



## Psychological Impact on Parents of University Students During COVID-19 Movement Control Order (MCO)

Juslina Omar, Azreen Friddy, Anne Tasha Serun,  
Hemma B.Rayandran, Julie Reeni Remash, Julia Natasya Mohd Zuhurin,  
Muhammad Nadzirul Syafiq Aduce & Yegharaj Jayaveeran  
Faculty of Medicine and Health Sciences, Universiti Malaysia Sarawak,  
94300, Kota Samarahan, Sarawak, Malaysia.

### ABSTRACT

The Malaysian Government has announced the Movement Control Order (MCO) starting 18<sup>th</sup> March 2020 due to the COVID-19 pandemic worldwide. This study attempts to assess the level of psychological distress among parents of university students stranded on campus and out campus during MCO; and to identify the stressors causing psychological distress among parents. It is a cross sectional study using an online self-administered questionnaire done at a public university in Kuching, Sarawak, Malaysia. Psychological distress was determined by using Kessler's Psychological Distress Scale (K10). The study has shown significant associations between parents' psychological distress with three stressors which consist of worrying about their child's food supply, child's future, and child's mental health.

**Keywords:** psychological distress, COVID-19 MCO, stressors, Kessler's Psychological Distress Scale (K10), parents

---

#### ARTICLE INFO

Email address: [ojuslina@unimas.my](mailto:ojuslina@unimas.my) (Juslina Omar)

\*Corresponding author

<https://doi.org/10.33736/jcshd.2895.2021>

e-ISSN: 2550-1623

Manuscript received: 30 December 2020; Accepted: 15 March 2021; Date of publication: 25 March 2021

---

Copyright: This is an open access article distributed under the terms of the CC-BY-NC-SA (Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License) which permits unrestricted use, distribution, and reproduction in any medium, for non-commercial purposes, provided the original work of the author(s) is properly cited.

---

## 1 INTRODUCTION

Coronavirus disease 2019 (COVID-19) was first discovered in December 2019 in Wuhan, China and has since spread all over the world, bringing about the progressing 2019–2020 coronavirus pandemic. The mode of transmission of the infection is via individuals during close contact, frequently by means of little droplets produced during coughing, sneezing, or talking. Those infected could be either asymptomatic (Chen et al, 2020) or manifest common symptoms such as fever, shortness of breath and cough (CDC, 2020). Other symptoms include sore throat, fatigue, abdominal pain, muscle ache, diarrhoea, and loss of smell. The incubation period is around five to twenty-one days. Although most cases bring about mild symptoms, some progress to viral pneumonia and multi-organ failure (CDC, 2020).

The emergence of an outbreak has led to physical health concerns and psychological changes. Infectious diseases cause significant psychiatric morbidities which vary from depression, anxiety, panic attacks and posttraumatic stress disorder symptoms, to psychosis and even suicidality (Müller, 2014). This is especially true for COVID-19 when there is much speculation surrounding the mode and rate of transmission, with the disease spreading at such an unparalleled magnitude, and there is still no definitive treatment (Cyrus, Cornelia, and Roger, 2020). It has been indicated that the increasing number of patients and suspected cases, as well as the increasing number of countries affected by the outbreak, have elicited public worry about being infected in this outbreak, which has increased anxiety (Bao et al., 2020). To combat this, psychological assistance services and hotlines are widely deployed by local and national mental health institutions in response to the COVID-19 outbreak. Malaysia Government has actively carried out daily live broadcasts and social media releases on the progression of the outbreak to keep the public updated.

Malaysia Government has decided to implement Movement Control Order (MCO) under the Prevention and Control of Infectious Disease Act 1988 and the Police Act. 1967 (Ministry of Health [MOH], 2020). The MCO prohibits nationwide movements, mass assembly, including all religious, social, cultural and sports activities. All levels of education institutions are closed, nationwide, and lastly, the closure of all premises except for essential services (John, 2020) during the initial phase of MCO. This order is implemented throughout the whole country starting from March 18 to March 31. The MCO order was extended three times, each for another two-week period, until May 3. Malaysia then entered another phase known as Conditional Movement Control Order (CMCO) from May 4 to June 9 and Recovery Movement Control Order (RMCO) from June 10 until 31<sup>st</sup> December 2020. The aim of enforcing this MCO is to exemplify social distance to stop the spread of COVID-19 infection (John, 2020).

During MCO university students were asked to stay put at their respective universities. Despite being provided with free meals, separation from loved ones, the loss of freedom, uncertainty over disease status, and boredom can, on occasion, create dramatic effects (Brooks et al., 2020). A study by Koller et al. 2016 on quarantine during SARS outbreak revealed that parents expressed anger and discomfort at not being able to care for their children and felt forced to relinquish their parental role.

The objectives of this study are:

- To determine the level of psychological distress among parents of university students stranded during MCO
- To evaluate the factors causing psychological distress to parents of university students stranded during MCO
- To determine the association between the sociodemographic profile with Kessler's Psychological Distress Scale (K10) among parents of university students stranded during MCO
- To determine the association between the factors causing psychological distress with the psychological distress level among parents of university students stranded during MCO.

## 2 METHODOLOGY

This is a quantitative cross-sectional study done at a public university in Kuching, Sarawak, Malaysia. The study was conducted among parents of students studying in one of the public universities in Sarawak, Malaysia. Only one of parents was recruited in the study among students who were stranded on campus during the MCO in the month of May 2020

The target sample size of participants was calculated using Raosoft, an online sample size calculator application. 324 sample size calculated with margin of error set at 5% and confidence interval of 95%. The snowballing sampling method was chosen due to the limitation for data collection during Movement Control Order. It may also help to gather useful data and information that would not be possible using probability sampling technique, which requires a sample frame and formal access to lists of parents.

An online self-administered questionnaire via google form was used in this study to obtain data from the parents of university students. It was distributed by sharing the questionnaire's link to student representatives of each residential college/faculty then shared to other students who were stranded at the university and later shared with their parents. Only one parent (either mother or father) for each student was required to complete the questionnaire. 356 parents were recruited.

The questionnaire consisted of three sections and it was prepared in Bahasa Melayu and English. The first section inquired about the respondent's socio demographic profile which included age, gender, race, educational level, household income, history of medical disease and history of mental illness. The second part assessed the psychological distress of the respondents using an adapted questionnaire of Kessler's Psychological Distress Scale (K10) (Kessler et al., 2003) and a validated Malay version of K10 (Tiong et al., 2018). The K10 questionnaire has 10 questions, based on anxiety and depression symptoms in the past 4 weeks. Participants answered on a 5-point scale (1 = none of the time to 5 = all of the time). Thus, the minimum score was 10, indicating no psychological distress, and the maximum score was 50, indicating the most severe level of

psychological distress. Scores were subsequently categorized into four levels of psychological distress: low (scores of 10–15); moderate (scores of 16–21); 'high' (scores of 22–29) and 'very high' (scores of 30–50). The last and third sections inquired about factors causing psychological distress to the parents. It consisted of a multiple response question for the respondents to select and to add any other causes that are not listed. The listed response questions on factors causing psychological distress were worried of long-term consequences of child's future, shortage of food supply during MCO, child's risk of getting Covid-19 infection and child's mental health status.

The data was analysed with the Statistical Package for Social Sciences Program (SPSS) Version 22.0. An analysis of descriptive and inferential statistics was used. Statistically significant variables were screened and the estimates of the strengths of associations between related stressors and parent's psychological distress was demonstrated with Cramer's V ( $\phi_c$ ). A two-tailed p-value < 0.05 with 95% confidence interval was considered statistically significant.

### 3 RESULTS AND DISCUSSION

#### 3.1 Sociodemographic Profile and Kessler's Psychological Stress Scale (K10)

Table 1 shows the parents' sociodemographic profile of students that were stranded during the COVID-19 MCO. Most parents are in the age categories 40-44, 45-49 and 50-54 with a male female ratio of 1:2.

**Table 1.** Socio-demographic profile of the respondents (N=356)

Variable	n	(%)
<b>Age category</b>		
35-39	1	(0.3)
40-44	23	(6.5)
45-49	100	(28.1)
50-54	129	(36.2)
55-59	79	(22.2)
60-64	21	(5.9)
65-69	3	(0.8)
<b>Gender</b>		
Male	138	(38.8)
Female	218	(61.2)
<b>Race</b>		
Malay	175	(49.2)
Chinese	55	(15.4)
Indian	43	(12.1)
Iban	27	(7.6)
Bidayuh	10	(2.8)
Others	46	(12.9)
<b>Educational level</b>		

No formal education	3	(0.8)
Primary	20	(5.6)
Secondary	150	(42.1)
University	183	(51.4)
<b>Household income (RM)</b>		
<1000	28	(7.9)
1000-3000	95	(26.7)
3001-5000	72	(20.2)
>5000	161	(45.2)
<b>History of Medical disease</b>		
Hypertension	106	(23.6)
Diabetes	54	(12.0)
Hypercholesterolemia	55	(12.2)
Kidney disease	6	(1.3)
Heart disease	22	(4.9)
Thyroid disease	7	(1.6)
Lung disease	1	(0.2)
Cancer	5	(1.1)
Stroke	1	(0.2)
Other comorbid conditions	11	(2.4)
None	181	(40.3)
<b>History of mental illness</b>		
Depression	2	(0.6)
Schizophrenia	1	(0.3)
Anxiety disorder	2	(0.6)
None	351	(98.6)

**Table 2.** Level of Kessler's Psychological Distress Scale (K10) among parents of students stranded during COVID-19 MCO.

Kessler's Psychological distress Scale (K10)	N (N=356)	%
Low (10-15)	183	51.4
Moderate (16-21)	99	27.8
High (22-29)	40	11.2
Very high (30-50)	34	9.6

Parents whose children were stranded in and out campus during COVID-19 MCO revealed that the majority of them (51.4%) reported low levels of psychological distress. 48.6% of parents reported moderate, high, and very high levels of psychological stress which were 27.8%, 11.2% and 9.6% respectively (Table 2). Compared to a previous study conducted in China during the initial phase of COVID-19 pandemic, more than half of respondents (53.8%) rated the psychological impact of outbreak as moderate or severe (Wang et al., 2020). These differences

firstly could be due to different instruments used. The study in China was conducted using IES-R and DASS-21 whereas this study utilised K10 Questionnaire. Secondly, the study in China was conducted during the initial outbreak of COVID-19 from 31<sup>st</sup> January to 2<sup>nd</sup> February 2020, whereas this study was conducted during the later stage of the pandemic from 2<sup>nd</sup> to 29<sup>th</sup> May 2020. Based on sociodemographic profiles there was no significant association between all the demographic variables and the level of psychological distress among the study population as shown in Table 3.

**Table 3.** Association between sociodemographic profile and Kessler Psychological Distress Scale, K10 Score (N=356)

Variable	N	Mean	SD	Minimum	Maximum	p-value
<b>Gender, F</b>						<b>0.954</b>
Male	138	17.48	8.3	10	48	
Female	218	17.53	7.4	10	50	
<b>Age, Y</b>						<b>0.162</b>
40-44	24	20.58	9.5	10	43	
45-49	100	16.69	7.0	10	50	
50-54	129	18.03	8.4	10	48	
55-59	79	17.32	7.5	10	45	
60-64	21	16.29	4.839	10	31	
65-69	3	11.33	2.309	10	14	
<b>Race, Y</b>						<b>0.034</b>
Malay	175	17.57	7.8	10.0	50.0	
Chinese, \$	55	15.16	6.2	10.0	42.0	
Indian	43	17.98	8.9	10.0	46.0	
Iban	27	16.07	5.9	10.0	34.0	
Bidayuh	10	21.30	11.3	12.0	48.0	
Others, \$	46	19.67	7.8	10.0	40.0	
<b>Education Level, Y</b>						<b>0.149</b>
No formal education	3	22.33	14.572	12	39	
Primary school	20	20.65	7.242	10	36	
Secondary school	150	17.65	7.742	10	45	
University	183	16.97	7.714	10	50	
<b>Household income, Y</b>						<b>0.172</b>
<1000	28	18.75	8.378	11	45	
1000-3000	95	17.89	7.465	10	36	
3001-5000	72	18.67	8.715	10	48	

>5000	161	16.55	7.364	10	50
<b>History of Medical Illness, T</b>					
Hypertension					<b>0.456</b>
– Yes	106	17.98	7.769		
– No	250	17.31	7.796		
Diabetes					<b>0.502</b>
– Yes	54	16.85	7.582		
– No	302	17.63	7.825		
Hypercholesterolaemia					<b>0.318</b>
– Yes	55	18.47	7.635		
– No	301	17.33	7.810		
Kidney Disease					<b>0.753</b>
– Yes	6	18.50	6.285		
– No	350	17.49	7.813		
Heart Disease					<b>0.914</b>
– Yes	22	17.68	7.273		
– No	334	17.50	7.826		
Thyroid Disease					<b>0.446</b>
– Yes	7	15.29	4.309		
– No	349	17.55	7.834		
Lung Disease					<b>0.335</b>
– Yes	1	10.00	.		
– No	355	17.53	7.784		
Cancer					<b>0.838</b>
– Yes	5	16.80	10.232		
– No	351	17.52	7.761		
Stroke					<b>0.481</b>
– Yes	1	23.00	.		
– No	355	17.49	7.789		
Other Co-Morbid					<b>0.987</b>
– Yes	11	17.55	7.764		
– No	345	17.51	7.795		
None					<b>0.979</b>
– Yes	181	17.52	8.120		
– No	175	17.50	7.442		
<b>History of Mental Illness, Y</b>					
Depression	2	15.00	4.243	12	18
Schizophrenia	1	20.00	.	20	20
Anxiety disorder	2	27.50	10.607	20	35
None	351	17.46	7.775	10	50

T: P-value obtained from Independent Sample T-Test

Y: P-value obtained from One-Way Anova

\$. P-value < 0.05 are only seen in the minority race Chinese and Other. Hence, the overall analysis is considered as not significant.

### 3.2 Related Stressors and Parents' Psychological Distress Level

The negative effects of family separation, in this case, the stranded students, can go both ways. Being away from families due to MCO can adversely affect not only the students themselves but also brings impact to the whole family in general and the parents, specifically (Muhd Faris Abdullah, 2020). However, there are limited sources available that reported on the impact of COVID-19 MCO on the parents of students who were stranded. In table 4, there were five related stressors that may cause psychological distress among parents of the stranded university students. Parents had four main concerns which include worry about their child's food supply, worry about the possibility of their child getting infected by COVID-19, worry of long-term consequences of their child's future and worry about their child's mental health.

**Table 4.** Percentage on type of stressors that influence the parents' psychological distress

Stressors	n	%
Worry of long-term consequences for a child's future	177	21.1%
Worry about a child's food supply	249	29.7%
Worry about the possibility of a child getting infected by COVID-19	243	29.0%
Worry about a child's mental health	157	18.7%
Worry about a child's safety and well-being	7	0.8%
None	5	0.6%

In Table 5, among the five related stressors, stressors that have shown significant association with parents' psychological distress includes worry about the long-term consequences of their child's future, worry about child's food supply and worry about child's mental health with  $p$  value  $< 0.05$ , confidence interval 95%. This is mainly related to their children's education being put on hold by the government until further notice. This decision undoubtedly has a specific impact on education and the growth of students. Parents with children in higher education have elevated expectations towards their children in relation to their academic performances and towards having promising future careers (Li-Fei & Heppner, 2002).

**Table 5.** Association between related stressors and parents' psychological distress (N=356)

Related stressors	Parents' psychological distress	
	Cramer's V	P
Worry about the long-term consequences of a child's future	0.223	.001
Worry about a child's food supply	0.259	<0.001
Worry about a child getting infected	0.106	.260
Worry about a child's mental health	0.290	<0.001
Worry about a child's safety and well-being	0.070	.622

Based on the Cramer's V ( $\phi_c$ ) values, the stressor worry about the long-term consequences of the child's future, worry about the child's food supply, and worry about the child's mental health showed moderate relationship with the parents' psychological distress. Our study has shown a



significant association between the worry of a child's food supply and parents' psychological distress, in which it is of moderate strength (0.259). This is because students who are residing on campus are not permitted to go outside, as to comply with the movement restriction. The distress may be because some university students do not have financial support from their families and resolve this matter through doing part time jobs outside (Humphrey, 2006). Hence, this movement restriction may eventually cause students to have problems with their food supply. Distribution of free meals or dry food should be prioritized by the university management as an important effort to sustain the well-being of their students and to lessen parental worries (Nor Hayati Endan, 2020).

Parents' concern for their children's mental health during this MCO is also a crucial factor influencing parents' psychological distress. From our research, these two variables have shown significant associations. It is widely known that prolonged isolation and separation from families will affect the mental health of students. Previous studies have also reported various other factors such as financial stressors, effects on daily-life activities and academic delays (Kernan, 2019). Muhd Faris Abdullah (2020) stated that data collected from the International Islamic University Malaysia (IIUM) alone has shown a rising trend in students seeking counselling during the MCO period in relation to anxiety and depression due to being away from their family members.

In previous studies on infectious diseases, researchers found a significant relationship between the risk of their children getting infected and the psychological distress experienced by their parents (Kesten et al., 2017). Our findings showed the opposite trend. The findings may have been due to the fact that the university was taking strict measures in complying with the MCO and such effort may lessen the parents' worries.

#### **4 CONCLUSION**

In conclusion, our study has shown most parents had low psychological distress. Three factors showed significant association influencing the psychological distress are worry of child's food supply, child's future, and child's mental health. Mental health assessment, psychological first aid and counselling to parents should be done to help with their distress.

Future research should include other universities throughout Malaysia to attain a larger sample size. An expanded research that focuses on coping skills during this COVID-19 pandemic would be useful to shed light on the way university students and their parents dealt with the uncertainties brought about by the pandemic.

#### **ACKNOWLEDGEMENT**

We would like to extend our gratitude to the Faculty of Medicine and Health Sciences, University Malaysia Sarawak. We would like to acknowledge Professor Mizanur Rahman for the guidance and Professor Dr. Chew Keng Sheng for the support; and Dr. Ting Xun Ting with his team for

granting us permission to use the Malay Version of K10 scale. Special thanks to all the respondents who voluntarily participated in our research.

## REFERENCES

Bao, Y., Sun, Y., Meng, S., Shi, J., Lu, L., 2020. 2019-nCoV epidemic: address mental health care to empower society. *Lancet* (London, England). 395(10224), e37-e38. [https://doi.org/10.1016/S0140-6736\(20\)30309-3](https://doi.org/10.1016/S0140-6736(20)30309-3)

Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The Psychological Impact of Quarantine and How to Reduce It: Rapid Review of the Evidence. *SSRN Electronic Journal*. [https://doi.org/10.1016/S0140-6736\(20\)30460-8](https://doi.org/10.1016/S0140-6736(20)30460-8)

Centers for Disease Control and Prevention. (2020) Coronavirus Disease 2019 (COVID-19) [online]. Retrieved from: <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>

Chen, N., Zhou, M., Dong, X., Qu, J., Gong, F., Han, Y., Qiu, Y., et al. (2020). Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study. *The Lancet*, 395(1), pp. 507-513. [https://doi.org/10.1016/S0140-6736\(20\)30211-7](https://doi.org/10.1016/S0140-6736(20)30211-7)

Cyrus, S. H., Cornelia Y. I., & Roger C. M. (2020). Mental health strategies to combat the psychological impact of COVID-19 beyond paranoia and panic. *Annals, Academy of Medicine, Singapore*. Retrieved from: <http://www.anmm.org.mx/descargas/Ann-Acad-Med-Singapore.pdf>

Humphrey, R. (2006). Pulling structured inequality into higher education: The impact of part time working on English university students. *Higher Education Quarterly*, 60(3), 270–86. <https://doi.org/10.1111/j.1468-2273.2006.00317.x>

John, B. (2020, March 16). PM: Malaysia under movement control order from Wed until March 31, all shops closed except for essential services. *Malay Mail*. Retrieved from <https://www.malaymail.com/news/malaysia/2020/03/16/pm-malaysia-in-lockdown-from-wed-until-march-31-all-shops-closed-except-for/1847204>

Kernan, W. D. (2019). Health-related impediments to learning among dental and oral surgery students. *Journal of prevention & intervention in the community*, 47(1), 32-44. <https://doi.org/10.1080/10852352.2018.1547307>

Kesten, J. M., Anderson, E. C., Lane, I., Hay, A. D., & Cabral, C. (2017). Parent views on the content and potential impact of respiratory tract infection surveillance information: semistructured interviews to inform future research. *BMJ paediatrics open*, *1*(1). Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5843006/pdf/bmjpo-2017-000036.pdf>

Koller, D. F., Nicholas, D. B., Goldie, R. S., Gearing, R., & Selkirk, E. K. (2006). When Family-Centered Care Is Challenged by Infectious Disease: Paediatric Health Care Delivery During the SARS Outbreaks. *Qualitative Health Research*, *16*(1), 47–60. <https://doi.org/10.1177%2F1049732305284010>

Kessler, R. C., Barker, P. R., Colpe, L. J., Epstein, J. F., Gfroerer, J. C., Hiripi, E., Zaslavsky, A.M. (2003). Screening for Serious Mental Illness in the General Population. *Arch Gen Psychiatry*, *60*(2), 184-9. doi:10.1001/archpsyc.60.2.184. Available at: <https://jamanetwork.com/journals/jamapsychiatry/fullarticle/207204>

Li-Fei, W. & Heppner, P. P. (2002). Assessing the impact of parental expectations and psychological distress on Taiwanese college students. *The Counseling Psychologist*, *30*(4), 582–608. Available at: <https://journals.sagepub.com/doi/pdf/10.1177/00100002030004006>

Ministry of Health Malaysia. (2020). Mental health and psychosocial support in COVID-19. Retrieved from: [http://www.moh.gov.my/moh/resources/Penerbitan/Garis%20Panduan/COVID19/Annex\\_33\\_Mental\\_health\\_and\\_Psychosocial\\_support\\_23032020.pdf](http://www.moh.gov.my/moh/resources/Penerbitan/Garis%20Panduan/COVID19/Annex_33_Mental_health_and_Psychosocial_support_23032020.pdf)

Muhd Faris Abdullah (2020, April 14). *Staying on campus during MCO a strain on students*. Retrieved from: <https://www.nst.com.my/opinion/columnists/2020/04/584261/staying-campus-during-mco-strain-students>

Müller (2014). Infectious diseases and mental health. Key Issues in Mental Health. *Basel: S. KARGER AG*, *2*, 99–113. Available at: <https://library.oapen.org/bitstream/handle/20.500.12657/24380/1005734.pdf?sequence=1#page=112>

Nor Hayati Endan. (2020, April 17). PKP:Kebajikan pelajar jadi keutamaan. *BHOnline*. Retrieved from: <https://www.bharian.com.my/authors/oleh-nor-hayati-endan?page=1>

Tiong, X. T., Nur Sara Shahira, A., Mohamad Adam, B., Fatin Ellisya, S., Selvasingam, R., Chong, K. J., Fong, A. Y. Y. (2018). Validation of the Kessler's Psychological Distress Scale(K10&K6) in a Malaysian Population, *ASEAN Journal of Psychiatry*, *19* (1), 2231-7805.

Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020). Immediate Psychological Responses and Associated Factors during the Initial Stage of the 2019 Coronavirus

Disease (COVID-19) Epidemic among the General Population in China. *International Journal of Environmental Research and Public Health*, 17(5), 1729. <https://doi.org/10.3390/ijerph17051729>