

### **SOCIAL SCIENCES & HUMANITIES**

Journal homepage: http://www.pertanika.upm.edu.my/

Case Study

# Impact of COVID-19 Pandemic in Malaysia: A Critical Survey

Noramalina Abdullah\*, Nur Zatil Ismah Hashim, Intan Sorfina Zainal Abidin and Sarah Madihah Mohd Shazali

School of Electric and Electronic Engineering, Universiti Sains Malaysia, Engineering Campus, 14300 Pulau Pinang, Malaysia

#### **ABSTRACT**

Since the COVID-19 outbreak was discovered in Malaysia on January 25, 2020, it has impacted many aspects of Malaysian life, including health, lifestyle, and economic changes. As a result, this study was carried out to conduct a more thorough investigation into the problems and effects experienced by the public in Malaysia as a result of the disease outbreak. The study was conducted for six months, from January 2020 until June 2020, and 100 people were chosen randomly as the study sample. The method employed online questionnaires administered via the Google Forms platform. Based on the study's results, the COVID-19 pandemic negatively impacts the community's physical and mental health, especially among students and employees. COVID-19 also affects peoples' lifestyles, and many have difficulties adapting to the new norms, as these changes involve how people socialize, learn, and work. The study also found that COVID-19 also negatively impacts the economy of individuals, communities, and countries, based on the current spending of Malaysian society and the affected industrial and worker conditions.

Keywords: COVID-19, Google forms, impacts of COVID-19, Malaysia, survey

#### ARTICLE INFO

Article history:
Received: 21 August 2021
Accepted: 14 July 2022
Published: 01 December 2022

DOI: https://doi.org/10.47836/pjssh.30.4.20

E-mail addresses:
eenora@usm.my (Noramalina Abdullah)
zatil.hashim@usm.my (Nur Zatil Ismah Hashim)
intan.sorfina@usm.my (Intan Sorfina Zainal Abidin)
sarah.madihah@yahoo.com (Sarah Madihah Mohd Shazali)
\* Corresponding author

ISSN: 0128-7702 e-ISSN: 2231-8534

### INTRODUCTION

Novel Coronavirus 2019, or COVID-19, is a type of virus that infects the human respiratory tract. The outbreak of the disease has shocked the entire world with the extent to which it affects individuals, communities, and the economy. The disease's first outbreak was discovered in early December 2019 in Wuhan City, China (Guo et al., 2020).

Malaysia discovered its first case on January 25, 2020, involving three Chinese nationals in close contact with infected people in Singapore (Elengoe, 2020). The Malaysian Ministry of Health (2021) reported 2.79 million cases of COVID-19 infection as of January 8, 2022, with a total death toll of 31,678. Aside from health implications, the disease outbreak has a wide range of consequences regarding the physical change, mental health, life norms, and social and economic factors.

# **Impacts on Physical and Mental Health**

The community was very concerned about the COVID-19 infection due to the high rates of illness and its implications on individual physical health. Most infected people experience flu, fever, or a loss of taste, which will disappear after a period. However, some cases have more severe symptoms, such as pneumonia, which can be fatal.

COVID-19 also indirectly impacts the public's general health because of lifestyle changes and lack of physical activities following the government's Movement Control Order (MCO) enacted to stop the virus from spreading into the community. Individual weight gain is one of the consequences of the lack of physical activities. For example, a study on the population of Spain conducted by Sánchez et al. (2021) discovered that 44.5% of the 1000 respondents gained weight during the country's lockdown. This weight change is alarming because it can lead to more dangerous diseases such as obesity, heart

disease, and high blood pressure, putting people at more risk when dealing with COVID-19 infection (Sattar et al., 2020).

Besides changes in body weight, another indirect effect of COVID-19 on physical health is eye strain, fatigue, and back pain. The new method of studying and working online from home has caused people to be exposed to longer screen time compared to normal conditions. These problems are common among workers who spend hours in front of the computer doing desk jobs. However, due to the implementation of MCO, where schools were closed and students were forced to study online, these problems have also begun to affect students from an early age. According to research by Kaya (2020) on 402 university students, online education during this COVID-19 pandemic has negatively affected university students' eye health. The deteriorating eye health was due to increased eye fatigue due to prolonged exposure to the screen. Similar results were obtained by Ting et al. (2020), where the primary subjects were students in primary school in Sarawak. The research reported that headaches, eye strain, and pains in the neck, shoulder, and back were among the common health issues faced by these students.

In addition to physical health, the outbreak also poses severe negative impacts on the mental health of individuals, though most people are still unaware of its implication. Compared to physical health, mental health is still stigmatized or considered taboo, so it is not usually up for public discussion. The 2017 National Mental

Health Study reported that at least one in every five youths suffers from depression and is a proclivity to commit suicide (Ashaha, 2019). The number is also expected to rise because of the implementation of the MCO, which requires the public to remain at home for extended periods. According to the Malaysian Ministry of Health, 44,000 calls about mental health issues were received in 2020 (Mat Ruzki, 2021), and it has increased drastically to an alarming level in 2021. The Psychosocial Support Helpline reported that between January 1 and June 18, 2021, the line received 110,000 calls requesting emotional support and counseling (Mohd Noor, 2021). Furthermore, MOH data revealed that 1,080 suicide attempts were treated in MOH hospitals in 2020 (Roslan, 2021). Gritsenko et al. (2020) also discussed the increasing number of cases of substance abuse and suicidal behavior due to the declining state of mental health during the pandemic. Cases of substance use, such as tobacco, cannabis, alcohol, or prescription drug, were increasing as they were used as a coping mechanism when dealing with the stress, anxiety, or depression they had during the pandemic.

Many factors contributed to the deteriorating state of mental health in the community. Additional stresses derived from adapting to the new life norms have been identified as one of the causes, and students were among those who were heavily affected by these changes (Commodari & La Rosa, 2020). For students, apart from the changes in daily life related to COVID-19, factors such as declining academic perspectives,

vast e-learning adoption, financial issues, and social restrictions were some of the identified stressors (Browning et al., 2021; Cielo et al., 2021). In a study by Moy and Ng (2021), 80% of the participants agreed that online learning was not as effective as face-to-face learning due to several factors. It caused stress among students as they had more difficulty coping with their studies. Students also reported that they have more homework compared to before they started online learning, thus causing them to have little free time to relax and de-stress (Commodari & La Rosa, 2020). In a study done by Islam et al. (2020) on a total of 476 university students living in Bangladesh, it was reported that they suffered from severe depression and anxiety. Apart from these effects, Cielo et al. (2021) reported other common mental effects, such as eventspecific distress and changes in sleeping habits.

On the community level, the additional stresses derived from the changes in new life norms have been identified as one of the causes of the increasing mental health problems. In addition, other factors influence societal mental health, such as employment, learning, social, and economic factors. The loss of family members due to COVID-19 infection is also one of the causes of mental health deterioration in Malaysia (Roslan, 2021). Due to issues such as job losses and business failures, the pandemic has had a significant impact on employees and employers. According to a Berita Harian report, over 800,000 Malaysians have lost their jobs because of the COVID-19

pandemic (Parzi & Abd Karim, 2020). Loss of main income or dependent position adds to the individual's stress and causes mental health to deteriorate. Individuals still working face difficulties such as salary reductions and increased working hours. Individuals with salary deduction issues must work part-time to support their income. This increase in working hours and lack of rest causes physical and mental stress in the individual.

Frontliners and critical sector workers are among those who frequently experience extreme stress and fatigue because of long working hours (Roslan, 2021). Untreated stress can potentially contribute to worse outcomes, such as suicide. According to the report by Utusan Malaysia newspaper, in Penang alone, on average, at least 10 people have committed suicide in a month (Ismail, 2021). It refers to data indicating that 53 suicide cases were reported between January and May this year. During the same time frame, 19 suicide attempts were also reported. High debt burdens because of job loss, stress, and family problems were among the factors that prompted people to commit suicide during the COVID-19 pandemic. Apart from the working environment, the individual living condition also affects a person's mental health. People who live in apartments or flats are more stressed than those who live in landed houses. Lack of space to take a breather and walk around has caused them to stay inside, which can be stressful in the long run. This problem is evident when many people live in the same household. The absence of personal

space for individuals to study or work might also disrupt the learning and working process, which will then cause more stress to accumulate.

Apart from students and working adults, COVID-19 affects pregnant mothers' physical and mental health. In terms of physical health, even though pregnant women were found to have a similar risk of infection compared to the general population, there is growing evidence showing that they are at higher risk of developing severe illness once infected with COVID-19 (Wang et al., 2021). They were shown to be more likely to be admitted to the intensive care unit, to be intubated, to require mechanical ventilation, and to be at higher risk of composite morbidity (Kotlar et al., 2021). Pregnant women infected with COVID-19 were also at higher risk of pregnancy complications, such as fetal distress, preterm delivery, stillborn, and miscarriage (Kotlar et al., 2021; Rasmussen et al., 2020; Royal College of Obstetricians & Gynaecologists, 2021). The lack of a limited number of physical activities due to quarantine also affects the physical health of pregnant women. Biviá-Roig et al. (2020) reported that during quarantine, there was a significant decrease in the amount of physical activity, such as walking, and participants spent more time sitting during quarantine. In his study, the decreased number of physical activities by pregnant women was attributed to the lack of space.

In terms of mental health, several studies were done on the relationship between COVID-19 and the mental health condition

of pregnant women. In a study by López-Morales et al. (2021), pregnant women had a more dramatic rise in depression, anxiety, and other negative effects than nonpregnant women. The study was conducted during quarantine, and the isolation due to COVID-19 was found to be one of the contributing factors to the increase in depression and anxiety amongst pregnant women, apart from anxiety about possible obstetrical outcomes such as fetal death or fetal abnormalities (Saccone et al., 2020). A similar study was done by Ayaz et al. (2020) and Kotlar et al. (2021) on the effect of COVID-19 on pregnant women during and before the pandemic, which also showed increasing effects in the number of pregnant women with anxiety and depression during the pandemic.

# **Impact on Lifestyle Changes**

Individual Lifestyle. Apart from health concerns, COVID-19 infection has indirectly impacted societal lifestyle changes. Adapting the new rules for individual aspects means adjusting people in response to the country's pandemic to meet personal and environmental survival needs. In addition to practicing social distancing when visiting public places, authorities require wearing a facial mask for everyone who visits public places such as offices, shops, hospitals, markets, and others. The adaptation of these new norms, based on the World Health Organization (WHO) recommendations, has been shown to curb the spread of the virus (Mohamed & Wan Sulaiman, 2020). However, the government

has also implemented the MCO to reduce the spreading further, prohibiting cross-state and district and implementing learning and work sessions from home. In addition, most public places, such as shopping malls, gyms, and others, were closed as part of the MCO implementation. These factors contribute to decreased physical activity and cause people to become inactive.

According to a report from Hu et al. (2020), out of 1,033 respondents, 40% of respondents reported having physically inactive leisure time, and about 90% of respondents reported increased screen time. A study conducted in India by Chopra et al. (2020) reported that the mean score difference for involvement in moderateintensity aerobic exercise before and during the pandemic was -0.12. Meanwhile, for participation in leisure activities, the difference was 0.49, indicating that most respondents lived sedentary lifestyles. The same report also stated that 1/3 of respondents had gained weight during the pandemic. Regarding dietary style changes, in a report by Hu et al. (2020) involving respondents from China, about 30% of them began to practice healthy eating styles during the pandemic. In the report by Chopra et al. (2020), which involved respondents from India, it was reported that half of the respondents had no changes in their diet, 29.9% ate healthier, and 18.56% had a worse eating diet compared to before the pandemic. Based on surveys conducted, among the factors influencing these dietary changes were fear of the spread of the COVID-19 virus (43.8%),

preferring home-cooked food (25.2%), and being less involved in outdoor dining and social activities (23.6%). Although there are positive changes in nutrition style, they cannot help improve the overall life of society if society still adopts a sedentary lifestyle.

Working Methods. The new norm challenges employers and employees in terms of work culture. Minister of Human Resources Datuk Seri M Saravanan said workers and employers need to change how they work, think, act, and interact in tandem with the current situation (Fazlul Haque, 2020). Working from home is a new norm that requires efficient personal adaptation methods for all employees and employers to maintain the quality of a job. Employers have used various methods to accommodate their employees' needs, including flexible working hours, job sharing, job rotation, weekly shifts, and project-based work schedules. The element of flexibility has been in use in Malaysia since 1998, when the government implemented Phased Working Hours across all federal government agencies. It was later enhanced with Flexible Working Time in 2019 (Abdull Rahman, 2020). Simultaneously, these flexible work arrangements can assist low-income female workers in supplementing family income by doing part-time work at home, managing the family's well-being, and reducing family expenses such as childcare costs. Employees can also better organize their work schedules and spend more time with their families. Transportation can also save time and money because they do not have to commute

to work. Flexible work arrangements made by employers and employees can aid in adapting to new norms and ensuring job stability. Despite its many advantages, working from home also has its drawbacks. One common challenge when working from home is gaining stable internet access. In addition, more stress may also occur when work is disrupted due to environmental disturbances, such as managing children while working from home (Sulaiman, 2020).

Learning Methods. The new norms in the education system during COVID-19 also require school students and institutions of higher learning to begin learning from home. They must use video conferencing applications that require stable internet access, such as Zoom, Skype, Google Meet, and others, similar to many workplaces that work from home. While online learning is an important requirement in Industrial Revolution Education 4.0, the constraints faced by some students should also be considered. According to Berita Harian (Capaian internet, 2021), one of the major challenges faced by many Malaysian students who want to study online is the lack of proper electronic gadgets and internet access, particularly students from families in the B40 group and students living in rural areas. Harun et al. (2021) survey revealed that 74% of students faced internet coverage problems and connectivity issues in online T&L.

The consequences of being unable to attend classes due to a lack of a suitable gadget and stable internet access cause some of the students to be dropped from the learning session, thus affecting students' overall academic results (*Capaian internet*, 2021). These problems are more evident in new students entering schools or higher education. For current students who have experienced online learning before, adapting to the same learning method in the following year is fine. As for students who are having their first sessions of school through online learning, the process of adapting will be harder. The lack of direct communication between students, teachers, and classmates makes learning more challenging.

It will be more critical if the students are in a non-conducive place to learn and are disturbed by their siblings. The same problems were also faced by teachers, as they had to come up with a new syllabus and teaching techniques to deliver their lessons as transparently as possible to the students. In conjunction with the learning method, Alam and Parvin (2021) have studied the impact of students' job readiness in higher education for pre and post-COVID-19. They have suggested that a proper policy framework should be enforced to avoid a "diploma disease crisis" (p. 2) to secure the quality and integrity of education.

## Impact on the Economy

Income loss is one of the most serious consequences of the COVID-19 pandemic. According to Berita Harian news, over 800,000 Malaysians have lost their jobs (Parzi & Abd Karim, 2020). Among the people facing this problem are individuals who traded on a small scale, following the implementation of the MCO, which ordered

the closure of most shops that are not in the group of essential services, such as medicine and food. Most traders started trading after being laid off from work. Those who receive daily wages working in farmers' or night markets are most affected (Abdul Aziz, 2021). In addition to small traders, workers in the tourism and transportation industries are also affected due to the freezing of the tourism sector at home and abroad during the pandemic period. Among the airlines affected by the COVID-19 pandemic was Malindo Airways Sdn Bhd, having to lay off approximately 2,200 employees (Bernama, 2020a). For those still employed, some companies made salary deductions ranging from 30% to 50% on the grounds that their business is impacted (Kamarulbaid, 2020). As a result, workers may need to supplement their income by working as food delivery drivers through the Grab Food or Food Panda applications.

The Malaysian Department of Statistics (DOSM) also conducted an online study to investigate the impact of COVID-19 on the economy and individuals. The study found that 78,372 surveys out of 168,182 admitted to losing employment because of the COVID-19 outbreak (Halid, 2020). According to the study, it was found that 71.4% of the respondents who worked had financial savings, which could last them less than one month. The study also discovered that job losses in the agriculture and services sector were higher than in the other sectors, accounting for 21.9% and 15% of total respondents, respectively. Apart from the impact at the individual level, the country's economy was similarly affected by the COVID-19 pandemic. In 2020, Malaysian Prime Minister Tan Sri Muhyiddin Yassin announced that Gross Domestic Product (GDP) had decreased by RM10.8 billion from RM17.3 billion due to losses from the tourism sector (Adnan & Halid, 2020). Apart from the tourism sector, the services and trade sectors also suffered losses, thus affecting national income.

#### **METHODOLOGY**

The survey method was used for the study, one of the methods of inference study that uses quantitative and qualitative data obtained from the investigation session. It was carried out online using the Google Form platform, where the respondents were required to answer the questions on the form provided. We have tailored the survey and referred to the requirement listed in the CHERRIES (Eysenbach, 2004) checklist to investigate the results of the Web Survey. For example, it states that the survey should be designed with either convenience or hard questions or either open or close questions.

## **Study Duration**

The review period takes six months, from January 2020 until June 2020. The questionnaire was distributed during the survey, and the results were recorded and analyzed.

# **Sample Selection**

The respondents in the sample were chosen at random. One hundred people were randomly chosen to answer the questionnaire: students and non-students. The Google Forms questionnaire was distributed via the WhatsApp, Facebook, and Twitter applications. This method was preferred because the respondents were civilians who did not live in a specific area, making it easier for distribution purposes and more cost-effective and time-saving. The distributed questionnaires are more than 100. When we received 100 responses, we took them for the further participated subject since it already complied with a normal population in a simple random sampling.

## **Study Instruments**

The study used online questionnaires to collect data for this study. The questionnaires are distributed using Google Forms. Respondent feedback is used as the primary data in this study. This questionnaire is divided into five sections: (i) respondent's background, (ii) changes in health, (iii) changes in lifestyle, (iv) changes in working or studying methods, and (v) economic change among Malaysians. The data obtained from 100 respondents are analyzed and presented by the researchers in the form of pie charts, bar graphs, and schedules. Analysis or discussion of the data is incorporated along with the data presented. Graphs are chosen since they are a powerful tool to display quantitative data that can be measured and focus on numbers and statistics. The data presented in this study only includes 100 random respondents, which are grouped into simple categories to be presented in pie charts and bar graphs.

#### RESULTS AND DISCUSSION

### **Respondent Demographics**

The study included 100 Malaysian residents from various states, including 30 women and 70 men (Table 1 and Figure 1). The majority of the 100 respondents were between the ages of 21 and 30 (44%) and between the ages of 12 and 20 (40%). The numbers were followed by 4% from the 31–40 age group, 5% from the 41–50 age group, and 7% from the 51 years old and above age group. However, the information about ethnicity was not included in the consideration.

Most respondents (80%) were unemployed since they were still studying

Table 1 Statistic of respondents according to their age

Age	Percentage (%)
Below 12	0
12–20	44
21–30	40
31–40	4.5
41–50	4.5
51 and above	7

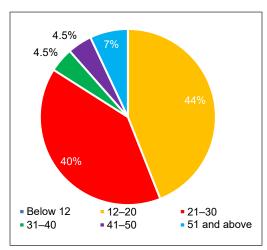


Figure 1. Respondent's age group

or furthering their studies at university (age 25 and under; Figure 2). Only 16% of the respondents were currently employed, and the remaining 4% were pensioners. Fiftyone percent of the respondents live in urban areas, and the rest live in rural areas.

# **Changes in Health**

**Physical Health.** According to the findings, 63% of respondents followed a typical three-meal-a-day schedule (Figure 3). However, 69% of respondents experienced a weight gain of 1–5 kg after the MCO (Figure 4).

Although most of them followed a regular mealtime schedule, weight gain still

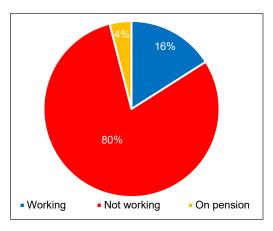


Figure 2. Respondent's employment status

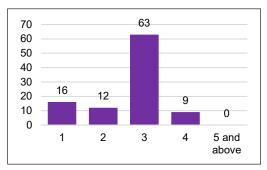


Figure 3. Frequency of food intake in a day by respondents

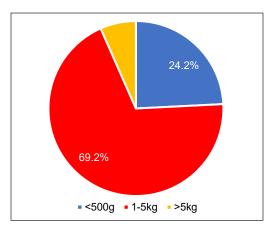


Figure 4. Changes in the weight of respondents after the Movement Control Order (MCO) was implemented

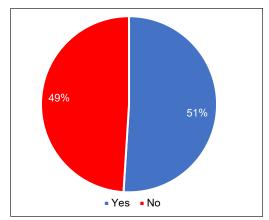


Figure 5. Number of respondents who experienced stress during the COVID-19 pandemic

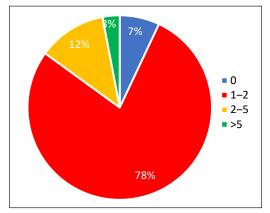


Figure 6. Frequency of respondents leaving home within a week during the pandemic

occurs due to changes in the individual's daily routine. During MCO implementation, Malaysians are only allowed to work or study from home. Lack of movement and physical activities are among the causes leading to individual weight gain. Weight gain can lead to more serious diseases such as obesity, heart disease, and high blood pressure if not addressed early.

Mental Health. Fifty-nine percent of respondents experienced stress during the COVID-19 pandemic (Figure 5). Stress can cause emotional instability resulting from job loss, changes in learning and working methods, physical changes, and unsecured personal safety. Furthermore, most students, employees, entrepreneurs, and academicians focus less on their mental health. Society's stigma regarding mental health also prevents individuals from getting proper help immediately.

### **Changes in Lifestyle**

Lifestyle. The implementation of the MCO that restricted the movement of Malaysians caused them to adapt to a new norm. Most respondents (78%) only came out of the house 1–2 times a week (Figure 6). Aside from the fear of the virus, MCO influenced the frequency of people leaving the house. They only leave the house for important reasons, such as purchasing household goods or resolving important issues. Shopping habits also change because people tend to buy in bulk to reduce the frequency of shopping physically. Online learning also eliminates the need for students to attend

school, resulting in a reduction in the frequency they leave the house.

When it comes to shopping, 77% of respondents prefer to shop online (Figure 7). Online shopping can be done at home, avoiding crowds and the risk of infection while shopping. Aside from the shopping method, most respondents (85%) have changed their shopping habits and shop with greater caution, as they need to save more than before (Figure 8).

Aside from spending habits, the length of time spent using electronic devices such as mobile phones, computers, tablets, and others was also examined. Changes in time spent using electronic devices are associated with changes in work and learning methods. For example, since the beginning of the COVID-19 pandemic, the online teaching and learning process has been fully implemented in all levels of education, from primary schools to higher learning institutions, to ensure the sustainability of teaching and learning sessions. Furthermore, some industries work from home and convert all documents to digital copies that can be accessed via electronic devices.

Thirty percent of respondents who use electronic equipment at work spent more than 10 hours daily, 20% spent 5 to 10 hours online, and most (41%) use electronic devices for less than 3 hours (Figure 9). However, the findings showed a significant improvement compared to before the MCO, as there are 50% of respondents used electronic devices for more than 5 hours. This data only focused on the usage during

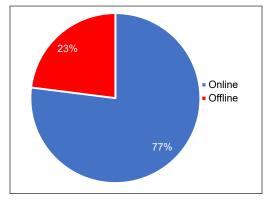


Figure 7. Respondents' choices on how to shop during the pandemic season

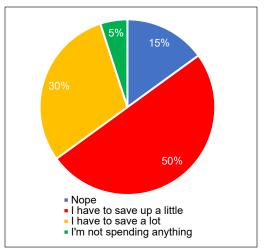


Figure 8. Changes in spending habits during the COVID-19 pandemic season

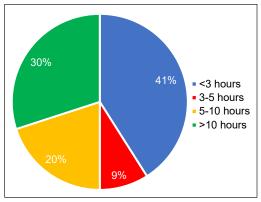


Figure 9. The use of electronic devices for work during the pandemic

working or studying and did not account for leisure. The use of electronic devices has the potential to harm the eyes in the long run.

Although the pandemic causes many shifts in working and learning methods online, which have drawbacks, it also has advantages. Some traders who cannot trade in the night market or shop can conduct their business online via social media platforms such as Facebook, Instagram, WhatsApp, and Twitter. It helps them to expand their market and, in turn, reduces the risk of exposure in public places. People's shopping habits in supermarkets, wet markets, and other store locations can also be improved because of increased exposure to e-commerce during the year.

Working Methods. According to a report from the Employee Insurance System (SIP) of the Social Security Organisation (SOCSO), there was a 42% increase in job losses in Malaysia for the first quarter of 2020, during the MCO period (Bernama, 2020b). Among the affected service sectors are transportation, tourism, food and beverage, and other small and medium

enterprises (SMEs) that require face-toface activities. Many businesses could not survive more than two months and had to be closed due to losses despite receiving various assistance from the government. Eighty percent of the respondents were unemployed, and only 16% had jobs (Figure 2). Most respondents were likely university students or had lost their job due to this pandemic. Simultaneously, to combat the spread of COVID-19, the concept of working from home has been implemented across the globe. According to the findings, 42% of those who worked said their working hours had increased since the COVID-19 pandemic began. At the same time, 58% of respondents did not experience an increase in working time due to factors such as not having a job or being a university student (Figure 10). The research was also conducted to see if working or learning online can help improve the efficiency of individuals in their field. Based on the data received, 79% of respondents agreed that changes in the new norms of working from home and learning online do not help improve efficiency (Figure 11).

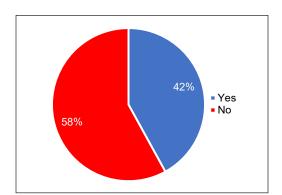


Figure 10. The increase in respondents' working time during the pandemic compared to before pandemic

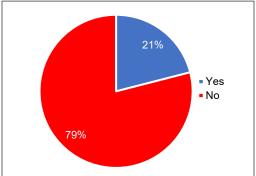


Figure 11. Increase in efficiency in working or learning from home

Among the factors mentioned are disruption from the surroundings, internet access issues, and others. Furthermore, the shift in norms has caused stress due to the lack of communication. Following the pandemic that affected approximately 1.5 billion students and families worldwide, governments in various countries have chosen distance learning methods to overcome the challenges by strengthening teacher support and reassessing assessment and examination policies. Among the methods for students to continue their education are online platforms, television, radio, and the provision of educational materials to be brought home. However, according to UNESCO and the International Telecommunication Union (ITU), 40% of students involved in school closures do not have internet access as of last May 2019, allowing many students to drop out if the school continues to close.

Seventy-five percent of respondents agreed that the main factor that affected Open and Distance Learning (ODL) was the lack of focus in online learning (Figure 12). Unconducive home environment, unattractive learning materials, internet access problems, failure of technology equipment used, inappropriate scheduling, and a lack of parental and pupil support in subjects are among the causes that affected the focus of learning. Most respondents (70%) believed internet instability was the most significant factor influencing learning. Most respondents who are students and studying at the university frequently faced internet instability during learning sessions and tests, indirectly hindering them from getting current information and notices on time.

Aside from a lack of focus on learning and internet access issues, 57% of respondents believed that changes in school sessions and tests also impact education and learning quality. The tight scheduling of the school session has replaced the face-to-face final examination with tests and assignments. Although tests and paperwork can be a medium for assessment, they also become a burden and pressure on students who have to deal with all subjects in a short period.

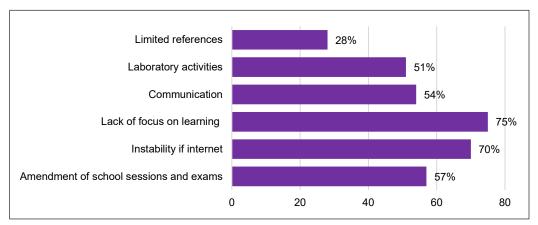


Figure 12. The factors that affected the Open and Distance (ODL) process during the pandemic season

The impact of the affected ODL process can be seen in Figure 13, where the majority believed that understanding the course has the highest impact (40%). Due to a lack of physical training programs and skill enhancement processes, most students are unable to master their soft skills, social skills, and technical skills. In addition, because of the change in the ODL method, the final examination system, which was previously held physically in the examination hall, had to be changed to online, which raised concerns about students' honesty in answering the examination. Other aspects, such as the accreditation documentation process, also affect the development of students.

The new ODL method had the second greatest impact on learning quality (32%). It includes experiments and learning materials that must be modified and improved to be delivered via an online system. Teachers and students are also hampered by the quality

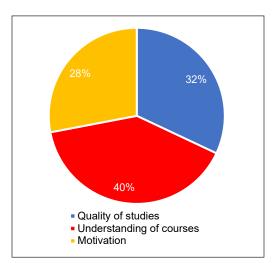


Figure 13. Impacts of the ODL methods on primary school students, secondary school students, and university students during the pandemic season

and method of delivery because teachers need to familiarize themselves with online delivery system techniques for teaching and learning activities. The last effect was in terms of student motivation (28%). Most students focus on academics and can work independently to complete their assigned tasks. However, motivation will be reduced at home due to a less focused and active learning environment.

## **Changes in Economic**

Individual Economics. The spread of COVID-19 had an impact on the community's economy as well. Many Malaysians have lost their jobs and sources of income because of the pandemic. The MCO, which was implemented for six months, has also restricted the various activities of the community and business. Ninety-three percent of respondents maintain food supply throughout the MCO (Figure 14). However, only 7% of respondents reported experiencing food shortages. It could be due to the respondent's location, which makes obtaining food supplies difficult.

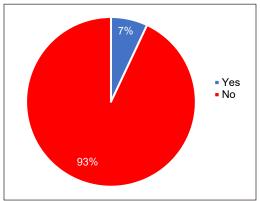


Figure 14. Respondent with a food supply that was cut off during the Movement Control Order (MCO)

Figures 15 and 16 depict respondents' employment status during the COVID-19 pandemic and the community's current salary-cutting situation. Most respondents, 87%, still have full-time jobs (Figure 15). In addition, most respondents, 91%, did not face a salary cut during the COVID-19 pandemic (Figure 16).

State Economy. Forty-three percent of respondents reported that during the pandemic season, most shops in their area had to close (Figure 17). The remaining 57% of respondents reported that shops in their area were still open for business. The questionnaire is intended for the sectors near the respondent's location. Due to the decrease in recreational spending and movement control among the community, most manufacturing and service sectors, such as accommodation, arts, entertainment, and recreation, and other services, such as beauty centers and salons, had to close. Among the sectors that are less affected due to the pandemic are the food and health sectors. Figure 18 depicts the responses to the questionnaire on the impact of COVID-19 on economic change in Malaysian society. It was discovered that each respondent viewed the economic changes brought about by COVID-19 differently. Most respondents (51%) strongly agreed that the bankruptcy rate increased during the pandemic. It is due to the reduced investment activities by the community because of the extremely lowprofit rate. Furthermore, the market index situation showed an increase in the number of bankrupts.

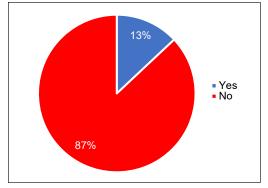


Figure 15. Work provisions during the COVID-19 pandemic

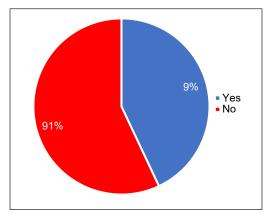


Figure 16. The situation of salary cuts during the COVID-19 pandemic

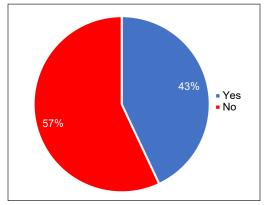


Figure 17. Situation of closure of business premises in residential areas of respondents during the COVID-19 pandemic

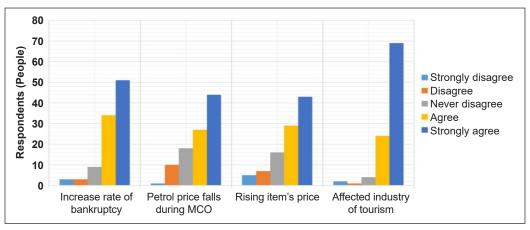


Figure 18. Impact of COVID-19 on the country's economy

Also stated in the figure, 44% of respondents agreed with the statement that petrol prices fell during the MCO. However, most respondents believed that the petrol market was oversaturated due to the reduction in demand for petrol during the MCO. One of the reasons for the drop is the reduction in human movement during the pandemic season.

Subsequently, 43% of respondents strongly agreed with the statement that a price increase occurred during the pandemic season. During the pandemic, there is a greater demand for goods and a limited supply. Rising prices for these goods resulted from trade activities within and outside Malaysia that were halted during the COVID-19 pandemic. According to the survey, 69% of respondents strongly agreed that the affected tourism industry could impact the Malaysian economy. Most Malaysians involved in the tourism industry were impacted by the COVID-19 pandemic, which resulted in the cancellation of tourism activities, causing them to lose their jobs and sources of income.

# Strength

This study describes the impact of the COVID-19 pandemic in a detailed and elaborated manner, consisting of all three major socio-economic sectors, namely health, lifestyle, and economy. This study's strength lies in the literature review on all three major sectors and in the survey conducted using the easiest medium widely available to the public, the Google Form. Google Form is a user-friendly platform, easily accessible for the respondents to understand and fill in the questionnaire, and a straightforward tool for the authors to create the questions. At the end of the survey, responses from various backgrounds (studying or working) were successfully captured to reflect the true impact of the COVID-19 pandemic.

In addition, several governmental policies and campaigns are already in line with this study. First, a new socioeconomic package named PRIHATIN Rakyat Economic Stimulus Package worth RM 250 billion was announced as early as March 2020 as part of continuous efforts

to reduce the effects of COVID-19. The package includes the following beneficiaries: healthcare, front liners, civil servants, students at higher learning institutions, business owners, telecommunication companies, insurance policyholders, and small and medium-sized enterprises. It has been designed to safeguard the people's welfare, support businesses, and strengthen the economy (Md Shah, 2020).

To cope with the adverse effects of the COVID-19 pandemic, the government has imposed social restrictions such as international travel control (IT), restrictions on gatherings (ROG), stay-at-home requirements (SAHR), and workplace closures (WPC). The WPC policy tends to reduce economic activity significantly as it stops the agents of the economy from engaging in business and also makes the investors pessimistic about the stock market. However, the SAHR policy is positively and significantly related to economic activity and stock prices. As reported in previous sections, people appeared to have changed their shopping habits during the MCO, as their movements were restricted to their homes. Now they prefer online shopping as it has become convenient to deliver purchases straight to the doorstep. As a result, logistics and shipment activities are growing, even though people are restricted at home (Keh & Tan, 2021).

This study shows its relevance at the international level as the International Labor Organization (ILO) performed a policy review for protecting and supporting enterprises (Lim, 2020). There are four pillars: The ILO Policy brief on COVID-19

Pillar 1 is concerned with stimulating the economy and employment; The ILO Policy Brief on COVI-19 Pillar 2 will look into the supporting enterprises, jobs, and incomes; ILO Policy Brief on COVID-19 Pillar 3 concerned about protecting workers in the workplace; and finally, the ILO Policy Brief on COVID-19 Pillar 4 will pay attention to the need for social dialogue in addressing the COVID-19 crisis.

#### Limitation

Nevertheless, due to the time and resources constraint (caused by the enforcement of the MCO), this study has only managed to find 100 respondents to fill out the survey. More data is needed to strengthen the finding of the true impact of the COVID-19 pandemic. The survey can be expanded to include more respondents from the age group above 30 years old as they are the highest income contributor to the country. Their response can be valuable, for example, from the perspective of business owners or older people who are more affected by limited physical activities. This study can also be further enhanced by analyzing the ethnic background of the respondents. Different ethnicities have different genetics and way of life. By studying these differences, more data can be gathered to highlight one ethnicity's positive aspects that can benefit others.

### Recommendation

The citizen must keep alert and always be reminded about the hazards of COVID-19. In addition, they need to accept the reality

that the virus is here to stay. Thus, citizens must adapt to the new norms by adjusting their lifestyles and mindsets. One good effort is that if one has an online business related to courier and food delivery, it will thrive during lockdowns. In order to excel, digital knowledge is, therefore, required. Finally, the government and nongovernment organizations (NGOs) should periodically organize advisory services such as physical health care, mental health care, good economic maintenance, and good nutrition care. Excessive campaigns through social media should have a good impact.

Based on Mat Dawi et al. (2021), theoretical and practical implications can be applied to public health during the COVID-19 pandemic. In terms of theory, the impacts of the perception of e-government information and services must be highlighted in social media and other online platforms for pandemic outbreak management. Thus, the effect of attitude toward preventive behavior on the relationship between e-government information and services can be observed. In terms of practical implications, the study has encouraged a disease management team that can promote public health awareness during the COVID-19 pandemic. Furthermore, they have summarized that Malaysia is a collectivistic society where an individual's decision to perform a specific behavior is influenced by people that are important to him/her. Thus, the disease management team may enhance the sense of community in public health communication.

#### **CONCLUSION**

This research investigates the impact of COVID-19 on Malaysians' lifestyles. Hundred people were chosen at random to complete the questionnaires. The study's findings indicated that COVID-19 affects society and the country, including health, lifestyle changes, and the economy. Although each of these effects is discussed separately, they are all linked. For example, in terms of health, COVID-19 can negatively impact the community's physical and mental health. Based on the study's results, weight change and deterioration in mental health can be associated with changes in the lifestyle of individuals during the COVID-19 pandemic, where most of the time must be spent at home, thus limiting recreational and social activities. In addition, difficulty adapting to changes in working and learning methods also contributes to mental and physical health deterioration.

Lifestyle changes due to COVID-19 also negatively affect students and employees. Among the impacts on students is the quality of lessons and understanding of lessons that deteriorated because of Open and Distance Learning (ODL). Among the factors that led to this situation are internet disruption and students' inability to focus when studying online. The lack of communication and practical activities also contributed to students' difficulty adapting to learning from home. Economically, COVID-19 also has a negative impact on the individual economy, society, and the country. Changes in terms of public expenditure have also changed, where people are spending less and saving more. The factors contributing to this may be the financial constraints of society due to the lack or loss of a source of income. In addition, the closure of various nonessential economic sectors, such as tourism, caused by the imposed Movement Control Order (MCO), also affected the economic downturn of the society and the country.

Overall, the study achieved its objective of analyzing and identifying the effects of the COVID-19 pandemic on Malaysians in terms of health, lifestyle changes, and economic and social changes in society in Malaysia. However, more in-depth studies and wider scope in the future are encouraged so that more detailed results can be obtained concerning the impact of COVID-19 on the lifestyle of Malaysians.

### **ACKNOWLEDGEMENT**

The authors want to thank the School of Electric and Electronic Engineering, Universiti Sains Malaysia, for supporting this research based on the findings from one of the university's courses- HFF255: Philosophy and Recent Issues.

### REFERENCES

- Abdul Aziz, M. (2021, February 8). Kadar pengangguran di Malaysia meningkat [Malaysia's unemployment rate is increasing]. *Berita Harian*. https://www.bharian.com.my/bisnes/lain-lain/2021/02/784288/kadarpengangguran-di-malaysia-meningkat
- Abdull Rahman, R. H. (2020, May 5). *Norma baharu bekerja secara fleksi* [Flexible working is the new norm]. Astro Awani. https://www.

- astroawani.com/berita-malaysia/norma-baharu-bekerja-secara-fleksi-241489
- Adnan, S., & Halid, S. (2020, March 13). RM3.37 bilion kerugian sektor pelancongan akibat COVID-19 [RM3.37-billion loss in tourism sector due to COVID-19]. *Berita Harian*. https://www.bharian.com.my/berita/nasional/2020/03/665159/rm337-bilion-kerugian-sektor-pelancongan-akibat-covid-19
- Alam, G. M., & Parvin, M. (2021). Can online higher education be an active agent for change? Comparison of academic success and jobreadiness before and during COVID-19. *Technological Forecasting & Social Change, 172*(November), Article 121008. https://doi.org/10.1016/j.techfore.2021.121008
- Ashaha, N. R. N. (2019, May 21). Depresi pembunuh senyap remaja Malaysia [Depression is the teens' silent killer in Malaysia]. *Sinar Harian*. https://www.sinarharian.com.my/article/29093/SUARA-SINAR/Analisis-Sinar/Depresipembunuh-senyap-remaja-Malaysia
- Ayaz, R., Hocaoğlu, M., Günay, T., Yardımcı, O. D., Turgut, A., & Karateke, A. (2020). Anxiety and depression symptoms in the same pregnant women before and during the COVID-19 pandemic. *Journal of Perinatal Medicine*, 48(9), 965-970. https://doi.org/10.1515/jpm-2020-0380
- Bernama. (2020a, June 4). Kehilangan pekerjaan meningkat 42 peratus pada suku pertama-PERKESO [Loss of employment increases by 42% during the first quarter PERKESO] *Berita Harian*. https://www.bharian.com.my/berita/nasional/2020/06/696090/kehilangan-pekerjaanmeningkat-42-peratus-pada-suku-pertama-perkeso
- Bernama. (2020b, October 12). 2,200 pekerja Malindo Airways akan diberhentikan [2,200 Malindo Airways employees will be laid off]. *Berita Harian*. https://www.bharian.com.my/bisnes/ korporat/2020/10/741188/bhplus

- Biviá-Roig, G., La Rosa, V. L., Gómez-Tébar, M., Serrano-Raya, L., Amer-Cuenca, J. J., Caruso, S., Commodari, E., Barrasa-Shaw, A., & Lisón, J. F. (2020). Analysis of the impact of the confinement resulting from covid-19 on the lifestyle and psychological wellbeing of Spanish pregnant women: An internet-based cross-sectional survey. *International Journal of Environmental Research and Public Health*, 17(16), Article 5933. https://doi.org/10.3390/ijerph17165933
- Browning, M. H., Larson, L. R., Sharaievska, I., Rigolon, A., McAnirlin, O., Mullenbach, L., Cloutier, S., Vu, T. M., Thomsen, J., Reigner, N., Metcalf, E. C., D'Antonio, A., Helbich, M., Bratman, G. N., & Alvarez, H. O. (2021). Psychological impacts from Covid-19 among university students: Risk factors across seven states in the United States. *PLOS ONE, 16*(1), Article e0245327. https://doi.org/10.1371/journal.pone.0245327
- Capaian internet, pemilikan gajet antara punca PdPR kurang berkesan [Internet access, gadget ownership contribute to the less-effective OTL]. (2021, January 18). Berita Harian. https://www.bharian.com.my/berita/nasional/2021/01/777434/capaian-internetpemilikan-gajet-antara-punca-pdpr-kurang-berkesan
- Chopra, S., Ranjan, P., Singh, V., Kumar, S., Arora, M., Hasan, M. S., Kasiraj, R., Suryansh, Kaur, D., Vikram, N. K., Malhotra, A., Kumari, A., Klanidhi, K. B., & Baitha, U. (2020). Impact of COVID-19 on lifestyle-related behaviours- a cross-sectional audit of responses from nine hundred and ninety-five participants from India. Diabetes & Metabolic Syndrome: Clinical Research & Reviews, 14(6), 2021-2030. https://doi.org/10.1016/j.dsx.2020.09.034
- Cielo, F., Ulberg, R., & Di Giacomo, D. (2021).
  Psychological impact of the COVID-19 outbreak
  on mental health outcomes among youth: A

- rapid narrative review. *International Journal of Environmental Research and Public Health, 18*(11), Article 6067. https://doi.org/10.3390/ijerph18116067
- Commodari, E., & La Rosa, V. L. (2020). Adolescents in quarantine during COVID-19 pandemic in Italy: Perceived health risk, beliefs, psychological experiences and expectations for the future. *Frontiers in Psychology, 11*. https://doi.org/10.3389/fpsyg.2020.559951
- Elengoe, A. (2020). COVID-19 outbreak in Malaysia. Osong Public Health and Research Perspectives, 11(3), 93-100. https://doi.org/10.24171/j. phrp.2020.11.3.08
- Eysenbach, G. (2004). Improving the quality of web surveys: The checklist for reporting results of internet e-survey. *Journal of Medical Internet Research*, 6(3). https://doi.org/10.2196/jmir.6.3.e34
- Fazlul Haque, E. H. (2020, May 1). Majikan, pekerja perlu adaptasi budaya kerja baharu [Employers, employees must adapt the new working culture]. Harian Metro. https://www.hmetro.com.my/mutakhir/2020/05/573333/majikan-pekerja-perlu-adaptasi-budaya-kerja-baharu
- Gritsenko, V., Skugarevsky, O., Konstantinov, V., Khamenka, N., Marinova, T., Reznik, A., & Isralowitz, R. (2020). Covid 19 fear, stress, anxiety, and substance use among Russian and Belarusian University students. *International Journal of Mental Health and Addiction*, 19(6), 2362-2368. https://doi.org/10.1007/s11469-020-00330-z
- Guo, Y.-R., Cao, Q.-D., Hong, Z.-S., Tan, Y.-Y., Chen, S.-D., Jin, H.-J., Tan, K.-S., Wang, D.Y., & Yan, Y. (2020). The origin, transmission, and clinical therapies on Coronavirus disease 2019 (COVID-19) outbreak an update on the status. *Military Medical Research*, 7(1), Article 11. https://doi.org/10.1186/s40779-020-00240-0

- Halid, S. (2020, April 9). COVID-19: Kira-kira 78,372 responden hilang pekerjaan [Approximately 78,372 respondents lost their jobs]. *Berita Harian*. https://www.bharian.com.my/berita/nasional/2020/04/674919/covid-19-kira-kira-78372-responden-hilang-pekerjaan
- Harun, Z., Hamzah, F. M., Mansor, S., Mahmud, A.
  S., Hashim, H., Sultan, M. T. H., Nik Mohamed,
  N. M. Z., Ibrahim, M. D., Hasini, H., Saad, M.
  R., & Ismail, A. R. (2021). COVID-19 Effects on
  Students' Teaching and Learning Perspectives in
  Malaysian Varsities. Pertanika Journal of Social
  Sciences and Humanities, 29(4), 2729-2748.
  https://doi.org/10.47836/pjssh.29.4.34
- Hu, Z., Lin, X., Kaminga, A. C., & Xu, H. (2020). Impact of the COVID-19 epidemic on lifestyle behaviors and their association with subjective well-being among the general population in mainland China: Cross-sectional study (preprint). *Journal of Medical Internet Research*, 22(8). https://doi.org/10.2196/preprints.21176
- Islam, M. A., Barna, S. D., Raihan, H., Khan, M. N., & Hossain, M. T. (2020). Depression and anxiety among university students during the COVID-19 pandemic in Bangladesh: A web-based crosssectional survey. *PLOS ONE*, 15(8), Article e0238162. https://doi.org/10.1371/journal. pone.0238162
- Ismail, K. (2021, June 21). Purata 10 orang bunuh diri di Pulau Pinang 5 bulan pertama tahun ini [10 people in average commit suicide in Penang during the first five months of this year]. *Utusan Malaysia*. https://www.utusan.com.my/terkini/2021/06/purata-10-orang-bunuh-diri-dipulau-pinang-5-bulan-pertama-tahun-ini/
- Kamarulbaid, A. M. (2020, September 30). Syarikat potong gaji 30-50 peratus [Companies to deduct 30-50% of employees' salaries]. *Utusan Malaysia*. https://www.utusan.com.my/rencana/2020/09/syarikat-potong-gaji-30-50-peratus/

- Kaya, H. (2020). Investigation of the effect of online education on eye health in Covid-19 pandemic. *International Journal of Assessment Tools in Education*, 7(3), 488-496. https://doi. org/10.21449/jjate.788078
- Keh, C., & Tan, Y. (2021). COVID 19: The impact of government policy responses on economic activity and stock market performance in Malaysia. *Jurnal Ekonomi Malaysia*, 55(1), 123-133.
- Kotlar, B., Gerson, E., Petrillo, S., Langer, A., & Tiemeier, H. (2021). The impact of the COVID-19 pandemic on maternal and perinatal health: A scoping review. *Reproductive Health*, 18, Article 10. https://doi.org/10.1186/s12978-021-01070-6
- Lim, L. L. (2020). The socioeconomic impacts of COVID-19 in Malaysia: Policy review and guidance for protecting the most vulnerable and supporting enterprises. International Labour Organizations. https://www.ilo.org/asia/publications/WCMS\_751600/lang--en/index.htm
- López-Morales, H., del Valle, M. V., Canet-Juric, L., Andrés, M. L., Galli, J. I., Poó, F., & Urquijo, S. (2021). Mental health of pregnant women during the COVID-19 pandemic: A longitudinal study. *Psychiatry Research*, 295, Article 113567. https://doi.org/10.1016/j.psychres.2020.113567
- Mat Dawi, N. M., Namazi, H., & Maresova, P. (2021). Predictor of COVID-19 preventive behavior adoption intention in Malaysia. *Frontiers in Psychology, 12*, Article 616749. https://doi.org/10.3389/fpsyg.2021.616749
- Mat Ruzki, R. (2021, May 25). Stigma halangan utama isu kesihatan mental [Stigma is the main obstacle in mental health issue]. *Berita Harian*. https://www.bharian.com.my/hujung-minggu/sihat/2021/05/820479/stigma-halangan-utama-isu-kesihatan-mental

- Md Shah, A. U. M., Safri, S. N. A., Thevadas, R., Noordin, N. K., Abd Rahman, A., Sekawi, Z., Ideris, A., & Sultan, M. T. H. (2020). COVID-19 outbreak in Malaysia: Actions taken by the Malaysian government. *International Journal* of *Infectious Diseases*, 97, 108-116. https://doi. org/10.1016/j.ijid.2020.05.093
- Ministry of Health. (2021, June 15). Situasi Terkini COVID-19 di Malaysia 15 Jun 2021 [15 June 2021: COVID-19 current situation in Malaysia]. COVID-19 Malaysia (Kementerian Kesihatan Malaysia). https://covid-19.moh.gov.my/terkini/2021/06/situasi-terkini-covid-19-dimalaysia15062021
- Mohamed, N. A., & Wan Sulaiman, W. S. (2020, August 1). *Mewajibkan pemakaian pelitup muka: Kesan, implikasi dan saranan* [Mask mandate: Effects, implications and proposals]. Astro Awani. https://www.astroawani.com/berita-malaysia/mewajibkan-pemakaian-pelitup-mukakesan-implikasi-dan-saranan-253555
- Mohd Noor, H. H. (2021, June 25). KKM terima 109,806 panggilan masalah psikologi [KKM received 109,806 calls on psychological issues]. Harian Metro. https://www.hmetro.com.my/mutakhir/2021/06/722642/kkmterima-109806-panggilan-masalah-psikologi
- Moy, F. M., & Ng, Y. H. (2021). Perception towards e-learning and Covid-19 on the mental health status of university students in Malaysia. *Science Progress*, 104(3). https://doi.org/10.1177/00368504211029812
- Parzi, M. N., & Abd Karim, L. A. (2020, October 31). 800,000 hilang kerja sejak COVID-19 melanda [800, 000 lost their jobs since COVID-19 outbreak]. Berita Harian. https://www.bharian.com.my/berita/nasional/2020/10/748412/800000-hilang-kerjasejak-covid-19-melanda
- Rasmussen, S. A., Smulian, J. C., Lednicky, J. A., Wen, T. S., & Jamieson, D. J. (2020). Coronavirus

- disease 2019 (COVID-19) and pregnancy: What obstetricians need to know. *American Journal of Obstetrics and Gynecology, 222*(5), 415-426. https://doi.org/10.1016/j.ajog.2020.02.017
- Roslan, S. (2021, May 21). Lebih 120,000 panggilan isu kesihatan mental diterima [More than 120, 000 calls on mental health issues have been received]. *Harian Metro*. https://www.hmetro.com.my/mutakhir/2021/05/708501/lebih-120000-panggilan-isu-kesihatan-mental-diterima
- Royal College of Obstetricians & Gynaecologists. (2021). *Coronavirus (COVID-19), pregnancy and women's health.* https://www.rcog.org.uk/globalassets/documents/guidelines/2021-11-02-coronavirus-covid-19-infection-in-pregnancy-v14.1.pdf
- Saccone, G., Florio, A., Aiello, F., Venturella, R., De Angelis, M. C., Locci, M., Bifulco, G., Zullo, F., & Di Spiezio Sardo, A. (2020). Psychological impact of coronavirus disease 2019 in pregnant women. *American Journal of Obstetrics and Gynecology*, 223(2), 293-295. https://doi. org/10.1016/j.ajog.2020.05.003
- Sánchez, E., Lecube, A., Bellido, D., Monereo, S., Malagón, M., & Tinahones, F. (2021). Leading factors for weight gain during COVID-19 lockdown in a Spanish population: A cross-sectional study. *Nutrients*, *13*(3), Article 894. https://doi.org/10.3390/nu13030894
- Sattar, N., McInnes, I. B., & McMurray, J. J. V. (2020).

  Obesity is a risk factor for severe COVID-19
  Infection. *Circulation*, *142*(1), 4-6. https://doi.
  org/10.1161/circulationaha.120.047659
- Sulaiman, Z. (2020, October 30). Bekerja dari rumah tidak semudah disangka [Working from home is not as easy as it seems]. Sinar Harian. https://www.sinarharian.com.my/article/107610/SUARASINAR/Analisis-Sinar/Bekerja-darirumah-tidak-semudah-disangka

- Ting, S. L., Saimon, R., Rahman, M. M., Safii, R., Ho, S. L., John, N., Lim L. T., & Arsad, N. (2020). Factors predicting screen time related to physical and behavioural complaints in primary school children. *Medical Journal of Malaysia*, 75(6), 649-654.
- Wang, C. L., Liu, Y. Y., Wu, C. H., Wang, C. Y., Wang, C. H., Long, C. Y. (2021). Impact of COVID-19 on Pregnancy. *International Journal of Medical Sciences*, 18(3), 763-767. https://doi.org/10.7150/ijms.49923

