

Stress Level among Parents in Klang Valley during Covid-19 Outbreak and Its Contributing Factors

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Abstract: The COVID-19 outbreak has affected the health, physical, social, mental and economy of people around the globe. Currently, Movement Control Order (MCO), often referred to as partial lockdown, signifies a major step taken by the government to contain the Covid-19 pandemic in Malaysia. Thus, this study was conducted to investigate COVID-19 outbreak impact factors that contribute to higher stress level among parents in Klang Valley resulting from the MCO. This cross-sectional study was designed with the sample size of 126 through a convenience sampling method. Parents with at least one child below 12 years old were recruited to answer an online questionnaire that consists of Coronavirus Impact Questionnaire (CIQ) and Perceived Stress Scale (PSS). The result showed a positive correlation between impact COVID-19 and stress level among parents in Klang Valley with Pearson Correlation of $r(123)=0.56$, $p<0.01$. The study revealed that, COVID-19 pandemic was moderately impactful to parents with 62% in agreement that the situation had affected them psychologically. From the recruited population, 73% of the parents reported to have experienced moderate to high stress levels. Thus, the MCO shows a significant association between the level of stress among parents and the COVID-19 pandemic. The findings offer insights into the elements that affect parents' stress levels during the COVID-19 pandemic and recommendations for policymakers on how to lessen this burden, particularly for nuclear families.

Keywords: COVID-19, Children, Anxiety, Behavioural Problems, Parenting Stress

Introduction

In 2019, COVID-19 epidemic swept the globe and expanded swiftly (Wu & Xu, 2020). During the pandemic, there were unforeseen problems like financial losses, restraining orders that interrupt regular family routines, and significant family stress (Adams et al., 2020). In terms of social, economic, and health-related pressures, this pandemic presented particular challenges to families (Miller et al., 2020). Furthermore, parents who worked in health-care facilities or important sectors might feel more worried during the pandemic, owing to a lack of childcare options due to the closure of nurseries, childcare centres, and schools, as well as the concern of contamination from the workplace. This epidemic was going to be a major source of anxiety for both parents and children. Brown et al. (2020) discovered that COVID-19 was linked to higher parental stress, which manifests itself in coercive behaviours and negative emotional expressions directed towards children.

Many factors can contribute to parental stress, particularly among single parents. A previous study found that single parents in Malaysia were financially impacted during the COVID-19

epidemic. Due to low income (Garcia et al., 2021) and balancing numerous jobs, some single parents were affected, especially during lockdown (Kim & Park, 2018). Their quality of life suffered as a result. It was challenging for them to go to other areas during the COVID-19 epidemic, and most parents were made to stay at home and care for their children. Single parents had a variety of obstacles, including finding suitable housing, financial stability, work security, and other expenditures (Abd Rahman, 2021). According to the survey, Malaysian government policy actions had helped single-parent households enhance their financial stability (Abd Rahman, 2021). However, in terms of mental health, the help single parents received was insufficient, as the majority were seriously impacted by the COVID-19 epidemic, particularly during lockdown, before receiving any government aid (Jusoh and Latada, 2020). Not just single parents, but many other families, particularly those with small children, were eventually affected. Because the nursery was closed during the pandemic to prevent COVID-19 from spreading, most parents were required to remain at home. This had also increased stress levels, particularly among parents who found it difficult to multitask at home (Heggeness, 2020).

In terms of teaching and learning (T&L), most schools were closed during pandemic COVID-19 to prevent the spread of the disease. However, because T&L was converted to an online format, most parents had to ensure that they grasp the system in order to assist their children in learning. This was especially important for families with many children who underwent classes at the same time. It was because they had to provide each of their children with a smartphone or laptop. Most parents found it difficult to meet this demand since it would add significantly to their family budget. Due to the limitations of having smartphones, gadgets, and computers, most parents would ask their children to share, and some might not be able to attend class live (Azlan et al., 2020). Not only were that, at the start of MCO, most students unfamiliar with Zoom, Google Meet, and other accessible platforms. Most children and parents needed some time to learn how to use the application. This also caused students and parents to become stressed just trying to grasp the basics of online learning (Sharin 2021; Suryani, 2013).

Many localities in Malaysia, such as rural areas, have internet connection issues due to location. Some students have to go to a relative's residence to use the internet. This could generate anxiety among parents and students, particularly those who were preparing for major exams like the PT3 and SPM. They were concerned that having restricted access to reference books and notes might impact their results. During the pandemic, parents did their best to assist their children in receiving the necessary learning T&L. (Azlan et al., 2020). One of the wise initiatives to increase digital connectivity in the community was the government's initiative to aid with internet connection by launching a program named National Digital Network (Jendela) (Malay Mail 2020).

Anxiety, panic behaviour, sleep difficulties, altered daily biological cycles, anger, and disappointment were shown to be the most prevalent effects of a COVID-19 epidemic or pandemic in all of the recent COVID-19 studies (Perveen et al., 2020). The current Movement Control Order (MCO), often known as partial lockdown, is a crucial measure taken by the Malaysian government to combat the COVID-19 outbreak. As a result of the MCO, the family's situation had drastically changed. Due to the partial lockdown, educational sectors were forced to close, posing a significant hardship on parents who must balance their educational responsibilities with their day-to-day work obligations. Parents of special needs children will be under more stress during the pandemic since they will be spending the majority of their time caring for their children, which will lead to heightened anxiety (Ren et al., 2020). Dealing with a 'Stay at Home' order may be extremely difficult for parents who are trying to juggle personal life, career, and raising children without the assistance of others. This scenario has gotten much worse, and parents' stress and mood levels may have an impact on their children's behaviour. Parents are more likely to experience discomfort as a result of this scenario, which may affect their capacity to provide supportive care (Spinelli et al., 2020). Quarantine has been linked to an increase in aggression between parents, spouses, and children, according to previous research. When children have a strained connection with their parents, have behavioural issues, or suffer from mental illness, the situation may deteriorate.

In line with previous studies, it is expected that families would face financial hardship during the pandemic, and this will be another major cause of stress for them. Indeed, lower-income people are more likely to reside in cities, where they are more congested both in terms of neighbourhood and household composition. According to a study, the COVID-19 pandemic has a significant impact on

family economic well-being. According to several research, lower income and unemployment are strongly linked to family stress (Wu & Xu, 2020). Many people were impacted by the epidemic COVID-19 because of economic restrictions imposed by the MCO. People are required to stay at home as a result of MCO, which would affect their income if they work in the retail industry. Not only in retail, but in a few other industries, people have been laid off due to the economy, which may have an impact on career possibilities and family income. Many parents were under stress because they needed to guarantee that their families' needs were met. At the same time, they were constrained in their travel and business during the MCO. As a result, it may increase the stress and anxiety of parents, particularly those with small children at home, who want to be sure they have enough savings to finance all of their expenses (Amran & Jamaluddin, 2021).

Positive attitudes regarding COVID-19 and trust in epidemic management have been linked to decreased levels of sadness and anxiety, according to research. The goal of this study is to better understand parents' emotions and identify risk factors that might aid future intervention efforts. The information gathered might be used to develop stress management approaches that would help parents control their stress levels and enhance the well-being of their families. The findings of this study can be utilised to better understand COVID-19's psychological influence on parents' emotions and behaviour. As a result, this research might aid in determining the influence of COVID-19 on parents in the Klang Valley. As a result, this research is significant because it may serve as evidence to persuade authorities to provide appropriate mental health professional measures in the face of parental stress. Overall, we performed a sociological survey in the Klang Valley on the parental stress scale score. The purpose of this paper is to (1) investigate parents' perceived stress levels during the COVID-19 outbreak, (2) determine the relationship between lifestyle changes, healthy lifestyle and stress levels among parents during the COVID-19 outbreak, and (3) determine the relationship between stress among parents and sociodemographic factors during the COVID-19 outbreak (residential type, income, number of children and employment status). Is there a favourable association between parenting stress and the impact of COVID-19?

Methodology

Participants

This cross-sectional study included a total of 126 individuals who lived in the Klang Valley during the MCO period of 18th March to 30th May 2020. Parents aged 18 and above with at least one kid (children must be under the age of 12), ethnically varied, with a variety of backgrounds including education level, monthly household income, work status, residential type, household type, and total number of children are among the participants.

Materials

The online questionnaire, which was created and distributed using the Google Form platform, is divided into four sections: study information and consent, socio-demographic data information, PSS-10 item outcome measure with score, CIQ outcome measure with score, and a short-answer question about how COVID-19 has impacted participants' lives. Meanwhile for PSS the reliability based on test-retest was 0.81 and concurrent validity test $r=0.61$ indicating PSS was reliable and valid questionnaire (Sandhu et al., 2015). CIQ has been tested for reliability with Cronbach Alpha 0.64 until 0.75 and internal consistencies using split half test with B, between 0.5 to 0.7 indicating unitary construct. (Stoddard et al., 2021) Participants were informed of their rights and confidentiality in the online form, and two researchers were on standby to answer any queries that arose. Participants' age group, ethnicity, education level, monthly household income, employment status, residential type, household type and total number of children and their ages, having a special needs child in the family, and their residential area within Klang Valley are all collected in the socio-economic data questions. Both outcome measure pages provided a brief explanation of how to pick the correct response to each item and were administered precisely as written in the original form.

Method

This was a cross-sectional survey that conducted using an online Google form and distributed to participants (n=126) using easy sampling methods. Parents who were 18 years old or older and who stayed in the Klang Valley during the MCO periods were the intended participants. During MCO periods, we used convenient sampling strategies to reach out to our potential respondents, with online links to the survey being spread via social media and, in particular, WhatsApp. The consent form, the importance of each participant's confidentiality, the study's objectives and significance, demographic information, and the Perceived Stress scale, which scales related to parents who stayed in Klang Valley during MCO periods, their perception of stress, and the Coronavirus Impact Questionnaire for the impact of COVID-19 on parents' social-psychological domains for the previous months were among the survey questions.

Measures

Socio-economic Characteristics

Basic socio-economic characteristics included parents' age group, ethnicity, education, income groups, employment status, residential type, household type and total number of children and their ages, having special needs child in family, and their residential area within Klang Valley.

Perceived Stress Scale

The Perceived Stress Scale (PSS) is a psychological instrument established for community samples of at least junior high school age respondents to evaluate self-reported stress perception. The PSS, which was created by Cohen et al (1983), consists of ten-item scales that assess respondents' feelings and thoughts over the previous month. The subscales are separated into two sections: Perceived Lack of Control (PLC) for items 4, 5, 7, and 8, and Perceived Stress (PS) for the remainder. The PLC assesses the stress coping mechanism, whereas the PS assesses the stress. The 5-point Likert scale score (0=Never, 1=Almost Never, 2=Sometimes, 3=Fairly Often, and 4=Very Often) is flipped on the PLC items according to this item. The total score can range from zero to forty and a higher score will indicate higher stress level which can be graded into three levels of perceived stress: score range 0-13=low stress, score range 14-26=moderate stress and score range 27-40=high perceived stress. The PSS-10 item version has also been approved for use in Malaysian subjects, including healthy people (university students, factory employees) and diabetes patients. Al-Dubai et al., 2015 published a verified Malay version of the PSS-10 item scale. The Malay Version was produced for this study to be available to respondents in case they had any trouble comprehending our online questionnaire (Gillani et al., 2011, Nielsen & Dammeyer, 2019, Mazlan & Ahmad, 2012 and Sandhu et al., 2015)

Coronavirus Impacts Questionnaire

The Coronavirus Impacts Questionnaire (CIQ) was created as one of numerous social-psychology-related surveys to assess how COVID-19 and social distance have affected persons in the United States (Conway et al., 2020). Chung et al. (2020) utilised a shorter 6-item version of the CIQ produced by Conway et al. (2020) in his research. The shorter version has similar psychometric properties to the lengthier form, and it would limit the survey length to a minimum for survey administration. Two elements from each of the three criteria are included in the condensed version (i.e., financial, resource, and psychological impact). It has been tested in the United States (Conway et al., 2020). and Singapore (Chung et al., 2020). The internal reliability of this shortened CIQ scale set is similar to that of the larger scale. The composite score was calculated by summing the scores from the six COVID-19 impact items (M = 2.01, SD = 0.61), with a total score ranging from 6 to 24, with higher scores suggesting that the pandemic had a greater overall influence on the respondent's life (Conway et al., 2020). The score is presented on a 4-point Likert scale ranging from 1 = Not true of me at all 2 = Not very true of me 3=Somewhat true of me 4 = Very true of me. Malaysians also experienced the impact of the COVID-19 pandemic on their psychological health, stress and emotional difficulties caused by school closures and children being confined at home, employment

and finances, access to resources, and a lack of outdoor physical activity because of the lockdown. These situations, when combined with a high level of economic insecurity and a lack of social support, are thought to aggravate parental stress.

Analysis Method

This online survey targeted for 126 participants. The sample size was calculated with G-Power 3.1.9.4 (Faul et al., 2007). All data collected were analysed using Statistical Package for the Social Sciences (SPSS) version 12.0.1 for Windows. Data was analysed with Pearson Correlation to determine the correlation between the impact of COVID19 and the stress level among parents in Klang Valley, and to determine the correlation between lifestyle changes and level of stress among parents during COVID-19. Multiple linear regression used to determine the relationship of stress among parents with socioeconomic factors: employment status, income, residential type and number of children.

Findings and Discussion

This research included 126 parents from Malaysia's Klang Valley. The majority of the parents, 54.8 %, are between the ages of 30 and 39. Meanwhile, the majority of the participants were Malay (83 %). The level of education was mostly Degree (56.3%). The majority of the participants are government employees (64.3 %). Furthermore, the majority of the participants were parents of nuclear families that resided in a landed structure. Table 2 shows that the majority of parents experience moderate stress (73%) and that this has a moderate influence on how they handle their children and household tasks during MCO (62%).

Table 1. Characteristic of the Respondents

Characteristics	Participants	Percentage
Age Groups		
18-29 years old	8	6.3
30-39 years old	69	54.8
40-49 years old	32	25.4
> 50 years old	17	13.5
Ethnicity		
Malay	105	83.3
Chinese	8	6.3
Indian	12	9.5
Others	1	8
Education Level		
SPM	7	5.6
Diploma	13	10.3
Degree	71	56.3
Postgraduate	34	27.0
Current Job		
Government	81	64.3
Private	26	20.6
Self Employed	8	6.3
Unemployed/Housewife/ Househusband	10	7.9
Retired	1	0.8
Monthly household Income		
B40(1)	8	6.3
B40	13	10.3
M40	73	57.9
T20	32	24.5
Type of Residential property		
Landed	86	68.3

High Rise	40	31.7
Household Type		
Nuclear family	113	89.7
Single parent family	11	8.7
Child lives with guardian	2	1.6

Table 2. The Percentage of Perceived Stress Scale and COVID-19 Impact among Participants

Perceived Stress Scale (PSS)		COVID-19 Impact Questionnaire	
	Percentage (%)		Percentage (%)
Low Perceived Stress	23	Mild Impact	11
Moderate Perceived Stress	73	Moderate Impact	62
High Perceived Stress	4	Severe Impact	24
		Extreme Impact	3
Total	100	Total	100

The Pearson correlation was used to establish the relationship between PSS and CIQ in table 3. The results show that there was a modest positive association between stress level and COVID-19 influence, with $r = 0.55$ and $p < 0.01$ respectively. The data was then analysed further to determine if there was a relationship between each lifestyle modification and stress levels. Psychological improvements reveal a moderate positive connection ($r = 0.451$, $p < 0.01$) with all three lifestyle modifications examined by CIQ. Financial and resource resources had a slight positive association with stress levels, with $r = 0.188$, $p = 0.035$ and $r = 0.267$, $p = 0.003$ respectively.

Table 3. Correlation of Stress Levels and Impact on Lifestyle Changes during COVID-19 Pandemic

Test	Correlation	r	p (sig)
Pearson	CIQ scale and PSS	0.550	<0.01*
Correlation	Lifestyle changes and PSS scale	Financial : 0.188	0.035*
		Resource : 0.267	0.003*
		Psychological : 0.451	<0.01*

A Multiple Linear Regression (Table 4) was used to determine the relationship between parental stress levels and sociodemographic parameters (residential type, income, number of children and the employment status). The results of the research revealed that sociodemographic characteristics accounted for 10% of the factors influencing stress levels among parents in the Klang Valley region, $R^2 = .104$, adjusted $R^2 = .074$, $F(4,121) = 3.504$, $p = .010$.

Table 4. The Relationship between Stress Levels and Job Status, Monthly Income, Residential Type and Number of Children

Variable	B (95% of CI)	β	P value ($p < 0.05$)
Job status	0.684	0.118	0.195
Monthly income	0.081	0.011	0.903
Residential type	2.298	0.191	0.033*
Number of children	-1.035	-0.224	0.012*

An open-ended question was asked to the respondents at the end of the questionnaire if there's any other way that COVID-19 had impacted their life. Results of the thematic analysis shown in Figure 1.

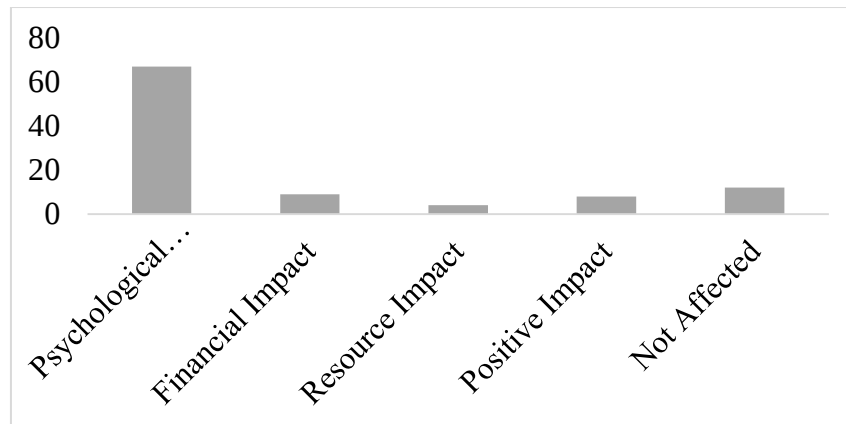


Fig. 1 Thematic Analysis Category

Table 5. Impacts of COVID-19 on Respondents' Life

Categories	N	Percentage (%)
Psychologically Impactful	87	67
Not Affected	16	12
Financially Impactful	12	9
Positively Impactful	10	8
Resourcefully Impactful	5	4

The majority of respondents, n=87 (67 %), stated that the pandemic, together with MCO, had a psychological impact on them. They associate the response with feelings of depression and anxiety about this unpredictable situation (30 %), concern about child education and development due to restrictions on seeing the outside world and feeling burdensome in assisting school-aged child with online learning (29 %), stress in juggling work, house chores, and child-minding (25%), frustration about not being able to travel and cancelling holiday plans (25%), and frustration about not being able to travel (25%) and cancelling holiday plans (16%).

The second highest response was provided by n=16 (12%) who stated that they are unaffected by the pandemic condition. While n=12 (9%) stated that they had lost their work, had been retrenched from their employer, and if they were still employed, they had experienced wage reductions owing to the closing of business premises. However, n=10 (8 %) of those polled had a favourable opinion of the pandemic scenario. One responder says that working from home has made her happy since she no longer has to sit in traffic for hours on end. Other respondents indicate that being at home has brought their families closer together. Among all responders, n=5 (4%) reported that the pandemic crisis had an impact on their resources. As previously said, resources are the limitations on access to the laboratory/office/firm/class, which causes project/work duties to be postponed. None of the respondents complained about a lack of resources for daily necessities such as meals, groceries, clothing, and so on, maybe owing to the availability of an online shopping platform.

Lifestyle changes are divided into three categories in this study: financial, resource, and psychological adjustments. Covid Impact Questionnaires, which include these three criteria, are used to assess these changes. According to the findings of our study, there is a relationship between lifestyle modifications and parental stress levels. The psychological aspect has the greatest impact, followed by resources, and finally finances (Abd Rahman et al., 2020; Saat et al., 2020). Considerably without a pandemic, parenting is a difficult undertaking; nevertheless, it becomes even more difficult during the epidemic time (Abdullah et al., 2020; Kadir et al., 2021).

It is not unexpected that psychological changes have the greatest impact on our sample population, which consists primarily of young parents with a bachelor's degree and a household income of M40. This is owing to the lack of assistance that this group of parents often had prior to the epidemic. Babysitters, nurseries, kindergartens, and schools are examples of support systems that help parents manage their children while they are at work. All of these support networks are gone during the epidemic, leaving parents to balance their children, employment, home duties, and a slew of other

responsibilities on their own. This is not just physically but also mentally taxing (Karpman et al., 2020).

Parents also have difficulty getting daily necessities, even when all of the grocery stores are open as usual. There are very strict rules to follow, such as the number of passengers in a car, road blocks, and movement radius limits, all of which make it difficult for them to get their daily necessities while also caring for their children and working. Some people deal with it by stockpiling so they don't have to go out as much to obtain what they need. Panic purchasing occurs when people observe others buying and are influenced to do the same, even if they do not need it. During a pandemic, it is self-preservation behaviour (Yau et al., 2020). As we can see from the findings of this study, parents who live in metropolitan areas are less influenced by this. This might be owing to the availability of food and grocery delivery services. Postal services may also be used to acquire such non-essentials, thanks to the emergence of several internet platforms. Families have been cut off from most of their support system and childcare alternatives as a result of stay-at-home orders and greater protection for the elderly, with day-care centres, sitters, and grandparents often unable to assist parents. (de Miranda et al., 2020)

During the epidemic, many individuals lost their jobs and their income was cut. However, this research indicates that money is not a concern for these parents. The bulk of them are employed and hail from middle-income families, according to the results. In addition, the government has granted financial relief to assist the people in dealing with the effects of the epidemic and lockdown. (Shah et al., 2020).

The relationship between four socio-demographic parameters and parental stress levels was investigated. Current employment position, monthly income, type of residence, and number of children are all socio-demographic characteristics to consider. In our study, the type of residence and the number of children had a strong association with the stress level of the parents. In our research, the number of children has an inverse association with stress levels. This might be due to a need to engage the kid in meaningful activities without the assistance of other childcare providers, siblings, or older children, as well as other demands such as working from home, domestic chores, a lack of personal space, social isolation, and paycheck deduction. This circumstance might also result in overwhelming tiredness as a result of one's parental responsibilities. Parents are emotionally drained by their parental responsibility to the point that just thinking about it makes them anxious. (Mikolajczak et al., 2018). Parents may be obsessed with homeschooling administration, length, and outcomes; they may have worries about their capacity to convey COVID-19 information to their children in a way that assures their safety (Fontanesi et al., 2020).

The child's socio-demographic characteristics and unique characteristics explain far less variation than one might predict. This isn't to say that these things don't play a role or that they can't serve as risk factors themselves. (Mikolajczak et al., 2018). Positive aspects of the scenario for parents may include the chance to spend more time with their family and children (Fontanessi et al., 2020). Income level and present employment status had a less significant association with stress level among parents, which might be attributed to the fact that the majority of the recruited sample (58%) and T20 (25%) respectively, are in their forties and twenties. The government also gave statutory and financial assistance during the COVID-19 Crisis as part of the Economy Stimulus Package. As a result, in our investigation, these two socio-demographic factors had less of an influence (Ridzuan et al., 2021). The study's implication was that it was critical to understand how COVID-19 affected parents' levels of stress during the pandemic in order to screen for and identify parents who required community support. According to this study's findings, there was a substantial relationship between parents' financial, resource, and psychological stress during COVID 19. Government, non-governmental organization, and the community should be aware of this and identify measures to lessen the burden on parents who were impacted by the pandemic, which may have an impact on their everyday activities in the post-pandemic period.

Conclusion

According to the findings of this survey, the majority of parents in the Klang Valley area are under considerable stress. Part of this anxiety stems from the COVID-19 pandemic, since our findings

reveal a substantial link between parental stress and the pandemic. Because parents are psychologically influenced by the epidemic, lifestyle changes contribute to the amount of stress. The number of children living at home and the kind of residential property (landed/high-rise) have an impact on parents' stress levels. Parental stress has detrimental repercussions not just for the parent's health and well-being, but also for the child's development. COVID-19-related stressor accumulation is a major risk factor linked to increased parent-perceived stress. Therefore, it is important for both government and non-government organisations to implement a strategy that may consider reducing the burden of COVID-19's effects on parents and their readiness for post-COVID scenarios.

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