

Psychological Vulnerabilities and its Relationship to Food During the Pandemic

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Introduction

For almost two years, the world has been mired with the seemingly never-ending COVID-19 pandemic. Ever since the World Health Organization (WHO) constituted COVID-19 to be a Public Health Emergency of International Concern (PHEIC)¹, countries all over the world have been implementing strong containment measures to help curb the virus such as home quarantines, and travel bans at both national and international levels. As of 10th December 2021, Malaysia has a cumulation of 2,678,465 confirmed cases of COVID-19 with 30,787 deaths².

The objective of this article is to discuss how the pandemic has impacted the lives of Malaysians, and explore psychological underpinnings behind certain events that have

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This view was prepared by Isabelle Koh Yue Sze, a contract RA from the Khazanah Research Institute (KRI). The author is grateful for the valuable comments from Dr. Sarena Che Omar, Nik Syafiah Anis Nik Sharifuddin, Ilyana Syafiq Mukhriz Mudaris, and Dr. Vanlal Thanzami, a senior lecturer from Monash University Malaysia.

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¹ WHO (2020)

² WHO (n.d.)

occurred during the pandemic, such as panic buying, and using alcohol and/or food as a coping mechanism. The article will also highlight how people from all walks of society have come forward to offer a helping hand to others during this needy time. While extensive research was not conducted, this article is meant to share information and ideas from the latest literature and data regarding coping during the pandemic.

The Impacts of the Pandemic on our Daily Lives

Ever since Malaysia detected their first COVID-19 case, the government imposed the Movement Control Order (MCO), a nationwide lockdown that involved general restrictions such as the closure of schools, higher education institutions and non-essential businesses, along with general prohibitions on mass gatherings, such as sports, religious, social and cultural activities³. Throughout 2020 and 2021, the MCO has been extended and relaxed to different phases with some having more lenient restrictions. Other than the closure of most businesses, schools and universities, Malaysians also had to undergo long periods of social isolation and were only allowed to leave their homes for essential activities (such as grocery shopping or medical reasons).

While handling such a ferocious crisis, the possible mental hazard because of the pandemic can be disastrous. The lockdown and quarantine policies imposed by governments worldwide lasted from weeks to months. Although these preventive measures were implemented to reduce the spread of the virus, the pandemic has forced people around the world to shift towards a “new normal”, altering lifestyles and social relationships.

A key measure to reduce the likelihood of transmitting COVID-19 is to practice social distancing, which is primarily comprised of avoiding face-to-face interactions, mass gatherings, and going into isolation. Humans are very social beings and our very existence has always revolved around the need to connect with others. Hence, the restriction measures have put a strain on our very social nature.

Financial issues also quickly set in as many non-essential small and medium enterprises (SME) had either indefinite closures or were forced to shut down. Malaysia’s Micro, Small and Medium Enterprises (MSME) sector, which accounts for almost 40% of Malaysia’s GDP contribution, could be on the brink of collapsing should the lockdown have continued. The Ministry of Entrepreneur Development and Cooperatives (MEDAC) surveyed 6,664 respondents across Malaysia from 15th June to 28th June 2021 to gauge the impact of MCO 3.0 on MSMEs in Malaysia and found that an estimated 580,000 or 49% MSME could have collapsed by October 2021⁴. Further, MEDAC also stated that Malaysia suffered a total loss of RM40.7 billion from the MSME sector last year due to the MCOs imposed⁵.

³ Wong et al. (2021)

⁴ MEDAC (2021a)

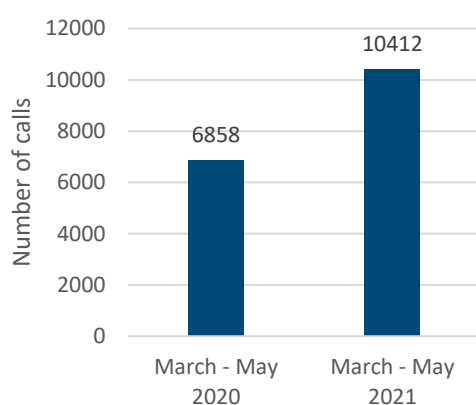
⁵ MEDAC (2021b)

Mental Health: A Concern on The Rise

*“The impact of the pandemic on people’s mental health is already extremely concerning. Social isolation, fear of contagion, and loss of family members is compounded by the distress caused by loss of income and often employment.”*⁶

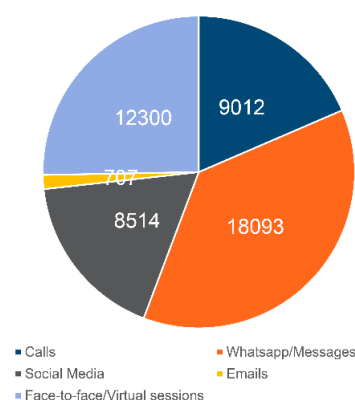
The pandemic has not only impacted Malaysia’s socio-economic sector, but the *rakyat*’s overall physical and mental wellbeing is also a rising concern. This coupled with lockdown restrictions, rising fear and anxiety of contracting the virus, and prolonged social isolation presents an alarming mental health crisis affecting the wellbeing of people around the world⁷.

Figure 1: Calls Received by Befrienders KL, March-May (2020 – 2021)



Source: Befrienders Kuala Lumpur, upon request.

Figure 2: Total number of people who reached out to MIASA (August 2020 – August 2021)



Source: Mental Illness Awareness and Support Association (MIASA).

Ever since the onset of the pandemic, there have been repercussions on people’s overall mental wellbeing, resulting in increased feelings of social isolation and loneliness, along with increased psychological distress, fear, anxiety and depression⁸. While the long-term effects of COVID-19 are unknown, experts believe that the pandemic may have long-term physical and mental health consequences⁹.

In Malaysia, the negative effects on mental health can be seen since the early stages of the pandemic. Since the first MCO, people have been reaching out to mental health hotlines; for instance, the Befrienders hotline received 6,858 phone calls between March to May 2020. Within the same period in 2021, the hotline had an alarming 52% increase during MCO 3.0, with a total of 10,412 (see Figure 1). On the other hand, a whopping number of 96,425 people reached out to the Mental Illness Awareness and Support Association (MIASA) between August 2020 and August

⁶ Dr. Tedros Adhanom Ghebreyesus from WHO (2020).

⁷ Sundarasan et al. (2020)

⁸ Ding et al. (2021), Sundarasan et al. (2021)

⁹ Ding et al. (2021)

2021, mainly through calls, physical or virtual sessions, emails, messages, and social media (see Figure 2).

Wong et al. (2021) conducted a study to gauge the depressive, anxiety, and stress symptoms of Malaysians during the Conditional MCO (CMCO) and Recovery MCO (RMCO). Figure 3 and 4 illustrates the trend of depressive, anxiety, and stress symptoms of Malaysian adults throughout CMCO and RMCO. While it was expected that the psychological wellbeing of Malaysians would improve as time progressed, the study interestingly showed otherwise; although the MCO restrictions were relaxed, the negative impact on mental health increased as time went on (see Figures 3 and 4). This increase in mental disorders over time can be seen as part of the continuous economic and societal consequences as the pandemic progressed. Many countries, including Malaysia, continue to adopt unprecedented social distancing policies. As prohibitions of mass gatherings, work-from-home policies, and virtual meetings continue to be put into place during the pandemic, it still negatively affects many industries¹⁰. Thus, many individuals continue to mentally suffer as the pandemic went on.

Figure 3. The proportion of participants with the presence of depressive, anxiety, and stress symptoms by the four-time points of the study period.

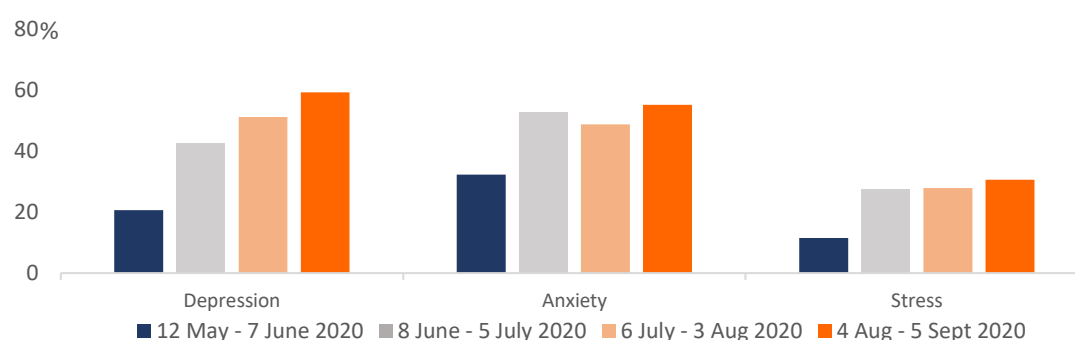
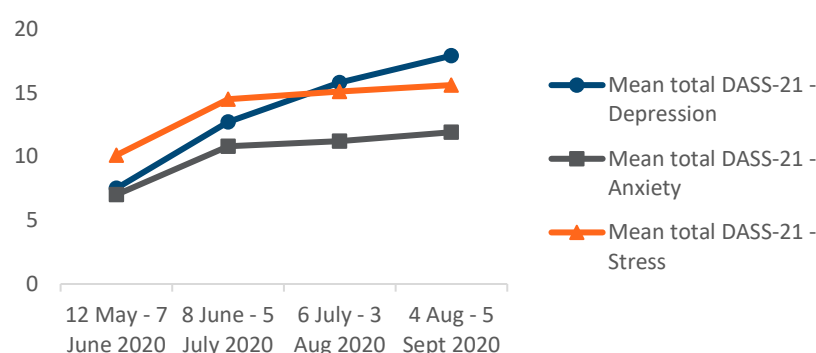


Figure 4. Changes in mean total DASS-21 score at different time points.



Source: Wong et al. (2021)

Demographically, there has also been evidence suggesting that the vulnerability to negative mental health outcomes could be associated with various demographic factors, such as gender,

¹⁰ Wong et al. (2021)

financial status and past medical history. Evidence suggested that females, younger people, lower socioeconomic status, those with pre-existing mental disorders, or working in the healthcare line have higher risks to experience negative mental health effects during the pandemic¹¹.

Furthermore, the prolonged lockdowns can be a detrimental and hostile experience for some, such as higher risks of developing mental health disorders like depression and social disorders like alcohol abuse, misuse of illicit substances and loneliness¹². This altogether has unfortunately caused some to take their own lives. Statistics released by PDRM (Royal Malaysian Police Force) showed that there were 631 cases of suicide in 2020, an increase from 609 in 2019. In the first five months of 2021, an astonishing figure of 468 cases was recorded, nearly doubling the rate in 2019 and 2020 with the three main causes being family problems, emotional pressure, and financial burdens¹³. Between 2019 and May 2021, a total of 1,708 cases of suicide were accumulated with over half of the total suicide cases being those aged between 15 to 18 years old. The increasing number of suicides has heightened awareness of mental health issues, but more must be done to eradicate the issue, especially with the heavy stigmatization of mental health.

Turning to Food and Alcohol for Comfort

The pandemic has been a source of stress and anxiety for many people. With the amount of stress and worry building up as the pandemic progressed, people have been looking for ways to cope with their feelings. These feelings can sometimes lead to a feeling of emptiness or an emotional void. As a way to restore that feeling of “fullness”, people might turn to food for comfort. Emotional eating, briefly defined as the tendency to overeat in response to alleviate one’s emotional state¹⁴, is usually associated with unhealthier food choices such as highly palatable foods that are high in sugar, fat, and salt.

Recent research studying the impact of lockdown measures on the general population discovered that a third of the population with no diagnosed eating disorders experienced binge eating behaviours as compared to pre-lockdown. For instance, a study conducted on Malaysian university students found that those experiencing high levels of perceived stress were more likely to shift towards unhealthy food¹⁵. In particular, the female participants consumed more sugary foods. Furthermore, Tan et al. (2021) found that nearly half of the Malaysian youths from their study gained weight due to the lockdowns.

While the term “emotional eating” has negative connotations to it, it is not all completely bad, but it can become a problem when it is the *only* coping mechanism to deal with discomfort. While eating may alleviate our emotions temporarily, engaging in this food-seeking behaviour persistently does come at the cost of weight gain and other health conditions like diabetes, hypertension, and cardiovascular diseases which are significant risk factors of COVID-19 severity.

¹¹ Lai et al. (2020)

¹² Sundarasan et al. (2020)

¹³ Hazlin Hassan (2021)

¹⁴ Singh (2014)

¹⁵ Chee and Wong (2021)

Drinking the stress away

People not only turn to food for comfort but there are also raising concerns regarding the increasing alcohol consumption during the pandemic. There is emerging, yet limited, evidence suggesting that alcohol consumption has increased during the pandemic. In Malaysia, a high prevalence of alcohol use and dependence during the pandemic was recorded¹⁶, in which the rising levels of psychological distress have been associated with increased alcohol consumption. Additionally, it was also concluded that people who drank alcohol in the last four weeks were more likely to have higher psychological distress.

The reasoning behind the increased alcohol consumption during the pandemic is in line with the self-medication hypothesis¹⁷, which states that people who experience psychological suffering may turn to abuse substances if they lack adaptive coping skills or low self-esteem. With people facing extended periods of psychological distress during the pandemic, some are likely to turn to alcohol to cope and in turn, increase their risks of developing alcohol abuse and dependence. For instance, during Beijing's SARS outbreak in 2003, it was found that individuals who were under quarantine or working in high-risk situations in China were more likely to turn to alcohol as a coping mechanism¹⁸.

The causal relationship between alcohol consumption and psychological distress is typically seen as a bi-directional pathway¹⁹. On one hand, increased feelings of psychological distress can lead to increased alcohol use as a coping mechanism while on the other hand, increased alcohol use can also worsen psychological distress.

While there is mounting evidence that the pandemic has altered the food choice motives of Malaysians, while also causing people to use alcohol as a means of coping during the pandemic. However, people have also engaged in certain behaviours to cope with the uncertainty over the situation; panic buying is one of them.

Panic Buying: What's Fuelling the Panic?

Panic buying became a common and eerie sight around the world, even in Malaysia. In George Town, long queues stretching out to 300m could be seen outside supermarkets even though stores remained open²⁰. A supermarket in Cheras saw fresh produce being cleared quickly from the shelves. Bread factories in Malaysia had to come to a halt as they reached their maximum capacity and were not able to restock their products²¹. The widespread confusion over whether MCO 2.0 will be extended has also triggered panic buying, causing some products to double their

¹⁶ Bahar Moni et al. (2021)

¹⁷ Khantzian (1997)

¹⁸ Wu et al. (2008)

¹⁹ Pacek et al. (2013)

²⁰ News Strait Times (2020)

²¹ Berita Harian (2020)

price²². Likewise, the country saw panic buying re-occurring when a two-week lockdown was reinstated on 1st June 2021²³.

Many factors can influence panic buying. A systematic review posits that panic buying can be categorised into four themes²⁴: (a) perceived risk and scarcity, (b) fear of the unknown, (c) coping, and (d) social influence.

Figure 5. The four themes of panic buying.



Source: Author's visualizations, information adapted from Yuen et al. (2020).

Perceived threat and scarcity

People tend to form risk perceptions about intense and ambiguous situations; the degree of perceived risk depends on one's perception of the susceptibility and severity of the situation. The health belief model suggests that people will engage in protective behaviour as an attempt to minimise the risk. In this case, the risk from COVID-19 is minimised by purchasing large quantities of goods which can restore one's sense of security and safety²⁵. By panic buying, people visit the stores less frequently which also lowers the risk of infection.

The reactance theory, on the other hand, implies that in response to a perceived threat (e.g., loss of behavioural freedom), one will experience psychological reactance, an unpleasant motivational arousal that occurs when people encounter a threat to their freedom, serving as a driving force to revamp them²⁶. In this context, people may feel threatened when a product is expected to go out of stock. As a result, it would trigger their sense of urgency and result in panic buying.

²² Afiq Aziz (2021)

²³ Zainal et al. (2021)

²⁴ Yuen et al. (2020)

²⁵ Shoib and Arafat (2021)

²⁶ Brehm (1966)

Fear of the unknown

There has been evidence that people would experience emotional distress during disease outbreaks²⁷. Lockdown announcements from the government further heighten these negative feelings, adding fuel to the flames. Coupled with limited knowledge of the situation, especially in the early stages, it creates uncertainty and may cause people to overthink multiple scenarios, arousing fear. It motivates people to make big purchases not because they have the actual need for the products, but rather to alleviate and escape their stress and anxiety, albeit short-term²⁸.

The association between fear and panic buying is in line with the principle of mood congruency; when we are under stress, our perception and judgment during the moment are significantly distorted²⁹. One's perceived risk of the situation intensifies with increasing fear, thus motivating them to take drastic measures to respond to the situation, such as the virus outbreak.

A means of coping

As aforementioned, coping plays a crucial role when it comes to managing our stress, where proper usage of coping strategies can help deal with stressful events and build resilience while inappropriate coping strategies can lead to more negative outcomes³⁰.

Stressors such as the fear of the unknown and perceived risk and scarcity can trigger one's coping mechanisms. Human beings have a desire to have control and various scenarios can threaten their sense of control thus, triggering the need to regain control. So, panic buying symbolises a form of regaining control over a control-less situation.

Social influence: “Monkey see monkey do”

As highly social beings, we have the natural need to belong to groups so we tend to agree on common beliefs, values, and attitudes to reduce in-group threats. When the majority behaves in a certain way or makes a certain decision, one would feel obligated to go along with the crowd. From a social psychology perspective, it provides an idea that one's behaviour is influenced by the environment. There are several perspectives to look from, such as self-fulfilling prophecy, normative influence, and social learning³¹ (see Table 1 for definitions).

²⁷ Sundarasan et al. (2020)

²⁸ Kennett-Hensel et al. (2012), Sneath et al. (2009)

²⁹ Cooper and Gordon (2021)

³⁰ Thompson et al. (2010)

³¹ For more detailed information, refer to Sharma and Pokharel (2021).

Table 1: Types of social influence and their definitions.

Social Psychology Phenomenon	Definition
Self-fulfilling prophecy	Beliefs that lead to their fulfilment.
Normative influence	Conformity is based on a person's desire to fulfil others' expectations, often to gain acceptance.
Social learning	Behaviours are learned by observing and imitating and by being rewarded and punished.

Source: Merton (1948), Deutsch and Gerard (1955), Bandura (1979).

Self-fulfilling prophecy

In this digital era, the information we need is readily at our fingertips and can be easily distributed across multiple digital platforms. On one hand, digital media can ease communication between the authorities and the public when it comes to providing updates or announcements. On the other hand, there is also the possibility of spreading false information and rumours like pictures of empty shelves and stock-outs in supermarkets. Consequently, it can create a sense of fear of goods possibly going out of stock and in turn, culminate into panic buying, which will then fulfill their once-false prophecy³².

Normative influence

As social beings, we sometimes get information from people around us and the information gathered might overshadow our thoughts and opinions. During a crisis like the pandemic, people may not have the time to react and follow what others do and “go along with the crowd”, with the assumption that others know what they are doing. Essentially, we tend to follow lucrative and hope-generating information in times of distress and fear, disregarding the accuracy of evidence³³.

Social learning

Although the theory was initially developed in the context of understanding aggression, the theory gives us the notion that we acquire most of our social behaviours by simply watching how others act. Hence, we may react to a situation by observing how the people surrounding us react to it.

Key Takeaways

While panic buying during this trying time may seem natural and instinctive, there are still unintended consequences attached to it. From a retailing perspective, panic buying will often disrupt the supply-demand chain, leading to a shortage of goods and spikes in prices; additionally,

³² Sharma and Pokharel (2021)

³³ Banerjee & Sathyanarayana Rao (2020)

the sporadic spike in demand for consumer goods, together with travel restrictions, present challenges in areas such as supply distribution and transportation (Yuen et al., 2020). Panic buying highlights a sense of privilege that vulnerable communities do not have, accentuating the gap between the haves and have-nots. People from wealthier communities and those who are at less risk of contracting the virus generally have more capability of stocking up and can easily navigate their way to supermarkets, leaving little room for those who have more difficulty financing a serious stockpile, like the elderly, people with disabilities and other marginalised communities.

Silver Lining Amidst the Pandemic: A Symbol of Collectiveness, Hope, and Unity

After going through countless MCO lockdowns for almost two years, people from all levels of society are left worn-out and hopeless; from dealing with thousands upon thousands of infection cases every day to losing their jobs due to the lockdowns. Although multiple financial aid packages were provided, many still struggle, especially with the fluctuating unemployment rates. As of August 2021, the employment rate slightly decreased, standing at 4.6%, and 748.8 thousand unemployed persons³⁴. After witnessing the number of hardships endured by almost everyone, people have stepped up to help.

By the people, for the people

In light of the worsening economic and health crisis, the community-led initiative #BenderaPutih – or White Flag – campaign was developed to help those who are facing hunger or require any other kind of assistance. It encourages people to reach out by putting up a white flag or cloth as a signal for help while also reassuring them that they do not have to feel ashamed for doing so. The campaign quickly gained traction and momentum on social media platforms with Malaysians stepping in to extend their help to those in need; the glimmer of hope we needed.

For instance, grocery chain 99speedmart prepared 1,000 care packages per day for housing areas near their outlets; similarly, instant noodle manufacturer Vit's said that it will be sending out people across 16 housing areas in Rawang, Selangor during the weekend to deliver food to homes displaying white flags³⁵. Refuge for the Refugees, an NGO, put up a fundraising campaign to help a total of 3,500 families for the next six months; members from the Facebook group "Caremongering Malaysia – Community Response to COVID19" pooled resources to help those who are facing financial difficulties during the pandemic³⁶.

Like-minded individuals were also motivated to start up their own NGOs to help the needy. In November 2020, a community-led initiative "Kuching Food Aid" was created to help provide food aid to families in need across Sarawak, including those coming from rural areas. The Pink Flag movement aims to raise awareness regarding period poverty during the pandemic in Malaysia and also eradicate this issue by raising funds to curate menstrual hygiene kits for menstruating individuals coming from underprivileged and marginalised communities. Project Langit, another

³⁴ DOSM (2021)

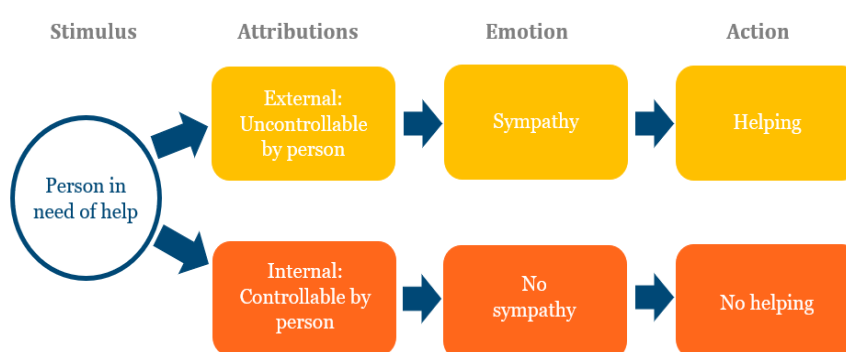
³⁵ Rahim (2021)

³⁶ Cheema (2020)

youth-start initiative, aims to help B40 entrepreneurs uprise from poverty by digitalizing and boosting their business through digital marketing.

Several concepts may explain the motives behind helping. The social-responsibility norm states that people are expected to help those needing help. However, our intentions to help one another is mediated by our attributions of their situation³⁷ (see Figure 6). We tend to provide less help to people who seem to have brought on their problems themselves or who don't seem to be working very hard to solve them on their own. All in all, we help those who are in need and deserving of it.

Figure 6. Role of attributions in influencing helping behaviour.



Source: Adapted from Rudolph et al. (2004), Author's visualisation.

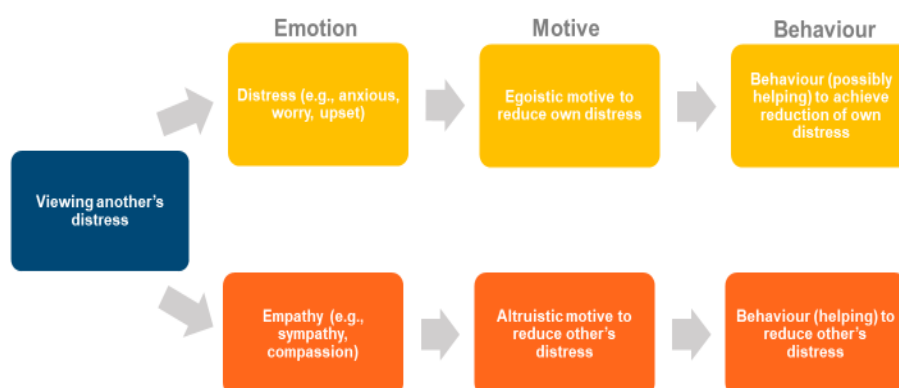
The role of empathy in helping

As highly social beings, our empathy is deeply rooted in us since young; when we feel empathy, we focus more on another's distress rather than our own which cultivates genuine sympathy and compassion for their welfare³⁸. As a result, these feelings could motivate us to help reduce another's distress. In this case, witnessing many go through hardships during the pandemic may arouse one's empathy for them and thus motivate them to help those that put up white flags. On the other hand, people may also feel distressed when they witness another's distress; hence, this might lead them to engage in behaviours that would typically result in reducing their distress (see Figure 7).

³⁷ Rudolph et al. (2004)

³⁸ Batson et al. (1987)

Figure 7. Role of empathy in influencing helping behaviour.



Source: Adapted from Batson et al. (1987), Author's visualisation.

Conclusion

As the pandemic is likely to turn into an endemic situation, it is important to be prepared in cases where surges in COVID-19 cases may occur in the future. Thus, these are a few broad recommendations on potential areas to focus on.

Prioritizing services for mental health

First and foremost, the government could develop a more robust mental health support system in Malaysia. Malaysia could better utilise the allocated funds for mental health by expanding the capacity towards mental health services and infrastructure, such as training more counselors and therapists to provide psychosocial support to those in need. This is to ensure that the current mental health professionals do not face issues maintaining access and quality of care while also reducing the rates of burnout, stress, and mental strain. Further, the government could also empower current NGOs to drive mental health programs in Malaysia. Current policymakers may want to consider reassessing how the current mental health treatment costs have impacted people in seeking mental health care and explore the possibility of making mental health services more accessible for all communities.

Encouraging healthy/ adaptive coping mechanisms

The government could also explore the opportunity of encouraging the public to learn healthy and adaptive coping mechanisms by proposing alternative methods to relieve stress and anxiety, as it could be beneficial in building resilience when faced with future outbreaks. It could also highlight the importance of having coping flexibility rather than relying on only one coping tool.

Using media to mitigate panic buying

While panic buying does not happen as much as compared to the early pandemic stages, there is still a possibility of it re-occurring in case of a surge of COVID-19 cases. Hence, the government could use media to its advantage by posting consistent reassuring statements, debunking rumours regarding stock shortages, and also describing the impact of panic buying on society. By

doing so, it may foster social responsibility and sensible shopping patterns in the public, while also promoting generosity and kinship feelings that will less likely trigger panic buying. At the same time, we as a society could also play a role in mitigating panic buying by being more aware of what is being shared on social media, such as by identifying fake news regarding the said issue and reporting them to the appropriate authorities.

Awareness on adopting healthy lifestyles

In regards to mitigating stress eating and increased alcohol use, the government may want to empower existing healthy lifestyle programs in Malaysia, such as the Senam 1Malaysia and Nutrition Month Malaysia by promoting their programs on social media. Further, they can also increase education and awareness regarding the importance of adopting healthy eating and maintaining an active lifestyle.

References

- Arafat, S.M. Yasir, Sujita Kumar Kar, Marthoenis Marthoenis, Pawan Sharma, Ehsanul Hoque Apu, and Russell Kabir. 2020. "Psychological Underpinning of Panic Buying during Pandemic (COVID-19)." *Psychiatry Research* 289 (July): 113061. <https://doi.org/10.1016/j.psychres.2020.113061>
- Arafat, S.M. Yasir, Sujita Kumar Kar, Vikas Menon, Charanya Kaliamoorthy, Srijeeta Mukherjee, Angi Alradie-Mohamed, Pawan Sharma, Marthoenis Marthoenis, and Russell Kabir. 2020. "Panic Buying: An Insight from the Content Analysis of Media Reports during COVID-19 Pandemic." *Neurology, Psychiatry and Brain Research* 37 (September): 100–103. <https://doi.org/10.1016/j.npbr.2020.07.002>.
- Aziz, Afiq. 2021. "Food prices surge on MCO extension concerns". The Malaysian Reserve. <https://themalaysianreserve.com/2021/01/29/food-prices-surge-on-mco-extension-concerns/>
- Bahar Moni, Ahmed Suparno, Shalimar Abdullah, Mohammad Farris Iman Leong Bin Abdullah, Mohammed Shahjahan Kabir, Sheikh M. Alif, Farhana Sultana, Masudus Salehin, Sheikh Mohammed Shariful Islam, Wendy Cross, and Muhammad Aziz Rahman. 2021. "Psychological Distress, Fear and Coping among Malaysians during the COVID-19 Pandemic." *PLOS ONE* 16 (9): e0257304. <https://doi.org/10.1371/journal.pone.0257304>.
- Bandura, Albert. 1979. "The Social Learning Perspective: Mechanisms of Aggression." In *Psychology of Crime and Criminal Justice.*, 198–236. Prospect Heights, IL, US: Waveland Press.
- Banerjee, Debanjan, and Ts Sathyanarayana Rao. 2020. "Psychology of Misinformation and the Media: Insights from the COVID-19 Pandemic." *Indian Journal of Social Psychiatry* 36 (5): 131. https://doi.org/10.4103/ijsp.ijsp_112_20.
- Batson, C. Daniel, Jim Fultz, and Patricia A. Schoenrade. 1987. "Distress and Empathy: Two Qualitatively Distinct Vicarious Emotions with Different Motivational Consequences." *Journal of Personality* 55 (1): 19–39. <https://doi.org/10.1111/j.1467-6494.1987.tb00426.x>.
- BBC. 2021. "Malaysians in covid lockdown fly white flags to ask for help." BBC News. <https://www.bbc.com/news/world-asia-57717214>
- Berita Harian. 2020. "Gardenia tak dapat tambah bekalan produk di pasaran." Berita Harian Online. <https://www.bharian.com.my/bisnes/korporat/2020/03/668487/gardenia-tak-dapat-tambah-bekalan-produk-di-pasaran>
- Brehm, Jack W. 1966. *Theory of Psychological Reactance*. New York, NY: Academic Press.
- Cheema, Sukhbir. 2020. "Malaysians are setting an example to the world by selflessly helping others during coronavirus pandemic." Mashable Southeast Asia.

<https://sea.mashable.com/social-good/9775/malaysians-are-setting-an-example-to-the-world-by-helping-each-other-during-coronavirus-pandemic>

Cheng, Shi-Hui, and Shi Ern Wong. 2021. "Stress, Emotional Eating and Food Choices Among University Students During the Covid-19". *Malaysian Journal of Social Sciences and Humanities (MJSSH)* 6 (9): 335 -46.

<https://doi.org/https://doi.org/10.47405/mjssh.v6i9.983>.

Cooper, Marty A., and Jamie L. Gordon. 2021. "Understanding Panic Buying Through an Integrated Psychodynamic Lens." *Frontiers in Public Health* 9 (April): 666715.

<https://doi.org/10.3389/fpubh.2021.666715>.

Department of Statistics Malaysia (DOSM). 2021. "Key Statistics of Labour Force in Malaysia, August 2021". Accessed 14 October 2021.

https://www.dosm.gov.my/v1/index.php?r=column/cthemByCat&cat=124&bul_id=KzdgZHBYTTVLbFh1VncvbjVCTGZOdz09&menu_id=Tm8zcnRjdVRNWWlpWjRlbmtlaDk1UT09

Deutsch, Morton, and Harold B. Gerard. 1955. "A Study of Normative and Informational Social Influences upon Individual Judgment." *The Journal of Abnormal and Social Psychology* 51 (3): 629–36. <https://doi.org/10.1037/h0046408>.

Ding, Kele, Jingzhen Yang, Ming-Kai Chin, Lindsay Sullivan, Giyasettin Demirhan, Veronica Violant-Holz, Ricardo Uvinha, et al. 2021. "Mental Health among Adults during the COVID-19 Pandemic Lockdown: A Cross-Sectional Multi-Country Comparison." *International Journal of Environmental Research and Public Health* 18 (5): 2686.

<https://doi.org/10.3390/ijerph18052686>.

Foulds, James A., Simon J. Adamson, Joseph M. Boden, Jonathan A. Williman, and Roger T. Mulder. 2015. "Depression in Patients with Alcohol Use Disorders: Systematic Review and Meta-Analysis of Outcomes for Independent and Substance-Induced Disorders." *Journal of Affective Disorders* 185 (October): 47–59. <https://doi.org/10.1016/j.jad.2015.06.024>.

Hassan, Hazlin. 2021. "Malaysia sees rise in suicides and calls to helplines amid Covid-19 pandemic." *The Straits Times*. <https://www.straitstimes.com/asia/se-asia/malaysia-sees-rise-in-suicides-and-calls-to-helplines-amid-covid-19-pandemic>

Kennett-Hensel, Pamela A., Julie Z. Sneath, and Russell Lacey. 2012. "Liminality and Consumption in the Aftermath of a Natural Disaster." *Journal of Consumer Marketing* 29 (1): 52–63. doi:10.1108/07363761211193046.

Khantzian, Edward J. 1997. "The Self-Medication Hypothesis of Substance Use Disorders: A Reconsideration and Recent Applications." *Harvard Review of Psychiatry* 4 (5): 231–44. <https://doi.org/10.3109/10673229709030550>.

Lai, Jianbo, Simeng Ma, Ying Wang, Zhongxiang Cai, Jianbo Hu, Ning Wei, Jiang Wu, et al. 2020. "Factors Associated With Mental Health Outcomes Among Health Care Workers Exposed to Coronavirus Disease 2019." *JAMA Network Open* 3 (3): e203976–e203976. <https://doi.org/10.1001/jamanetworkopen.2020.3976>.

Merton, Robert K. 1948. "The Self-Fulfilling Prophecy." *The Antioch Review* 8 (2): 193–210. <https://doi.org/10.2307/4609267>.

- Ministry of Entrepreneur Development and Cooperatives (MEDAC). 2021a. "Malaysia MSME'S sector may collapse if lockdown continues." Accessed 15 October 2021.
https://medac.gov.my/admin/files/med/image/portal/PDF/Kenyataan%20media/PRESS%20STATEMENT_MALAYSIA%20MSME%E2%80%99S%20SECTOR%20MAY%20COLLAPSE%20IF%20LOCKDOWN%20CONTINUES.pdf
- Ministry of Entrepreneur Development and Cooperatives (MEDAC). 2021b. "Malaysia suffered RM40.7 billion losses from MSME sector in 2020." Accessed 15 October 2021.
<https://medac.gov.my/admin/files/med/image/portal/PDF/Kenyataan%20media/PRESS%20RELEASE%20@%20MALAYSIA%20SUFFERED%20RM40.7%20BILLION%20LOSSES%20FROM%20MSME%20SECTOR%20IN%202020.pdf>
- News Strait Times. 2020. "Covid-19: Panic buying at supermarkets nationwide [NSTTV]". Accessed 20 October 2021.
<https://www.nst.com.my/news/nation/2020/03/575302/covid-19-panic-buying-supermarkets-nationwide-nsttv>
- Pacek, Lauren R., Silvia S. Martins, and Rosa M. Crum. 2013. "The Bidirectional Relationships between Alcohol, Cannabis, Co-Occurring Alcohol and Cannabis Use Disorders with Major Depressive Disorder: Results from a National Sample." *Journal of Affective Disorders* 148 (2): 188–95. <https://doi.org/10.1016/j.jad.2012.11.059>.
- Polizzi, Craig, Steven Jay Lynn, and Andrew Perry. 2020. "Stress and Coping in the Time of COVID-19: Pathways to Resilience and Recovery." *Clinical Neuropsychiatry: Journal of Treatment Evaluation* 17 (2): 59–62. doi.org/10.36131/CN20200204
- Rahim, Rahimy. 2021. "Businesses pledge support for white flag campaign." The Star.
<https://www.thestar.com.my/news/nation/2021/07/01/businesses-pledge-support-for-white-flag-campaign>
- Rudolph, Udo, Scott Roesch, Tobias Greitemeyer, and Bernard Weiner. 2004. "A Meta-analytic Review of Help Giving and Aggression from an Attributional Perspective: Contributions to a General Theory of Motivation." *Cognition and Emotion* 18 (6): 815–48.
<https://doi.org/10.1080/02699930341000248>.
- Scully, Maree, Helen Dixon, and Melanie Wakefield. 2009. "Association between Commercial Television Exposure and Fast-Food Consumption among Adults." *Public Health Nutrition* 12 (1): 105–10. <https://doi.org/10.1017/S1368980008002012>.
- Sharma, Pawan, and Manjila Pokharel. 2021. "Social Perspectives of Panic Buying." In *Panic Buying: Perspectives and Prevention*, edited by S.M. Yasir Arafat, Sujita Kumar Kar, and Russell Kabir, 81–92. Cham: Springer International Publishing.
https://doi.org/10.1007/978-3-030-70726-2_6.
- Shoib, Sheikh, and S. M. Yasir Arafat. 2021. "Behavioural Perspectives of Panic Buying." In *Panic Buying: Perspectives and Prevention*, edited by S.M. Yasir Arafat, Sujita Kumar Kar, and Russell Kabir, 1–12. Cham: Springer International Publishing.
https://doi.org/10.1007/978-3-030-70726-2_1.

- Singh, Minati. 2014. "Mood, Food, and Obesity." *Frontiers in Psychology* 5 (925): 1-20. <https://doi.org/10.3389/fpsyg.2014.00925>.
- Sneath, Julie Z., Russell Lacey, and Pamela A. Kennett-Hensel. 2009. "Coping with a Natural Disaster: Losses, Emotions, and Impulsive and Compulsive Buying." *Marketing Letters* 20 (1): 45-60. <https://doi.org/10.1007/s11002-008-9049-y>.
- Sundarasan, Sheela, Karuthan Chinna, Kamilah Kamaludin, Mohammad Nurunnabi, Gul Mohammad Baloch, Heba Bakr Khoshaim, Syed Far Abid Hossain, and Areej Sukayt. 2020. "Psychological Impact of COVID-19 and Lockdown among University Students in Malaysia: Implications and Policy Recommendations." *International Journal of Environmental Research and Public Health* 17 (17): 6206. <https://doi.org/10.3390/ijerph17176206>.
- Tan, Seok Tyug, Chin Xuan Tan, and Seok Shin Tan. 2021. "Trajectories of Food Choice Motives and Weight Status of Malaysian Youths during the COVID-19 Pandemic." *Nutrients* 13 (11): 3752. <https://doi.org/10.3390/nu13113752>.
- The Star. 2021. "White flags raised and Malaysians step up to help." Accessed 10 October 2021. <https://www.thestar.com.my/news/nation/2021/07/06/white-flags-raised-and-malaysians-step-up-to-help>
- Wong, Li Ping, Haridah Alias, Afqah Alyaa Md Fuzi, Intan Sofia Omar, Azmawaty Mohamad Nor, Maw Pin Tan, Diana Lea Baranovich, et al. 2021. "Escalating Progression of Mental Health Disorders during the COVID-19 Pandemic: Evidence from a Nationwide Survey." Edited by Chung-Ying Lin. *PLOS ONE* 16 (3): e0248916. <https://doi.org/10.1371/journal.pone.0248916>.
- World Health Organization (WHO). 2020. "Substantial investment needed to avert mental health crisis." Accessed 26 September 2020. <https://www.who.int/news/item/14-05-2020-substantial-investment-needed-to-avert-mental-health-crisis>
- World Health Organization (WHO). n.d. "Malaysia". Accessed 24 October 2021. <https://covid19.who.int/region/wpro/country/my>
- WHO. 2021. "Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV)". Accessed 29 December 2021. [https://www.who.int/news/item/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-\(2005\)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-\(2019-ncov\)](https://www.who.int/news/item/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-(2019-ncov))
- Wu, Ping, Xinhua Liu, Yunyun Fang, Bin Fan, Cordelia J. Fuller, Zhiqiang Guan, Zhongling Yao, Junhui Kong, Jin Lu, and Iva J. Litvak. 2008. "Alcohol Abuse/Dependence Symptoms Among Hospital Employees Exposed to a SARS Outbreak." *Alcohol and Alcoholism* 43 (6): 706-12. <https://doi.org/10.1093/alcalc/agn073>.
- Yuen, Kum Fai, Xueqin Wang, Fei Ma, and Kevin X. Li. 2020. "The Psychological Causes of Panic Buying Following a Health Crisis." *International Journal of Environmental Research and Public Health* 17 (10): 3513. <https://doi.org/10.3390/ijerph17103513>.

- Zainal, Fatimah., Chern, Lo Tern., Trisha, N., Loh, Ivan., Devi, Venesa., and Carvalho, Martin.
2021. "Panic buying still a common sight." The Star.
<https://www.thestar.com.my/news/nation/2021/05/30/panic-buying-still-a-common-sight>
- Zhang, Jie, Huipeng Lu, Haiping Zeng, Shining Zhang, Qifeng Du, Tingyun Jiang, and Baoguo Du.
2020. "The Differential Psychological Distress of Populations Affected by the COVID-19
Pandemic." *Brain, Behavior, and Immunity* 87 (July): 49–50.
<https://doi.org/10.1016/j.bbi.2020.04.031>.