

## Health and Hygiene Care to Curb COVID-19 Outbreak among Youth in Malaysia

Zuriani Ibhrim<sup>1</sup>, Izzah Nur Aida Zur Raffar<sup>2</sup>, Wan Kamal  
Mujani<sup>3</sup>, Salmy Edawati Yaacob<sup>4</sup>, Suhaila A. Aziz<sup>5</sup>

Institute of Islam Hadhari, Universiti Kebangsaan Malaysia<sup>1</sup>, Academy of Islamic  
Contemporary, MARA University of Technology<sup>2</sup>, Faculty of Islamic Studies, Universiti  
Kebangsaan Malaysia<sup>3</sup>, Faculty of Islamic Studies, Institute of Islam Hadhari, Universiti  
Kebangsaan Malaysia (Corresponding Author)<sup>4</sup>, Faculty of Education, Humanities and Arts,  
Kolej Universiti Poly-Tech MARA<sup>5</sup>

To Link this Article: <http://dx.doi.org/10.6007/IJARBS/v12-i6/13132>

DOI:10.6007/IJARBS/v12-i6/13132

Published Date: 13 June 2022

### Abstract

This study aims to identify the level of health care and hygiene among youth in Malaysia during the Movement Control Order MCO and to identify differences between male and female youth. Using survey research design, 545 respondents who were purposefully selected answered the questionnaire. The data was analyzed using descriptive statistical techniques and inferential test Mann-Whitney U. The results of the study found that the level of hygiene and health care of Muslim youth during the MCO period was at a high level (mean = 3.49). It also indicated that there was a significant difference between gender ( $p < 0.05$ ).

**Keywords:** Health, Hygiene, COVID-19, Youth

### Introduction

At present, the World Health Organization (WHO) (2020) defines COVID-19 as Coronavirus (CoV) to be a dangerous virus that could cause respiratory tract infections. According to Hajimin et al (2020); Shereen et al (2020), coronavirus disease (COVID-19) is an infectious disease known as severe acute respiratory syndrome coronavirus (SARS) and Middle Eastern respiratory syndrome coronavirus (MERS-CoV). This virus was identified in Wuhan, China late 2019, and this pandemic has continuously spread worldwide. The protracted duration of the COVID-19 pandemic has changed. The COVID-19 social restrictions imposed by various nations, including Malaysia have impacted the politics, socio-economy, well-being, and educational systems (Abdul Rashid, 2020).

The authorities have introduced numerous initiatives to contain and eradicate the virus and ensure the continuance of the people's activities and livelihood (Hajimin et al., 2020). The government outlined strategies for the public to be self-isolated and encouraged them to stay protected by masks and hand sanitizers. These need to be done to protect older

people and those with underlying health problems from getting infected. Preventive measures such as the (MCO) have led to changes in the daily lifestyle of society compared to the previous lifestyle (Abd Aziz et al., 2021), which is not only applicable in Malaysia and Indonesia. The Indonesian authorities have implemented movement orders to prevent the rapid spread of Coronavirus disease (COVID-19). These include school closures, imposing a “stay at home” policy, limiting public gatherings, and restricting religious activities (Miyanza et al., 2020).

The COVID-19 outbreak has recorded an increase in severe cases in Malaysia and several other countries. The government should take immediate drastic actions to control this pandemic from spreading rapidly. Various mechanisms have been utilized to prevent infections and overcome the pandemic’s spread, such as MCO in the context of hygiene and health care. Hygiene becomes the main focus for the control and prevention of COVID-19. In particular, COVID-19 transmission can occur quickly through respiration, such as sneezing or coughing (World Health Organization, 2020). In addition, COVID-19 spreads through liquid particles from an infected person’s mouth or nose when they speak, cough, sneeze, or breathe (World Health organization, 2020). People can also be infected by contacting surfaces contaminated with the virus without washing their hands and later touching their eyes, nose, or mouth (World Health Organization, 2020).

It is therefore crucial to ensure a clean environment to avoid exposure to COVID-19 transmission. Good hygiene practices include always ensuring that objects, especially frequently touched and exposed to the public such as doorknobs, Automated Teller Machines (ATM), dining tables, and handrails are always cleaned and sanitized. In addition, hygiene practices such as wearing a face mask, regularly washing hands with water or hand sanitizer, bathing, changing clothes and bathing after returning from outside, maintaining personal hygiene (bathing, nails, hair) while at home are also very important to prevent the transmission of the virus. Apart from that, maintaining good health by eating a healthy and balanced diet, drinking enough water, always doing recreational activities, and exercising during MCO are highly encouraged (Ministry of Health Malaysia, 2020; Join & Calendar, 2020; WHO, 2020). As the world today is advanced, health awareness is taken seriously by the world community. As the organization responsible for global health, WHO has also put in place guidelines to control the spread of the COVID-19. All communities in the world, especially youth should respond to these suggestions and apply these recommendations.

Despite the measures and efforts made, some cases are reported in Malaysia where public individuals, dignitaries, politicians, celebrities, civil servants, and companies failed to comply with the Standard Operation Procedures (SOPs) set by the authorities (Abu Bakar, 2021). The youth are no exception in not following these SOPs. Kelantan state police Chief Datuk Shafien Mamat stated that teenagers or young adolescence represent the highest number of age groups that violated the SOP set to control and contain the spread of the COVID-19 (Rohana, 2021). Thus, this issue needs attention because it plays a significant role in helping the authorities control, contain and break the COVID-19 chain. Statistics from the Department of Statistics Malaysia (2019) showed that the population aged between 15 to 30 is estimated at 9.2 million.

Researchers conducted this study to analyze the level of health care and hygiene among youth in Malaysia during the MCO to identify differences in the level of health care and hygiene among youth in Malaysia by gender. In addition, the study aims to identify the level of health care and hygiene among youth in Malaysia during the MCO to identify differences in the level of health care and hygiene among youth in Malaysia by gender. Hypotheses were formed to answer the questions and objectives of the study:

- **Alternative Hypothesis:** There is a significant difference between gender and the level of health care and hygiene among youth during the MCO.
- **Null Hypothesis:** There is no significant difference between gender and the level of health care and hygiene among youth during the MCO.

### **Literature Review**

A pandemic is dangerous and spreads rapidly on a massive scale across the world, involving large populations. Usually, the disease that causes a pandemic is a new (novel) disease in which the human population has no immunity or resistance against the disease. Pandemics are not new and have occurred at different stages in human history (Ferguson et al., 2020). It happened due to the increased incidence of viral diseases in animals (Madhav et al., 2017). Given the increasing frequency of pandemics, many researchers, including Garrett (2007) and most recently Madhav et al (2017); Fan et al (2018), argued that large-scale global epidemics are inevitable. Ferguson et al (2020) from Imperial College London, who is a part of the COVID-19 Response Team, claimed that COVID-19 is the most severe episode as such an event ever occurred in 1918, leading to the Spanish flu epidemic. Barro (2020) concluded that during the Spanish Influenza pandemic in 1918, many deaths were inevitable. The number of COVID-19 cases is still low compared to the Spanish flu in 1918. This pandemic had a severe negative impact on economic activities over a long period.

Some past studies detailed the spread of the COVID-19 pandemic and its impact on the economy, education, and society. According to Ibrahim (2020), COVID-19 impacted the Malaysian economy due to increased COVID-19 cases. Movement Control Orders have to be implemented to control the spread of this virus and break the chain. According to Sukumaran (2020), the implementation of the Movement Control Order (MCO) phase one stipulated the condition that all business premises must be closed except for businesses under essential services that were allowed to operate. As stated by Sulaiman (2020), the impact of the COVID-19 is no longer limited to health risks that can invite disability and life but also contributes directly to the slowdown in economic activities in terms of demand, production, investment, and income. He also concluded that the manufacturing, tourism and, transportation sectors were significantly affected by the closure of the business and travel restriction due to the MCO.

Studies related to the impact of COVID-19 were reviewed at length by Vitenu-sackey, & Barfi (2021), who related the impact of COVID-19 on the currently volatile global economy up to forcing many economic sector closures to be carried out due to directives to orders confinement or lockdown. In addition, Amory et al (2020) stated in their study the issue of household poverty, especially those with low incomes who are experiencing financial problems who shrank and lost their jobs. His study described that in a period of crisis, the government reminded people to save or add to their savings and more be careful in their

expenses. According to Kochhar and Barroso (2020), the risk of retrenchment is the highest in the tourism, trade, services, transportation, entertainment, and recreation sectors as these sectors received the impact of the COVID-19. Lee et al (2020) reported that COVID-19 blocks many economic activities. First, the spread of the virus leads to adherence to social isolation and closure of many non-essential business premises and corporate offices. Secondly, the exponential rate at which the virus spread and the adverse effects of COVID-19 transmission disrupts its supply and chain due to movement restrictions implemented in many countries to curb the spread of the epidemic.

A study on B40 group who is living in low-cost flat housing in Kota Damansara during Conditional Movement Control Order (CMCO) found that majority of the respondents practice step 3W (Wash, Wear and Warn), followed the current development of COVID-19 in the mass media, and have a high awareness of social incarceration activities (Tajudin et al., 2021). Even though they are alert and aware of the danger of the virus. They remain concerned about declining of their finances due to some of them do not have permanent employment and stable finance. Nearly 99.9 % of housemakers are worried about their finance due to the implementation of Movement Control Orders (MCO). Rahman (2020) mentioned that COVID-19 adversely impacted B40 group because of the difficulty of working at home due to the type of work that required them to work outside their houses. For example, traders on the side of the road or at farmers' markets cannot operate from home as the nature of their business demands them to work outside. The effects of the COVID-19 have impacted the B40 group, making life difficult for those of whom the majority are made up of Muslim Malays, whether income and financial security, access to essential goods and food, public transportation, and poor infrastructure facilities. Lim (2020) also supported and added that the B40 group is affected due to low access to education, working in the informal sector, and unstable income. However, they also need to continue to survive as the challenges of this pandemic are not over yet. Every day their sources of income and savings are decreased, causing the well-being of their lives to be affected if not helped.

Therefore, Kashim et al (2020) explained that the spread of the COVID-19 affected Islam in terms of faith and worship. The problem can be solved if Muslims play the role of combating and deciding this pandemic by adhering to control orders movements and standard operating procedures the Malaysian government has set based on the principles of *maqasid syariah*. Meanwhile, Nazir and Rashid's "Community callousness towards lockdown of COVID-19 pandemic and the role of preventive specialist" focused on a study on society members who approach health facilities in Srinagar, India. Observations on individuals who break the rules of social distancing practice responded that "when I am healthy, COVID-19 will not infect me". Regression analysis found that there was a statistically significant difference between "because I am healthy, COVID-19 will not infect me", "COVID-19 is a scam by the media", "God will help us", "tired of staying indoors", and "go out and buy groceries". The findings suggested that young people (29-32 years) are exposed to several social situations based on their personal choices, environmental factors, and a change of lifestyle. This age group is prone to taking life and duties for granted. They are inherently rebellious and anti-social, and break the rules without any hesitation (Nazir & Rashid, 2020).

Based on the previous studies, the study on the COVID-19 pandemic is gaining attention and development nowadays. The Movement Control Order (MCO) approach is the best and most appropriate method today by the government to curb the pandemic and protect the people's lives and safety. However, studies on the relationship between the level of compliance with SOPs of Malaysians, especially among youth, are not widely discussed and very limited. Thus, this study attempts to identify the level of health care and hygiene among youth in Malaysia during the MCO and identify the differences in the level of health care and hygiene among youth in Malaysia by gender.

### **Method and Study Area**

This quantitative study employed a survey study design by distributing the questionnaire to respondents. This method is applied to obtain data quantitatively based on the objectives of the study. The survey study design is used widely to explain various issues like attitudes, views, feelings, and behaviors of respondents (Chua, 2020). Rozmi (2016) claimed that survey research is a social survey that can examine and study many aspects of the social world and human behavior such as behavior, values, attitudes, beliefs, perceptions in addition to expectations and predictions of understanding, phenomena, levels of knowledge, favorites, etc.

The sample of respondents in this study consisted of 545 respondents and was purposefully selected. The characteristics of the respondents are Muslim youth, aged between 15 to 30 years old, and Malaysian citizens. The selection of samples is based on non-probability sampling, which used the purposive sampling method on respondents with specific characteristics and criteria based on the study sample. Sampling is an essential aspect of quantitative research methods because the information obtained after the analysis is made based on the selected sample (Creswell, 2009).

The questionnaire consisting of four sections is applied to collect the entire study data. However, this research paper will describe only one part involving 11 questions covering social aspects. To evaluate the validity of the content of the items of this questionnaire, the validity of the items was evaluated by Dr. Norshariani Abd. Rahman from a lecturer at The Islamic Hadhari Institute, The National University of Malaysia as an expert evaluator on the suitability of the questionnaire items provided. The researchers conducted a pilot study to evaluate the reliability and consistency of the study questionnaire through the value of Cronbach's Alpha index coefficient that can be adopted in the actual study. Typically, the number of pilot study samples does not require a large sample size. According to Creswell (2009), the minimum number of samples of 30 people.

Seventy respondents from Kolej Universiti Poly-Tech MARA (KUPTM) and Universiti Teknologi MARA (UiTM), 20 male students and 50 female students, participated in the pilot study. The reliability of the questionnaire on the adherence of Muslim youth to the Movement Control Order through the value of Cronbach's Alpha reliability coefficient obtained a reliability value of 0.783. Thus, the reliability value of this research instrument indicates a good level of interpretation and is acceptable for use in actual studies (Sekaran, 2010). The instrument is in a position of high reliability, effectiveness, and consistency.

Meanwhile, the data was analyzed using descriptive statistical techniques and inferential test Mann-Whitney U using IBM SPSS (Statistical Package for the Social Sciences). The descriptive analysis used percentages, frequency distributions, and the means values are most suitable for researchers to get more comprehensive information, detailed and accurate as required in the objectives of the study. The interpretation of mean scores in less than 2.0 is low, 2.01-3.00 is moderate, and 3.01-4.00 is considered high (Bond & Fox, 2015). According to Chua (2006), applying descriptive analysis can express and describe a variable in a phenomenon logically using particular methods. Aidit & Syahir (2014) stated where the focus of descriptive research is to explain the scenarios and problematic issues on the behavior of a group of people. Meanwhile, Mann-Whitney testing can be performed in testing the null hypothesis, which states that there is no real difference between the two groups of data independent samples. This test is also known as U test because it tests the null hypothesis (Sriwidadi, 2011).

### Results and Discussion

This analysis aims to identify the level of health care and hygiene among youth in Malaysia during the MCO. As shown in Table 1, analysis of the findings of the study on analyze the level of health care and hygiene among youth in Malaysia during the MCO recorded the highest mean value on the item "I always wear a face mask properly when outside" (mean = 3.90), followed by the item "I always take care of personal hygiene (shower, nails, hair) while at home" (mean = 3.81), "I always wash my hands with sanitary fluids when there is no water while outside" (mean = 3.73), "I know touching the eyes, nose or mouth can increase the risk of COVID-19 infection"(mean = 3.73)," I change clothes or take a shower after coming home from outside" (mean = 3.67)," I always wash my hands with soap and water when outside" (mean = 3.64)," I always drink enough water" (mean = 3.59), "I practice eating healthy, balanced and nutritious food when at home during the MCO season." (mean = 3.32), and the item "I always do recreational activities and exercise during MCO" (mean = 2.89) Meanwhile, the item "I always order food online taking into account the nutrition of the food" recorded the lowest mean score (mean = 2.71).

Table 1

*The level of health care and hygiene among youth in Malaysia during the Movement Control Orders (MCO)*

No	Statement	Percent (%) & Frequency (N)				Mean	Interpretation of Mean
		Strongly disagree	Do not agree	Agree	Strongly Agree		
1	I always wash my hands with soap and water when outside.	0.2% (1)	3.9% (21)	27.9% (152)	68.1% (371)	<b>3.64</b>	High
2	I always wash my hands with sanitary fluids when there is no water while outside.	0.2% (1)	2.4% (13)	22% (120)	75.4% (411)	<b>3.73</b>	High
3	I always wear a face mask properly when outside.	0.2% (1)	0.2% (1)	9.4% (51)	90.3% (492)	<b>3.90</b>	High

4	I know touching the eyes, nose or mouth can increase the risk of COVID-19 infection.	0.6% (3)	2.9% (16)	19.1% (104)	77.4% (422)	<b>3.73</b>	High
5	I change clothes or take a shower after coming home from outside.	0.2% (1)	3.1% (17)	26.6% (145)	70.1% (382)	<b>3.67</b>	High
6	I always take care of personal hygiene (shower, nails, hair) while at home.	0% (0)	0.4% (2)	18.5% (101)	81.1% (442)	<b>3.81</b>	High
7	I practice eating healthy, balanced and nutritious food when at home during the MCO season.	0.9% (5)	12.1% (66)	40.9% (223)	46.1% (251)	<b>3.32</b>	High
8	I always order food online taking into account the nutrition of the food.	11.7% (64)	31.6% (172)	30.5% (166)	26.2% (143)	<b>2.71</b>	Moderate
9	I always drink enough water.	0.6% (3)	5% (27)	29% (158)	65.5% (357)	<b>3.59</b>	High
10	I always do recreational activities and exercise during MCO.	5.5% (30)	27.3% (149)	40.2% (219)	27% (147)	<b>2.89</b>	Moderate

---

Source: Questionnaire 2021

The study also analyzed the differences in health care and hygiene levels during the MCO between male and female youth. Based on Table 2, the results of the inferential analysis test using the Mann-Whitney U test rejected the null hypothesis of this study because there is a significant difference between the level of health care and hygiene during the MCO between male and female youth ( $p < 0.05$ ,  $p = 0.009$ ). The mean of hygiene for males was higher compared to females, even though more female respondents were involved in this study.

Table 2

*Mann-Whitney U Level of Health Care and Hygiene during the MCO across Gender**Test Statistics*

	Mean Hygiene
Mann-Whitney U	20987.000
Wilcoxon W	113222.000
Z	-2.600
Asymp. Sig. (2-tailed)	.009

Source: Questionnaire 2021

**Discussion**

The results of the study found that the majority of respondents responded positively to the level of health care and hygiene among youth. Following the instructions of the authorities during the period of MCO recorded the highest mean value on the item "I always wear a face mask properly when outside" (mean = 3.90) reached strongly agree (90.3%, n = 543). These findings by Mohamed & Sulaiman (2020), concluded that starting 12 August 2020, the Malaysian Government has issued a directive to make it compulsory to wear face masks when in public places. Wearing a face mask is very important; the risk of infection through the respiratory tract and nasal cavity is very high. The respondents agreed that wearing face masks constantly can prevent the risk of COVID-19 infection in the community.

The analysis of the study also found that respondents among youths followed by the item "I always take care of personal hygiene (shower, nails, hair) while at home" (mean = 3.81) reached 99.6 (n = 543), while other items such as "I change clothes or take a shower after coming home from outside" (mean = 3.67) reached 96.7 (n = 527). Malaysian Ministry of Health (2020) urged the people to adhere to and practice personal hygiene during the COVID-19 pandemic so as not to re-wear clothes that have been used, In addition to bathing clean, washing hands, washing feet, nails and hair to maintain personal hygiene to avoid from contracting infectious diseases and staying healthy.

In addition, the results of the study found that youth respondents practice wash hands when leaving the house or touching risky places on the item "I always wash my hands with sanitary fluids when there is no water while outside" (mean = 3.73) reached 97.4% (n = 531). In addition, other items such as "I always wash my hands with soap and water when outside" (mean = 3.64) reached 96% (n = 523). Although, previous research has also shown that the act of washing hands with soap should be a daily practice, not just to prevent the transmission of COVID-19 alone (Rafidah, 2020). In general, handwashing with soap and water as well as hand sanitizer, when practiced cleaned properly, is very effective in killing most germs and pathogens (UNICEF, 2020; WHO 2020).

For this study, most participants reported practicing proper hand hygiene. Even so, most participants of this research practiced healthy lifestyle such as "I always drink enough water" (mean = 3.59), "I practice eating healthy, balanced and nutritious food when at home during the MCO season" (mean = 3.32), and the item "I always do recreational activities and exercise during MCO" (mean = 2.89) Meanwhile, the item "I always order food online taking into account the nutrition of the food" recorded the lowest mean score (mean = 2.71) reached



56.7% (n = 309). According to Join & Calendar (2020); Heyland et al (2016); Clerkin et al (2020) that physical activities help raise the levels of white blood cells and antibodies that fight off infections. Besides, exercise can also help prevent blood clots, which have been a symptom for some people who contracted COVID-19. Moreover, Hayman (2020) indicated that eating a well-balanced, healthy diet and staying away from processed junk food is very important to maintain overall health, and support immune functions. The aspect of health care has become a matter of more attention, especially to increase the body's immunity to fight disease and prevent infection. The spread of COVID-19 also requires people to adopt a healthy lifestyle, including regular exercise, following the food pyramid and hydrating themselves by drinking enough water.

### **Conclusion**

Various efforts were made by the authorities to ensure that the spread of the COVID-19 pandemic is contained and curbed, especially with the implementation of SOPs during the MCO period. This study is carried out to identify the level of health care and hygiene among youth in Malaysia during the MCO. Researchers found out that the health care and hygiene of youth are at a reasonable and satisfactory level. The study also identified the differences in the level of health care and hygiene among youth in Malaysia by gender. In addition, the researchers found out that there is a significant difference between the health care and hygiene of male and female youth during the MCO.

Based on statistics results, respondents reacted positively and always wear a face mask correctly when outside, take care of personal hygiene (shower, nails, hair) while at home, wash their hands with sanitary fluids when there is no water while outside, clothes or take a shower after coming home from outside, wash my hands with soap and water when outside, drink enough water, practice eating healthy, balanced and nutritious food when at home during the MCO season, do recreational activities and exercise during MCO and order food online taking into account the nutrition of the food. Meanwhile, mean hygiene for males was higher than females, although more female respondents were involved in this study.

This study highlights health care and hygiene among the youth during MCO and the importance of knowing and practicing it in new norms to curb the COVID-19 pandemic. As youth are an asset to the country, they need to pay attention to good personalities, listen to instructions and behave nobly to be icons and models. Adherence of the youth to the MCO in hygiene and health care has a positive impact on controlling the spread of the epidemic in line with the *maqasid syariah*, especially in one's preserving life. This study recommends that all parties work together to comply with the SOPs during the MCO period set to help the country overcome the COVID-19 epidemic towards survival and well-being. Future research should focus on different strategic methods to ensure compliance with SOPs and correlations between other variables.

### **Acknowledgement**

This paper is one of the research outputs made to fulfill the University Research Grant (URG) Kolej Universiti Poly-Tech MARA Kuala Lumpur (KUPTM 2020 -2021).

## References

- Rezkyawan, M. A. L. T., Gabriela, J., Daulung, H. T. (2020). *Menjaga kondisi psikis selama PSBB dalam masa pandemi COVID-19 di Indonesia*. Jakarta: Fakultas Kedokteran Universitas Katolik Indonesia.
- Abd Aziz, N. N., Abdul Kadir, M. J., Hassan, M. N. N., Zakaria, N. B., & Premananto, G. C. (2021). The role of media on knowledge, awareness and students' attitude during Movement Control Order (MCO). *Environment-Behaviour Proceedings Journal*, 6 (16), 23-29.
- Abdul Rashid, A. A., Nurhafizah, M. S., Nor Hamizah, A. R. (2020). *Wabak COVID-19: Pengurusan aspek kesihatan mental semasa norma baharu*. *International Journal of Social Science Research*, 2 (4), 156-174.
- Abu Bakar, J. M. (2021). *Ahli politik, selebriti langgar SOP mengecewakan*. *Utusan Malaysia*. <https://www.utusan.com.my/terkini/2021/06/>.
- Aidit, G., & Syahir, A. S. (2014). *Manual penyelidikan secara Islam*. Shah Alam: Penerbit Institut Perkembangan Minda (INMIND).
- Bond, T. G., & Fox, C. M. (2015). *Applying the Rasch Model: Fundamental Measurement in the Human Sciences*. Ed. ke-3. Mahwah, NJ: L. Erlbaum.
- Barro, R. J. (2020). Non-pharmaceutical interventions and mortality in U.S. cities during the Great Influenza Pandemic, *National Bureau of Economic Research*. pp. 1918-1919.
- Chua, Y. P. (2006). *Kaedah Penyelidikan*. Kuala Lumpur: McGraw-Hill Sdn. Bhd.
- Chua, Y. P. (2020). *Mastering Research Methods* (3rd ed.). McGraw-Hill Education.
- Clerkin, K. J., Fried, J. A., Raikhelkar, J., Sayer, G., Griffin, J. M., Masoumi, A., & Schwartz, A. (2020). COVID-19 and cardiovascular disease. *Circulation*, 141(20), 1648– 1655.
- Creswell, J. W. (2009). *Research design qualitative, quantitative and mixed methods approaches*. Lincoln: University of Nebraska.
- Department of Statistics Malaysia. (2019). *Buku tahunan perangkaan*. Malaysia: Percetakan Nasional.
- Fan, V. Y., Jamison, D. T., & Summers, L. H. (2018). *Pandemic risk: How large are the expected losses?* *Bulletin of the World Health Organization*, 96 (2), 129–134.
- Ferguson, N., Laydon, D., Nedjati Gilani, G., Imai, N., Ainslie, K., Baguelin, M., Bhatia, S., Boonyasiri, A., Cucunuba Perez, Z., Cuomo-Dannenburg, G., Dighe, A., Dorigatti, I., Fu, H., Gaythorpe, K., Green, W.,
- Garrett, T. A. (2007). *Economic effects of the 1918 influenza pandemic*. US: Federal Reserve Bank of St. Louis, 26.
- Hajimin, M. N. H. H., Omar, P. M. F. F. A., & Ibrahim, I. A. (2020). Movement restrictions confronting COVID-19 in Malaysia: An overview from Islamic perspective. *Al-Maqasid: International Journal of Maqasid Studies & Advanced Islamic Research*, 1 (2), 1-17.
- Halim, A. A. (2020). *Cabaran COVID-19 menurut perspektif Akidah dan Hadis*. *Institut Kajian Hadis Dan Akidah*, 7(2), 1–16.
- Hamlet, A., Hinsley, W., Okell, L., Van Elsland, S., Ghani, A. (2020). *Impact of non-pharmaceutical interventions (NPIS) to reduce COVID-19 mortality and healthcare demand*. London: Imperial College.
- Heyland, D. K., Stapleton, R. D., Mourtzakis, M., Hough, C. L., Morris, P., Deutz, N. E., Needham, D. M. (2016). Combining nutrition and exercise to optimize survival and recovery from critical illness: conceptual and methodological issues. *Clinical Nutrition*, 35(5), 1196– 1206.

- Hyman, M. (2020). How to protect yourself from COVID-19: supporting your immune system when you may need it most. *Dr. Hyman*. Retrieved from <https://drhyman.com/blog/2020/03/17/protectyourself-from-covid-19/>
- Ibrahim, M. F. (2020). *Pandemik COVID-19 dan implikasi terhadap institusi zakat di Malaysia sebagai institusi kewangan sosial Islam*. Konferen Seminar Kewangan Islam 2020, Universiti Utara Malaysia.
- Join, I. F. M., & Calendar, P. (2020). Boosting Immunity: Functional medicine tips on prevention & immunity boosting during the COVID-19 (Coronavirus) outbreak.
- Kashim, M. I. A. M., Samuri, M. A. A., & Adnan, N. I. M. (2020). *COVID-19 and Islam*. Bangi. UKM Press.
- Kochhar, R., Barroso, A. (2020). Young workers likely to be hard hit as COVID-19 strikes a blow to restaurants and other service sector jobs. *Pew Research Center*, March 27. <https://www.pewresearch.org/fact-tank/2020/03/27/young-workers-likely-to-be-hard-hit-as-covid-19-strikes-a-blow-to-restaurants-and-other-service-sector-jobs/>
- 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 Organization*, 1–99.
- Lee, K., Jais, M., & Chan, C. W. (2020). Impact of Covid-19: Evidence from Malaysian stock market. *International Journal of Business and Society*, 21, 607-628.
- Madhav, N., Oppenheim, B., Gallivan, M., Mulembakani, P., Rubin, E., & Wolfe, N. (2017). Pandemics: Risks, impacts, and mitigation. In D. T. Jamison, H. Gelband, S. Horton, P. Jha, R. Laxminarayan, C. N. Mock, & R. Nugent (Eds.), *Disease control priorities: Improving health and reducing poverty* (3rd ed.).
- Ministry of Health Malaysia. (2020). *6 hygiene and personal health care tips*. <https://www.1media.my/2020/09/6-tip-penjagaan-kebersihan-dan.html>. Accessed 20 September 2020.
- Ministry of Housing and Local Government. (2020). Mysejahtera. [https://mysejahtera.malaysia.gov.my/intro\\_en/](https://mysejahtera.malaysia.gov.my/intro_en/)
- Mukhtari, A. N. M. M. F. (2020). COVID-19 and hygiene from a conventional perspective and an Islamic perspective. *Ahmad Najaa 'Mokhtar*: 742–751.
- Nazir, S., & Rashid, A. (2020). Community callousness towards lockdown of COVID-19 pandemic and the role of preventive specialist. *International Journal of Research and Review*. 7 (4), 232-236.
- Sulaiman, N. M. W. W. (2020). *Mandatory use of face masks: Effects, implications and recommendations*. <https://www.astroawani.com/berita-malaysia/mewajibkan-pemakaian-pelitup-muka-kesan-implukan-dan-saranan-253555>. Accessed August 1, 2020.
- Rafidah, R. M. R. (2020). COVID-19: *Hand washing is more effective at killing germs*. *Harian Metro Online* Retrieved from <https://www.bharian.com.my/berita/nasional/2020/04/672449/covid-19-basuh-tangan-lebih-berkesan-bunuh-kuman>. Accessed April 3, 2020.
- Rohana, M. N. (2021, January 18). *Belia paling ramai langgar SOP*. *Utusan*. <https://www.utusan.com.my/berita/2021/01/>
- Rozmi, I. (2016). *Metodologi penyelidikan teori dan praktis*. Bangi: Penerbit Universiti Kebangsaan Malaysia.
- Sekaran, U. (2010). *Research methods for business: A skill building approach*. Singapore: John Wiley & Sons.

- Raman, S. (2020). *COVID-19 in Malaysia: Pandemic impacts on the poor*. <https://www.iseas.edu.sg/media/commentaries/covid19-in-malaysia-pandemic-impacts-on-the-poor/>
- Shereen, M. A., Khan, S., Kazmi, A., Bashir, N., & Siddique, R. (2020). COVID-19 infection: Origin, transmission, and characteristics of human Corona Viruses. *Journal of Advanced Research*, 24 (1), 91-98.
- Sriwidadi, T. (2011). *Penggunaan Uji Mann-Whitney pada Analisis Pengaruh Pelatihan Wiraniaga dalam Penjualan Produk Baru*. *Binus Business Review* 2(2): 751.
- Sukumaran, T. (2020). *Coronavirus: Malaysia in partial lockdown from March 18 to limit outbreak*. Health & Environment. <https://www.scmp.com/weekasia/healthenvironment/article/3075456/coronavirus-malaysias-primeministermuhyiddin-yassin>.
- Sulaiman, Syahir. (2020). *Economic impact of COVID19*. <https://www.1media.my/2020/03/impak-ekonomi-covid19-syahir-sulaiman.html>.
- Tajudin, N., Besar, J.A., Fuad, M., Jali, M. & Awang, A.H. (2021). *Gaya Hidup Sihat Komuniti Rentan Ketika Perintah Kawalan Pergerakan Bersyarat (PKPB) Akibat wabak pandemik COVID-19: Kajian kes kawasan flat Kota Damansara Selangor*. *E-Bangi*, 18(3): 82–102.
- UNICEF. (2020). *Everything you need to know about washing your hands to protect against coronavirus (COVID-19)*. <https://www.unicef.org/coronavirus/everything-you-need-know-about-washing-your-hands-protect-against-coronavirus-covid-19>. Accessed 17 September 2020.
- Vitenu-sackey, P. A., & Barfi, R. (2021). The Impact of Covid-19 Pandemic on the Global Economy: Emphasis on Poverty Alleviation and Economic Growth POVERTY ALLEVIATION AND ECONOMIC GROWTH. *Finance Research Letters*, 8(1), 32–43. <https://doi.org/10.18488/journal.29.2021.81.32.43>
- World Health Organization. (2020). *Water, sanitation, hygiene and waste management for COVID-19: Technical brief*. 03 March 2020 (No. WHO/2019-NCoV/IPC\_WASH/2020.1). World Health Organization.