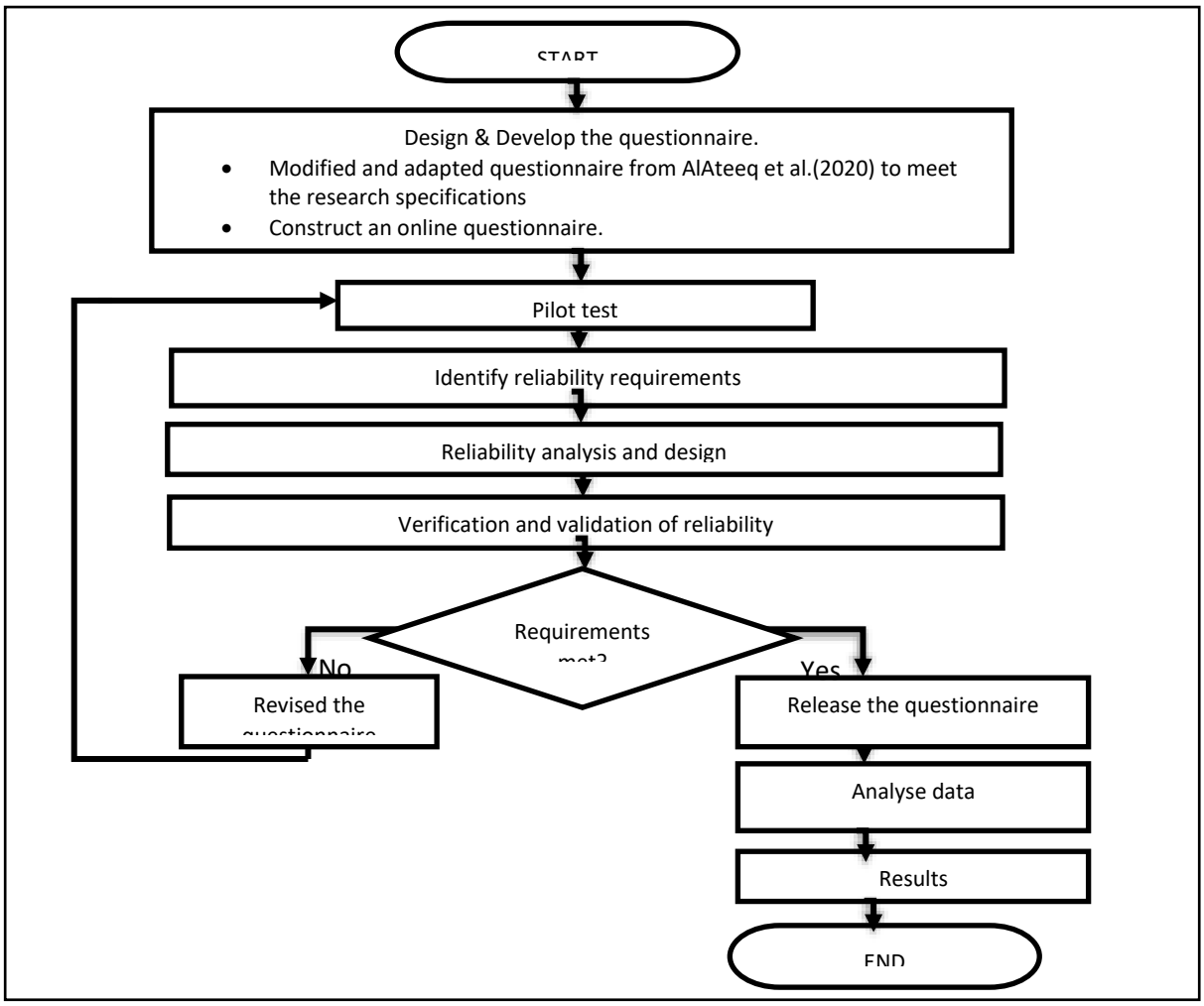

Figure 1. Flowchart of Research Study

Results

Reliability Analysis

In this section, the results obtained will be discussed thoroughly. Table 2 presents the result of the reliability test. The Cronbach's alpha coefficient obtained was 0.792, which indicates that the questionnaire was constructed with slightly high reliability and was acceptable for measuring the variables in this study.

Table 2
Result of Reliability Test

Cronbach's Alpha	Number of items
0.792	10

Descriptive Analysis

The demographics analysis, including gender, age, level of education, and living area for the 272 respondents involved in this study, are depicted in Table 3. The proportion of male respondents was 56.6% (154 respondents), while the female respondents were 43.4% (118 respondents). Most of the respondents were less than 20 years old (71.7%), and 68.4% were diploma students. This result is not biased because it follows the study's objective, which is to explore the perceived stress level among first-year students due to remote teaching and learning during the COVID-19 pandemic in Malaysia.

Since the Ministry of Higher Education advised educational institutions to execute teaching and learning remotely (The Ministry of Higher Education, 2020), it is relevant to identify the living area that students are primarily staying in as it influenced their internet accessibility. The result in Table 3 shows that the majority of the students live in the sub-urban area (54%), and followed by urban (32.4%) and rural area (13.6%).

Table 3
Demographic Analysis

Measure	**Item**	**Frequency**	**Percentage**
Gender	Male	154	56.6
	Female	118	43.4
Age	< 20	195	71.7
	20-25	74	27.2
	>25	3	1.1
Level of education	Pre-Diploma	15	5.5
	Diploma	186	68.4
	Degree	71	26.1
Area of living	Urban	88	32.4
	Sub Urban	147	54.0
	Rural	37	13.6

The ten items representing the questions to determine the perceived stress are listed below:

Item 1: *In the last month, how often have you been upset because of something that happened unexpectedly*

Item 2: *In the last month, how often have you felt that you were unable to control the important things in your life?*

Item 3: *In the last month, how often have you felt nervous and stressed?*
Item 4: *In the last month, how often have you felt confident about your ability to handle your personal problems?*
Item 5: *In the last month, how often have you felt that things were going your way?*
Item 6: *In the last month, how often have you found that you could not cope with all the things that you had to do?*
Item 7: *In the last month, how often have you been able to control irritations in your life?*
Item 8: *In the last month, how often have you felt that you were on top of things?*
Item 9: *In the last month, how often have you been angered because of things that happened that were outside of your control?*
Item 10: *In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?*

Table 4
Perceived Stress

Items	Never (1)	Seldom (2)	Sometimes (3)	Fairly often (4)	Very often (5)	Mean	Std. dev
1	4 (1.5%)	25 (9.2%)	83 (30.5%)	103 (37.9%)	57 (21%)	3.68	0.956
2	9 (3.3%)	26 (9.6%)	88 (32.4%)	95 (34.9%)	54 (19.9%)	3.58	1.017
3	2 (0.7%)	22 (8.1%)	63 (23.2%)	106 (39%)	79 (29%)	3.88	0.948
4	6 (2.2%)	53 (19.5%)	122 (44.9%)	66 (24.3%)	25 (9.2%)	3.19	0.928
5	10 (3.7%)	60 (22.1%)	126 (46.3%)	61 (22.4%)	15 (5.5%)	3.04	0.902
6	8 (2.9%)	35 (12.9%)	95 (34.9%)	89 (32.7%)	45 (16.5%)	3.47	1.009
7	11 (4%)	46 (16.9%)	131 (48.2%)	68 (25%)	16 (5.9%)	3.12	0.897
8	26 (9.6%)	64 (23.5%)	130 (47.8%)	39 (14.3)%	13 (4.8%)	2.81	0.959
9	7 (2.6%)	37 (13.6%)	89 (32.7%)	84 (30.9%)	55 (20.2%)	3.53	1.041
10	9 (3.3%)	34 (12.5%)	88 (32.4%)	97 (35.7%)	44 (16.2%)	3.49	1.013

Table 4 shows the percentage for each item from Item 1 to Item 10 for perceived stress calculated to determine their stress level. All items show an average mean score above 3.00, except Item 8, which got a mean score less than 3.00 (2.81) with a 0.959 standard deviation. It shows that sometimes they often felt negatives feeling last month, which led to stress eventually. The stress level can be identified from these ten items using the Perceived Stress Scale (PSS) (Cohen et al., 1983). Table 5 indicates the students' level of stress.

Table 5
Level of Stress

Level	Score	Frequency	Percentage
Low Stress	0-13	2	0.7%
Moderate Stress	14-26	21	7.7%
High Stress	27-40	249	91.5%

The findings are surprising since 249 from 272 students (91.5%) were grouped in high-stress categories. It followed by moderate stress (7.7%) and low stress (0.7%), respectively. It is alarming that most students felt stressed doing online distance learning during this pandemic. The students felt the burden since the classes are more self-paced with many workloads to be completed. This finding is in line with the study conducted by Chandra (2020), where most of them are stressed due to the pressures of transitional examinations and study workload.

Conclusion

In conclusion, this study examined the level of perceived stress among first-year university students in Malaysia during the Movement Control Order (MCO) period. The results showed that a high percentage of students experienced stress during online distance learning, which is alarming. The findings of this study are consistent with previous research that suggests students are more likely to experience stress during transitional examinations and heavy workloads. The study also highlighted that remote learning significantly changes the nature of interactions between students, peers, and lecturers. The flexibility of online learning can be both a motivation and a challenge for students, leading to stress and mental health issues. Hence, the students should learn to control their stress levels as their mental health is more likely to be affected during this pandemic (Varma et al., 2021).

Therefore, it is crucial for educational institutions and the Ministry of Education to address the issue of high stress levels among students during online learning. This includes providing support and resources to help students manage their stress levels, such as mental health services and time management workshops. Additionally, there is a need to study the level of stress experienced by lecturers during remote learning to understand the challenges they face and provide them with adequate support.

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