

Stress and Quality of Life among Young Adults During Covid-19 Pandemic in Kuala Selangor

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ABSTRACT

Introduction: Social isolation, as recommended by the World Health Organization, helps reduce the spread of COVID-19. However, countless reports verified that it affected the psychological wellbeing and quality of life of individuals worldwide. **Objective:** To assess the stress levels and quality of life of young adults in Kuala Selangor during the COVID-19 pandemic. **Methods:** A cross-sectional study design with a sample size of 191 who were selected through convenience sampling answered the questionnaires, which were the perceived stress scale and the World Health Organization-Quality of Life questionnaire (WHOQoL-26). **Results:** This study showed that 89.5% of young adults have an extremely severe stress level. Meanwhile, the physical health domain of quality of life showed the lowest score (median = 44.00, IQR=24.00) compared to other domains, such as environmental health (median =63.00, IQR =50.00), psychological health (median=56.00, IQR=38.00), and social relationships (median =50.00, IQR=44.00). There was also no significant difference between stress level and the demographic data of the respondents, including age, gender, educational status, socioeconomic status, and employment status. The study found a weak negative correlation between stress level and environmental health ($p=0.007$), but no correlation was found with other domains such as physical health, psychological health, or social relationships. **Conclusion:** There was an extremely severe stress level among young adults, but it did not relate to the quality of life. Thus, the quality of life can be affected by other possible factors rather than psychological influence. This project encouraged the health sector to plan effective programs related to stress-coping strategies and a better quality of life to survive during the pandemic.

Keywords: COVID-19; Quality of Life; Stress; Young Adults

INTRODUCTION

COVID-19 outbreaks have occurred since late December 2019. The viruses have been spread pandemically and affect most countries worldwide in terms of economic, educational, and social life (Brooks *et al.*, 2020; Shevlin *et al.*, 2020). To reduce virus transmission, the Malaysian Government has announced a Movement Control Order (MCO) for the whole country starting on March 18th of March 2020 (Ministry of Health Malaysia, 2020). Social isolation showed positive changes in terms of daily cases. On the contrary, individuals' personal lives were negatively impacted.

Along with the COVID-19 crisis, mental health was the most common issue talked about among Malaysians. Most people were overwhelmed because they were physically and mentally unprepared; thus, their stress level increased and became one of the top factors in mental health problems (Brooks *et al.*, 2020). In terms of quality of life, there was a decline in the mode of living, including physical activities, psychological health, and social relationships. As a result, it has been reported that quality of life and mental health have decreased since the onset of the pandemic (Park *et al.*, 2021). Malaysians stress levels went up during MCO (Mustapha, 2020). Malaysian residents experienced moderate to very high levels of psychological distress as a result of the COVID-19 pandemic (Moni *et al.*, 2021). Novotn *et al.* (2020) found that younger people were more likely to have higher stress levels than older ones during the pandemic. In these modern days, younger people always have

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their gadgets on their hands; therefore, they perceived COVID-19 issues (Novotn *et al.*, 2020) and received a lot of information related to them from social media as they are bound to their gadgets most of the time, which can easily cause stress (Bao *et al.*, 2020). In a study of Filipinos nursing students was affected by academic stress and COVID-19–related anxiety (Berdida & Grande 2023). Several studies showed that mental health and cultural aspects have an effect on the use of these coping strategies (Ping, Natalia, & Hurai, 2022).

Movement restrictions were successful in suppressing COVID-19 outbreaks. However, it had an adverse impact on the community. Being locked out of socializing with friends and family and having limited freedom are all factors that may intensify the negative psychological impact on the community (Brooks *et al.*, 2020). According to Lei *et al.* (2020), society will be affected during the COVID-19 pandemic because most people will develop unhealthy lifestyles, such as reduced physical activity, due to drastic changes in their daily routine. In the same way, restricted physical activity will also impact society's quality of life, especially in the psychosocial aspect (Puccinelli *et al.*, 2021). In the case of hypertensive patients during COVID-19 the quality of life declined as a result of limited routine activities related to primary health care (Lolo *et al.*, 2022).

The consequences of stress during the pandemic, as stated in the issue, led to depression, anxiety, insomnia, and other cognitive problems (Marks, 2021). Therefore, the researchers aimed to assess the level of stress and quality of life, determine the correlation between stress and quality of life, and determine the association between stress level and demographics among young adults during the COVID-19 pandemic in Kuala Selangor.

METHODOLOGY

Study Design

This study was a cross-sectional conducted among young adults in Kuala Selangor.

Sample

In this study, convenience sampling was used with a sample size of 382. According to the Malaysian Youth Council, youth is defined as those aged 15 to 30 years old (Fadzil, 2020). Thus, the inclusion criteria were that residents in Kuala Selangor Area, aged in the range of 15 to 30 years old, had quarantine experience during the COVID-19 outbreak. The exclusion criteria include being unable to respond to an online-based survey questionnaire and being unable to read or understand the Malay language.

Sample Size

According to Kuala Selangor's Regional and Land Department (2019), the population size of young adults in Kuala Selangor was 67415 people. The sample size (n) by using the online statistical calculator, Raosoft, with a confidence level of 95% and a margin of error of 5% (significance level = 0.05), the young adults' sample size in Kuala Selangor is obtained.

Instruments

Perceived Stress Scale (PSS-10) Malay version

This questionnaire was adapted from Sandhu, Ismail, and Rampal (2015) and consists of 10 questions with a 5-point Likert scale of never, almost never, sometimes, fairly often, and very often. The total level of stress ranged from 0 to 50. A score of 7 or below: normal, 8 to 9, mild, 10 to 12, moderate, 13 to 16, severe, 17 or more, extremely severe. The Cronbach's alpha coefficient for the developed questionnaire was 0.72. Ten questions were asked to obtain information about the level of stress. A total score ranging from 0 to 50 is computed and then summed for all the scale items. A high score indicates the person is experiencing a high level of stress, and if the score is low, the person is experiencing less stress.

World Health Organization Quality of Life Questionnaire (WHOQoL-26)

The questions were adapted from Hasanah, Naing, and Rahman (2003) and consist of 26 questions. The questionnaire consisted of four domains: physical health, psychological health, social relationships, and environmental health. The questionnaire used a five-point Likert scale (a) for items 1 and 15. 1: Very Poor; 2: Poor; 3: Neither Poor nor Good; 4: Good; 5: Very Good"; (b) items 2, 16, 17, 18, 19, 20, 21, 22, 23, 24, and 25. 1: Very dissatisfied", 2: Dissatisfied", 3: Neither satisfied nor dissatisfied", 4: Satisfied; 5: Very satisfied"; (c) items

3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, and 14. 1: not at all", 2: a little", 3: a moderate amount", 4: very much", 5: an extreme amount," and (d) item 26, "1 : Never", "2 : Seldom", "3 : Quite often", "4 : Very often", "5 : Always".

The Cronbach's alpha coefficient for the developed questionnaire was 0.89, which indicated acceptable internal consistency. To calculate the domain score, the average score of the items in each domain was determined and then multiplied by 4 to standardize the scores with those used in the WHOQOL-100. In terms of the questionnaire's scoring, a higher score indicates a better quality of life, while a lower score indicates a poorer quality of life.

Validity and Reliability for the Stress Scale (PSS-10) Malay Version and the World Health Organization-Quality of Life Questionnaire (WHOQoL-26)

The questionnaire was checked by the experts for content validity. Five respondents were involved in face validation. The pilot study was done among 40 respondents. The Cronbach's alpha obtained for the Perceived Stress Scale (PSS-10) was 0.704. While for the World Health Organization's Quality of Life (WHOQOL-26), it was 0.954, which is considered good.

Procedure

The online distribution of the questionnaire was facilitated through social media. Google Forms was distributed through residents' media socials Facebook page, WhatsApp, and Instagram, and it took only 30 minutes to be completed. Written consent was provided to the respondents who met the inclusion criteria before they answered the questionnaires. Those who were under 18 years old signed an assent form that was given to their guardian to give permission. After gaining permission from the respondents, Google Forms were distributed for them to answer. Due to time constraints, there are only 191 respondents involved in this study.

Data Analysis

The analysis of the data was performed using SPSS version 26.0. Descriptive statistics were used to determine the level of stress and QoL among young adults during COVID-19 in Kuala Selangor. The Spearman correlation test was used to determine the relationship between the level of stress and quality of life, and the Fisher exact test was used to determine the relationship between demographic data and the level of stress among young adults during COVID-19 in Kuala Selangor.

Ethical Consideration

The data was collected after approval from the Research Ethics Committee of Universiti Teknologi MARA (UiTM), Malaysia on 29th December 2021 with reference number REC/12/2021 (UG/MR/1043).

RESULTS

Demographic Characteristics of Young Adults in Kuala Selangor

Table 1: Demographic Characteristics of Respondents (n=191)

Variables	Frequency(n)	Percentage(%)
Age		
15-19	22	11.5
20-24	123	64.4
25-30	46	24.1
Gender		
Male	49	25.7
Female	142	74.3

Educational Status		
Secondary School	35	18.3
Diploma	21	11.0
Bachelor’s Degree	121	63.4
Master’s Degree	14	7.3
Socioeconomic Status		
B40 (<RM4849)	145	75.9
M40 (RM4850-RM10959)	36	18.8
T20 (>RM10959)	10	5.2
Employment		
Employed	62	32.5
Unemployed	8	4.2
Student	121	63.4

Table 1 show that most of the respondents from 20 to 24 years old (n=123, 64%) and female (n=142, 74.3%).

Level of Stress among Young Adults During COVID-19 Pandemic in Kuala Selangor

Table 2: Frequency and Percentage of the Level of Stress among Young Adults During COVID-19 Pandemic in Kuala Selangor (n= 191)

Items	Frequency N (%)				
	Never	Almost Never	Sometimes	Fairly Often	Very Often
“ In the last month, how often have you been upset because of something that happened unexpectedly”	3(1.6)	22(11.5)	71(37.2)	82(42.9)	13(6.8)
“ In the last month, how often have you felt that you were unable to control the important things in your life”	7(3.7)	29(15.2)	67(35.1)	75(39.3)	13(6.8)
“ In the last month, how often have you felt nervous and stressed”	4(2.1)	19(9.9)	65(34.0)	82(42.9)	21(11.0)
“ In the last month, how often have you felt confident about your ability to handle your personal problems”	9(4.7)	62(32.5)	58(30.4)	57(29.8)	5(2.6)
“ In the last month, how often have you felt that things were going your way”	6(3.1)	61(31.9)	79(41.4)	42(22.0)	3(1.6)
“ In the last month, how often have you found that you could not cope with all the things that you had to do”	5(2.6)	34(17.8)	80(41.9)	61(31.9)	11(5.8)
“ In the last month, how often have you been able to control irritations in your life”	8(4.2)	72(37.7)	56(29.3)	48(25.1)	7(3.7)
“ In the last month, how often have you felt that you were on top of things”	8(4.2)	67(35.1)	60(31.4)	52(27.2)	4(2.1)
“ In the last month, how often have you been angered because of things that were outside of your control”	4(2.1)	24(12.6)	69(36.1)	71(37.2)	23(12.0)
“In the last month, how often have you felt difficulties were piling up so high that you could not overcome them”	8(4.2)	29(15.2)	64(33.5)	75(39.3)	15(7.9)

One-half (42.9%) of respondents were fairly often upset because of something that happened unexpectedly thus felt nervous and “stressed”.

Table 3: Level of Stress Experienced by Young Adults During the COVID-19 Pandemic in Kuala Selangor (n=191)

Variables	Frequency(n)	Percentage(%)
PSS-10		
Normal	0	0.0
Mild	2	1.0
Moderate	2	1.0
Severe	16	8.4
Extremely Severe	171	89.5
Total Score (Median, IQR)	38.80 (22.00, 4.00)	

Table 3 showed the level of stress of the respondents. The majority of the respondents had extremely severe stress (n=171,89.5%).

Table 4: Quality of Life by Domain among Young Adults During COVID-19 (n=191)

Variable	Median	IQR
WHOQOL-26		
Physical health	44.00	25.00
Psychological health	56.00	38.00
Social relationship	50.00	44.00
Environmental Health	63.00	50.00

Table 4 showed the respondents' quality of life according to four domains. Physical health was the lowest which was 44 (IQR=25.00), while the highest score was environmental health 63 (IQR=50.00) followed by psychological health, 56 (IQR=38.00), and social relationship 50 (IQR=44.00).

Correlation between the Level of Stress and Quality of life among Young Adults During COVID-19 In Kuala Selangor

Table 5: Correlation between the Level of Stress and Quality of Life among Young Adults During COVID-19 in Kuala Selangor (n=191)

The level of stress		
	rs	p-value
Physical Health	-0.119	0.100
Psychological Health	-0.131	0.072
Social relationship	-0.105	0.148
Environmental Health	-0.195	0.007**

*Spearman Correlation Coefficient

**Significant p value

Table 5 shows that there was a statistically significant, negative, and weak correlation between environmental health and the level of stress $s(191) = -0.19, p = 0.007$. While physical health, psychological health, and social

relationships did not correlate with the level of stress.

Demographic data and level of stress among young adults during COVID-19 Pandemic in Kuala Selangor

Table 6: The Relationship between Demographic Data and Stress among Young Adults During COVID-19 in Kuala Selangor (n=191)

Variables	Mild n (%)	Moderate n (%)	Severe n (%)	Extremely Severe n (%)	X ² Statistic	P- value
Age (Years Old)						
15-19	1(4.5)	0(0.0)	1(4.5)	20(90.9)	5.25	0.471
20-24	1(0.8)	2(1.6)	13(10.6)	107(87.0)	-	-
25-30	0(0.0)	0(0.0)	2(4.3)	44(95.7)	-	-
Gender						
Male	2(4.1)	0(0.0)	4(8.2)	43(87.8)	4.92	0.169
Female	0(0.0)	2(1.4)	12(8.5)	128(90.1)	-	-
Educational Status						
SecondarySchool	1(2.9)	0(0.0)	1(2.9)	33(94.3)	9.42	0.326
Diploma	1(4.8)	0(0.0)	2(9.5)	18(85.7)	-	-
Bachelor’sDegree	0(0.0)	2(1.7)	11(9.1)	108(89.3)	-	-
Master’sDegree	0(0.0)	0(0.0)	2(14.3)	12(85.7)	-	-
Socioeconomic Status						
B40 (<RM4849)	1(0.7)	1(0.7)	9(6.2)	134(92.4)	11.02	0.063
M40 (RM4850- RM10959)	1(2.8)	1(2.8)	4(11.1)	30(83.3)	-	-
T20 (>RM10959)	0(0.0)	0(0.0)	3(30)	7(70)	-	-
Employment Status						
Employed	1(1.6)	0(0.0)	5(8.1)	56(90.3)	9.17	0.146
Unemployed	1(12.5)	0(0.0)	1(12.5)	6(75.0)	-	-
Student	0(0.0)	2(1.7)	10(8.3)	109(90.1)	-	-

*Fisher’s Exact Test

Table 6 Fisher’s Exact Test was performed to examine the relationship between the level of stress and the demographic data of the respondents. The test revealed neither age ranges ($X^2= 5.25, p= 0.471$), gender ($X^2=4.92, p= 0.169$), educational status ($X^2=9.42, p= 0.326$), socioeconomic status ($X^2=11.02, p= 0.063$), nor employment status ($X^2=9.17, p= 0.146$) were related to the level of stress. Therefore, the respondents who reported being stressed did not differ either by age, gender, educational status, socioeconomic status, and employment status.

DISCUSSION

Developmental Stages of Young Adulthood and its Characteristics

Young adulthood is a developmental phase characterized by cognitive, social, and emotional changes as individuals transition from adolescence to adulthood. Arnett (2000) notes that this stage typically begins around age 18 or 19 and lasts until the mid- to late-20s or early 30s. During this period, young adults are faced with new challenges and opportunities that require them to establish a sense of identity and find their place in the world, as per Erikson’s psychosocial development theory (1950). The developmental instability that is commonly experienced during young adulthood is a normal and expected part of the process that can result in greater resilience and

adaptability in the long run. Eccles (2004) points out that this developmental stage is often characterized by self-focus, which allows individuals to establish autonomy and independence. However, Twenge and Campbell (2009) caution that excessive self-focus may lead to a sense of entitlement and self-centeredness.

Establishing intimate relationships is the primary developmental task of young adulthood, according to Erikson's theory (1950). This involves forming close bonds with others, building social connections, and creating a sense of community. However, the COVID-19 pandemic has had a significant impact on young adults, particularly in terms of their mental health and well-being. The pandemic-induced social isolation, financial insecurity, and uncertainty about the future have resulted in increased levels of stress and anxiety for many young adults (Cao *et al.*, 2020).

The Level of Stress among Young Adults During the COVID-19 Pandemic in Kuala Selangor

Almost half of the respondents agreed on three items on the five-point Likert scale of perceived stress: (a) upset, (b) nervous, and (c) stress, about things that occurred during the COVID-19 pandemic. This was highly predicted as lots of changes happened, especially in terms of lifestyles, and thus had consequences for mental distress towards people. Similar findings were published in other studies showing that young individuals are particularly vulnerable to excessive stress during COVID-19 (Couarraze *et al.*, 2021). In addition, individuals under the age of 50 were overwhelmingly female, which may explain their high degree of job stress, which was more widespread among younger people (Couarraze *et al.*, 2021).

Apart from that, this study also has a high percentage of stress as compared to other studies conducted by Pedrozo-Pupo *et al.* (2020), where 15% of participants had a high level of stress during the COVID-19 pandemic in Colombia. This might be because of stressors that pile up during the pandemic, such as financial problems, fear of the COVID-19 infectious rate, and an uncontrolled diet. Other than that, this study is also consistent with other studies conducted by Varma *et al.* (2021), where about 35% of participants reported depressive symptoms during COVID-19. In previous studies, it had been declared that young adults have higher tendencies to experience high levels of stress during COVID-19 as compared to other levels of age.

Charles *et al.* (2021) found that young adults were concerned about their loved ones' and their own health related to COVID-19 issues. Similar findings were reported in a study by Klaiber *et al.* (2021), where younger and middle-aged adults were more concerned about COVID-19's threat to numerous life domains, particularly their personal emotional well-being, finances, and professional aspirations. Although young people are less likely to experience severe COVID-19 symptoms than older adults, this study revealed how the pandemic affected them mentally. Stress in young adults during the pandemic can be affected by a few factors, such as past mental diagnoses, isolation, financial difficulties, hopelessness, loneliness, and uncertainty because of COVID-19 outbreaks. According to Killgore *et al.* (2020), all of these factors can increase the likelihood of psychiatric disorders and suicide.

The COVID-19 pandemic has had a profound impact on the mental health and well-being of young adults, and effective strategies for reducing stress during this challenging time are crucial. Social support has been found to be a crucial protective factor against stress, and maintaining social connections through virtual means such as video chats, phone calls, and social media can help alleviate feelings of isolation (Holt-Lunstad, Smith, & Layton, 2010).

Engaging in regular physical activity has been found to be an effective way of reducing stress and improving mood, even with small amounts of exercise. Online workout classes and apps provide numerous options for at-home exercise routines (Salmon, 2001). Mindfulness practices, including meditation, yoga, and deep breathing exercises, have been found to be effective in reducing stress and anxiety (Lenze *et al.*, 2014). A variety of guided mindfulness resources, such as apps and online tools, are available. Limiting exposure to constant news and social media posts about the pandemic can help manage feelings of stress and anxiety. Staying informed about the pandemic is important, but it is advisable to limit exposure to reputable sources of information and to set specific times of the day for news updates. Seeking professional help, such as counseling or therapy, is recommended if stress and anxiety are impacting daily functioning. Many providers are offering virtual sessions during the pandemic, making it more accessible for young adults to receive support and care (American Psychological Association, 2020).

The Quality of Life among Young Adults During COVID-19 Pandemic in Kuala Selangor

The majority of respondents reported good quality of life and health during the COVID-19 pandemic. However, they were not feeling safe in their daily lives; this was in line with the earlier study by Mohsen *et al.* (2022), which

found that the pandemic was the main factor affecting personal safety and quality of life. This may be a result of the fear that infections may cause morbidity and mortality. People who reported negative feelings were caused by a lack of knowledge about the pandemic and the effects of associated negative emotions (Rezapor, Dehzangi, & Saadati, 2022).

COVID-19 has negatively affected most people globally, especially in terms of quality of life. According to Rossi *et al.* (2020), there was a significant decline in quality of life, mood, and psychological well-being during the pandemic. Our study showed that physical health had the lowest score as compared to other domains, which were psychological health, social relationships, and environmental health. This indicates that physical health has the most significant effects in terms of quality of life, as it has the lowest score.

This study's finding has been consistent with a study conducted by Ozdemir *et al.* (2020), where they found a low level of physical activity during COVID-19 in Turkey, which has been declared an adverse effect of the pandemic. Hence, this shows that this study was against the null hypothesis, which is that there are effects on quality of life among young adults during COVID-19 in Kuala Selangor. From the findings, the researchers assumed that physical inactivity has an adverse influence on health care systems, the environment, economic development, community well-being, and overall quality of life. According to Algahtani *et al.* (2021), in terms of demographic origins, employment losses, chronic medical illnesses, and psychological concerns, several population groups were particularly exposed to low quality of life during the pandemic. Additionally, the lockdown had a negative impact on some leisure behaviors, such as a drop in strenuous physical activity and an increase in sedentary behavior (Cheval *et al.*, 2021).

Correlation Between the Level of Stress and the Quality of Life among Young Adults During the COVID-19 Pandemic in Kuala Selangor

This study found that there was a negative and weak correlation between the level of stress and environmental health, while other domains, such as physical health, psychological health, and social relationships, did not correlate with stress levels.

Previous studies showed a significantly negative correlation between the level of stress and all domains of quality of life (Pieh *et al.*, 2020; Korkmaz *et al.*, 2020). However, in this study, the analysis identified only environmental health as being correlated with the level of stress. This may be because the researchers did not control excessive variables that might influence the stress and quality of life of the community. For instance, the environment of work or study As mentioned by Cummings *et al.* (2018), environmental health concerns include economic means, security, healthcare, and social services; advantages in learning new knowledge and skills; entertainment; the surrounding atmosphere, such as pollution; and transportation.

Tan *et al.* (2021) discovered that environmental stress had only a minimal effect on psychological well-being in previous research, which could be explained by the fact that COVID-19 reported cases were assessed at the federal level rather than the city or community level. During a pandemic, perseverance and environmental factors influence health. These findings can help mental health professionals analyze problems and conduct programs that boost resilience, which can improve their psychological health during a pandemic. A variety of programs, including mindfulness, mental awareness, and personal development programs, may improve resilience (Huang *et al.*, 2019). Communities might look for chances to participate in training and programs related to mindfulness and basic skills during the pandemic.

Relationship between Demographic Data and Stress among Young Adults During COVID-19 Pandemic in Kuala Selangor

In a study by Elbay *et al.* (2020), elements such as a higher number of life stressors, including being younger, female, and unemployed, may be correlated with greater psychological stress during COVID-19 pandemics. However, the results turn out differently where the level of stress does not relate to those factors. This may be due to the fact that the researchers did not control the confounding factors that may influence the level of stress, such as the source of support. As found in the study by Woodward *et al.* (2018), stress can be avoided by having a protective factor, which is social support, even with low socioeconomic status.

The researchers also did not include other characteristics that may influence the results. For instance, type of job,

pre-existing medical condition, number of children, and level of knowledge about COVID-19. In spite of that, attention should be given to the community to assist them in coping with stress during global disasters or pandemics, as it showed they were under extremely severe stress. Studies showed that COVID-19 pandemic has had a notable impact on the mental and emotional health of children, leading to manifestations of depression, and anxiety, and increased irritability (Tambunan *et al.*, 2021).

CONCLUSION

This study found that the majority of respondents perceived an extremely severe stress level during the survey. This might be a trigger warning for the public to focus more on mental health issues. However, an overall quality of life in the degree of being healthy and comfortable. However, there was a weak and negative correlation between the environmental health domain and the level of stress. This research encouraged the health sector to plan effective programs related to stress-coping strategies and a better quality of life to survive during the pandemic. Due to time constraints, the researcher only manages to get 191 respondents, compared to the real sample size calculation of 382 respondents.

Conflict of Interest

The authors affirm that this study was carried out with no personal, commercial, or financial conflicts of interest.

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