

Media-induced anxiety and cultural coping mechanisms during COVID-19 in Surabaya

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Abstract

This study investigates the socio-psychological reactions and coping strategies of urban outskirts residents in Surabaya, Indonesia, amidst the COVID-19 pandemic. Through a combination of quantitative surveys and qualitative interviews with 100 respondents, the research explores how individuals perceive and respond to the abundance of information about COVID-19, including its origins, death tolls, and misinformation on mainstream and social media platforms. While some respondents feel devastated by the information overload, others surrender to the belief that the pandemic is destined by a higher power. Coping mechanisms vary, with some focusing on boosting immunity through vitamins and herbal drinks, engaging in cultural rituals, or turning to religious spirituality. The study draws on perspectives from Communication and Health Anthropology to offer a comprehensive understanding of local practices in response to the pandemic, contributing to broader global Sustainable Development Goals.

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INTRODUCTION

The new coronavirus (2019-nCoV), commonly known as COVID-19, originated and spread from Wuhan, China, in December 2019 (Hui et al., 2020). This virus spreads throughout the world until the World Health Organization (WHO) declared it as an international health pandemic on 30 January 2020 (Sohrabi et al., 2020). On 3 February 2020, China's government has reported 17,205 infected cases in China, and the WHO has reported 146 infected cases in 23 countries outside China (Yoo et al., 2022). It appears that the COVID-19 pandemic attack not only physical health but also mental health (Shigemura et al., 2020). Media consumption, which contains updates and information regarding

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COVID-19, affects mental health (Holmes et al., 2020). Repeated media broadcast on health precautions in facing COVID-19, which require the people to do physical distancing and self-isolation, cause fears and social stigma. Besides, news and updates that continuously reports cases of COVID-19 deaths could cause anxiety, stress, and depression in someone (Hisham et al. 2021; Lazzari et al. 2020; Sikhangezile and Modise 2020).

Public panic does not only occur during the COVID-19 pandemic but also during the influenza pandemic in 1918. According to Siegel (2006), infection and death rates increase due to public panic about the pandemic. “Panic leads to the greatest amount of viral spread because when people panic, they tend to take fewer precautions” (Siegel, 2006). This statement emphasized that public panic causes people to ignore the health protocols required to overcome the pandemic. As preventive measures to protect each individual from COVID-19 infections, health protocols include washing hands with soap, maintaining physical distance, wearing a mask, and avoiding physical contact with other people. According to Siegel, when the Influenza 1918 pandemic struck parts of the world, there were many people had little knowledge with the virus and illness and less understood with health protocol implemented at that time, noting that the majority of poor people living in dense and slum areas did not aware of the importance of practicing health protocol for their safety. That situation is actually similar to the situation at time this research is done, many people living in urban Surabaya and the outskirt’s inhabitants do not aware of the importance and the urgency of practicing health protocol and distancing to protect them from being contagious or infected by the COVID-19 virus, which is spread quickly from human to human contact. The problem is not only a little knowledge and less understanding of lower class people or people living in crowded kampong, just like in urban Surabaya, but also the little awareness and higher degree social cohesion of lower class people to live communally make them quite hard to be controlled to strongly obey the government’s rule and practicing the strict protocol. Moreover, for some others, who believe that pandemic is actually God’s will and creation, so they tend to act in the Javanese’s terms as ‘*nerima*’ (acceptance) and ‘*semeleh*’ (taken for granted) by the God’s destiny.

In August 2020, East Java Governor, Khofifah Indar Parawansa, received an award from the Ministry of Religion. This award was given for her effort in dealing with COVID-19 by using scientific and spiritual approaches. This award was given on the recommendation of the PTKIN Leaders Forum specifically to Governor Khofifah for her initiative as the only governor who fought the COVID-19 pandemic not only with science

and technology approaches, but she also did perform and invited communal Muslims prayer (locally known as *istighosah*) and remembrance to Allah God Almighty (locally termed as *wirid*) and the salutation to the Prophet Muhammad PBUH (locally termed as *sholawat*) to ask wills and wishes to stop the pandemic and to keep people healthy and live longer. For majority Muslims, this religious ritual approach is believed to be strongly effective and potential to expel the pandemic away from their place. The video of the Governor's reciting the *wirid* and *sholawat* was gone viral via a Youtube channel.

Surabaya city is one of the highest rank of incident number of COVID-19 in East Java province and in Indonesia (Utomo et al., 2022). In coping with the pandemic, the Surabaya communities have used cultural and ritual spiritual or religious approaches beside applying the health protocol as ordered by the Surabaya mayor government. The cultural and religious ritual have been used in order to reduce the panic of society and relieve the stress and depression caused by the spread of information and the impact of social media postings about COVID-19 and the data of the death toll. People also got stressed by the lockdown policy and self-isolation which make them unable to go outside and do their normal life as they routinely do before the pandemic. In this situation, this study raises questions of (1) how have the social panic been experienced by the society living in urban during the COVID-19 outbreak, (2) How the social media information flooding have impacted to the panic, how does the cultural belief held by the people influence the perception toward the human health and COVID-19 Pandemic.

METHODS

In this research use two types of data: qualitative and quantitative. Quantitative data gathering was carried out by survey using a questionnaire instrument. The quantitative data were intended to map the degree of panic among the urban inhabitants regarding the massive flows of information received both from mass media and social media, the perceptions and behavior toward the COVID-19, the daily consumption of information through social media accounts, and the degree of anxiety and stress of the people. We did a survey quantitative by distributing questionnaires to 100 respondents who live in four different areas of Surabaya, particularly those populations living in the outskirt housing areas, they are the Eastern part of Surabaya, Western area, North, and Southern housing area. Every area was selected by randomly for 25 respondents between 18 and 50 years old both females and males. Meanwhile, the qualitative data were gathered by conducting interviews with informants

who were selected purposively such as medical practitioner, people with comorbid indications, teenagers, and volunteers of COVID 19 in Surabaya. The in-depth interviews were carried out to dig up more details regarding the panic experience of each person in coping with the pandemic, and how these people construct the meaning of COVID 19 from their cultural belief and religious perspective to facing and getting rid of the pandemic for themselves and the people surroundings. We also want to know whether or not the local community utilized any culture and ritualism to behave upon the pandemic. Besides, the researchers try to understand the socio-cultural constructs of Surabaya inhabitants in facing the COVID-19 pandemic outbreak. Whether the local culture affect the community's response to the outbreak or not.

RESULTS AND DISSCUSION

To evaluate the panic experiences of the people in urban Surabaya in facing COVID-19, this study formulated indicators to measure the degree of panic based on the changing of psychological human conditions that have been influenced by the pandemic according to Steven Taylor 's (2019) study. For Taylor, there are three psychological changes of human that influenced by the pandemic, they are (1) emotional changes such as anxious, worrisome, and afraid of the pandemic; (2) social behavioral changes like practicing healthy behavior; (3) develop prejudice such as afraid of being alienated or discriminated in the social group. All these three indicators then are translated into 13 item of questions covering for five variables of *Cyberchondria Severity Scale (CSS)*, which are scales to measure the anxiety behaviors impacted from the exposure of internet information (Taylor, 2019). The five CSS variables are: (1) *Compulsion*: searching information in the internet disturbing other activities; (2) *Distress*: negative emotion after searching information in the internet; (3) *Excessiveness*: repeatedly browsing similar information in the internet; (4) *Reassurance*: anxiety needs a consultation with the professional regarding the searched information in the internet; (5) *Mistrust of medical professional*: trusting to the internet is higher than to professional or medical advice.

Every indicator is measured with Likert scale using four type scales, they are: Not Perform (value 1), Rarely Perform (value 2), Often Perform (value 3), and Always Perform (value 4). All the value gained from each respondent then are summed as a total value. Using the statistical formulae of value range, the total value of every respondent grouped into three different classes or degrees of panic in coping with pandemic situation: (1) Not Panic is total

value range between 13 and 26; (2) Panic Enough is total value range between 27 and 39; (3) Very Panic is total value range between 40 and 52. Each question is measured by using the Likert 4 range of scale: never (1 point), rarely (2 points), often (3 points), and always (4 points). Then, the points obtained by each respondent from the Likert scale is summed up. Furthermore, the data are divided into three classes, which shows respondents' panic level in facing the COVID-19 pandemic. The interval measurement formula for data grouping is as follows.

$$I = \frac{R}{K} I = \frac{R}{K}$$

I = Interval

R = Range (Highest Score-Lowest score)

$$I = \frac{(52 - 13)}{3} = \frac{39}{3} = 13$$

Based on the above calculations, we can obtain the respondent categorization of panic experience in facing a pandemic (Table 1).

Table 1. Points Range Per Category

Category	Points
Not Panic	13-26
Quite Panic	27-39
Extreme Panic	40-52

(Source: Composed by authors)

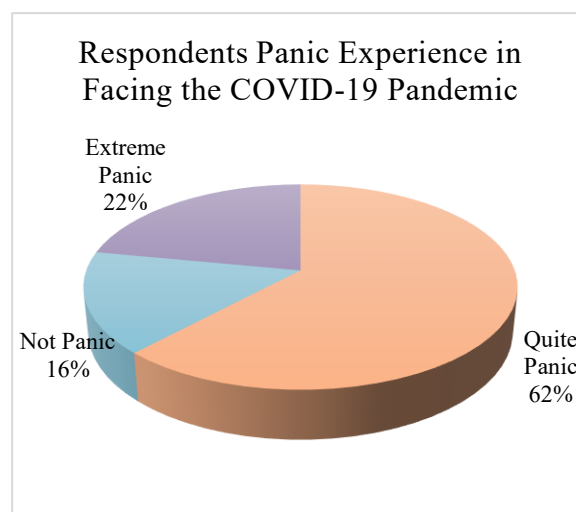
Based on the results of the quantitative survey that has been conducted, the following results are obtained. The majority of respondents feel “quite panic” in facing the pandemic, with a relatively high percentage of 62 percent. It shows that after four months since the COVID-19 pandemic started, the public is slightly panic about COVID-19. Several determining factors include media consumption behavior, neighborhood, and religiosity, which will be discussed in the next part. Meanwhile, 22 percent of respondents are in the extreme panic category, and 16 percent are in the not panic category.

Table 2. Respondents Panic Experience in Facing the Pandemic

	Frequency	Percent
Not Panic (13-26)	16	16.0
Quite Panic (27-39)	62	62.0
Extreme Panic (40-52)	22	22.0
Total	100	100.0

(Source: Composed by authors)

Figure 1. Diagram of Respondents Panic Experience in Facing the COVID-19 Pandemic



Source: Composed by authors

This research employs the Likert Scale to measure the public panic level in Surabaya amidst the COVID-19 pandemic. From the measurement by using 13 variables in the Likert Scale, we obtain three levels of public panic in Surabaya, namely Not Panic (16 percent), Quite Panic (62 percent), and Extreme Panic (22 percent). The majority of respondents (62 percent) showed a moderate panic level, or as we call it, “Quite Panic”. It shows that Surabaya people are currently dealing with the pandemic calmly, neither terrified nor ignorant. From the quantitative survey results and observations, we found that several groups of people with different panic levels are scattered in different areas throughout Surabaya. The first group consists of paranoid people with a high level of panic or extreme panic (22 percent). Based on our investigation, there are two sub-groups of people in this group. The

first is health workers and the people who are familiar with the health sciences. It is because they understand the situation and deal with the COVID-19 patients directly. Health workers know the actual condition in the field and understand the dangers of the COVID-19. The same things also apply to people who are familiar with the health sciences. Various information regarding COVID-19, which currently become the dominant discourse in society, is the primary concern of this sub-group. The second sub-group is the people with comorbidity, which have similar symptoms to COVID-19.

The researchers listened to several health workers, and they explained that COVID-19 does exist. It is apparent in some health workers and patients who died due to COVID-19. It certainly creates panic for health workers because they interact directly with the infected patients; as Paini, one of our informants who works as a nurse in Regional Province Hospital in Surabaya, said that most of her family members work as a nurse, aside from herself, both of her children are also a nurse. Although being a health worker family, Paini's family has anticipated to prevent themselves from panics. Paini's family has a medical background and, therefore, understands how to deal with the illness. The family also attempt to prevent themselves to not making close-contact with other, especially when interacted with COVID-19 patients; they provide information and knowledge about the symptoms and the virus to the member of family. Paini's family also applied a strategy to reduce the panic level by consuming healthy foods, milk, vitamin C, and also traditional herbal beverages. Whenever they feel exhausted, they prefer to get some rest and avoid going anywhere. Besides, they submit to the God's will and pay more attention to personal safety first and help the patients. "If we treat a COVID-19 patient, we must wear a complete Personal Protective Equipment (PPE). There is an option whenever we treat a COVID-19 patient; we have to protect ourselves first, then deal with the patient." (personal interview with Paini, October 2020)

The second sub-group who is paranoid about the pandemic situation is the people with comorbidity, which have similar symptoms to COVID-19. Some mass media information mentioned that only a few deaths were caused by COVID-19 solely; most deaths involved comorbidity.

According to *suarasurabaya.net*, the Curative Team Leader of the COVID-19 Task Force said that 91,9 percent of COVID-19 death case in East Java are followed by comorbidity. In East Java, most of the deaths from COVID-19 are patients with kidney problems, diabetes mellitus, chronic lung disease, and heart disease (Perdana, 2020).

Therefore, people with more than one comorbid diseases are more prone to COVID-19 and, consequently, more terrified.

One of our informants, Tatic (*pseudonym*), said that her condition with four comorbid diseases have made her terrified to getting infectious to COVID-19. She chose to avoid any social gathering, because she fears of a new cluster of COVID-19 transmission would emerge. Considering her prone health condition, she also hesitates to take a rapid test because she believes that the result will be reactive due to her comorbid diseases: *“I am scared of the rapid test, too much hassle. The result will be reactive because I have comorbid diseases, and later they will put me in quarantine. Instead of going out, I prefer to spend my time at home.”* (personal interview with Tatic, September 2020)

Another group is the people with a moderate panic level, or as we categorized in this research as Quite Panic, which consists of 62 percent of the total respondents. There are two sub-groups in this category. The first is teenagers with a high level of media consumption. The second one is a group of people who receive overload information about COVID-19. The high level of media consumption behavior and overload information make this group search for alternative information, different from the dominant discourse they gain. This group uses alternative information, which contradicts the dominant information, to counter the dominant information they get. Teenagers are one of the groups who actively search for alternative information. One of our informants, Raka, is a teenager who, instead of searching for COVID-19 updates, prefers alternative information to reduce anxiety. Raka is a teenager who felt anxious amidst the COVID-19 pandemic. However, from the alternative information he got, when someone worries more, the more stressed they are and the more prone they are to COVID-19. *“I am stressed too, for sure. However, I eventually read some articles and experts’ opinions, saying that the more we are anxious, the more we will be affected.”* (personal interview with Raka, September 2020). Raka obtained such information from an Indonesian celebrities and musician, such as Jerinx of his popular name. This statement’s source is generally found in LINE Today, a news portal from a social media called LINE. From those articles and statements, some people choose to reduce their concern about COVID-19, while still following the development of COVID-19.

Aside from alternative information on how anxiety affects immunity towards COVID-19, our informants also search for another alternative information to reduce anxiety. First, information regarding the popular and controversial Indonesian celebrity’s, namely Jerinx, opinion on the government’s new normal implementation. According to Jerinx, the

new normal is unnecessary because it creates a wave of unemployment and eventually causes starvation. Ultimately, Jerinx, and some other celebrities, established a group to distribute free groceries and daily needs to the people, with no health protocols. However, Jerinx's rapid test result is non-reactive or negative. Therefore, according to Jerinx, immunity is the main factor to fight against the COVID-19; the rapid test is solely an instrument to detect the virus. Such perception is incompatible, but since he is a celebrity then his fans or social media followers accepted and circulated to others. The condition becomes crucial among the urban teenagers in Indonesia, particularly those who do not believe with COVID-19 and tend to neglect any health campaigns attempted by the government. Some teenagers refused to follow the health arrangements and preventions from the government. They do not trust the government, and tend to follow those public figures who want to make sensation to the public with the pandemic.

As a sub-culture group are that actively using the social media, teenagers have higher chances to search for alternative information outside society's dominant discourses. Various dominant information found in mass media and social media is more likely to escalate public panic amid the pandemic. Instead of reducing media consumption, teenager groups are trying to find alternative information. Raka is an example of teenager who has tried to find alternative information amidst a pandemic to reduce his own anxiety. The final group is the people with a low panic level and not terrified by the COVID-19 pandemic, which makes up to 16 percent of the total respondents. This group consists of low-income people who are less-exposed or received very little information to COVID-19. Low-income people have lower panic and fear levels because they cannot gain access to the dominant information that creates fear among society. In facing the pandemic, they choose to put their faith in their respective religions. In Surabaya, this group is mostly found in the North region of the city. North Surabaya residents mostly consist of Arab and Madura ethnic descents. This group is considered as a society with a high level of religiosity; they are not afraid of COVID-19 and choose to put more faith in God.

Moreover, there are several factors affect the panic level among the people of Surabaya in facing the COVID-19 outbreak. One of them is mass media consumption, mainly consumption of information related to COVID-19 updates, as disclosed by one of our informants, Didik, a resident in Mojo Subdistrict. According to Didik, he felt a changing panic level from the early times of the pandemic until now. One of the reasons is his mass media and information consumption behavior. In the early months of the pandemic, Didik

felt extreme panic because there are considerable amount of information that cause fear. This fear disturbed his psychosomatic condition and affected his health condition.

“In the early times of the COVID-19 pandemic, I used to keep up with news on television and the internet. However, I no longer do that now because I become unwilling and doubtful. The news on television and the internet are exaggerated (...) Once, I felt down until I had high gastric acid because COVID-19 news is too much to handle” (personal interview with Didik, September 2020)

Interestingly, aside from reducing media consumption, Surabaya residents use cultural rituals to lower their panic level. Local community in Java recognize the term outbreak as *pageblug* (Javanese term of pandemic), and they face *pageblug* with cultural rituals. For instance, the local community in Sememi Subdistrict, carried out a feast or *slametan* or locally term as communal feast symbolizing the social unity, after the first Large-Scale Social Restriction was eased in October 2020. The term *slametan* is derived from the Javanese language, *slamet*, mean safe, harmony, welfare, safety and protection, and the Arabic, *salam*, which means peace. The concept of *slametan* refers to a human activity aimed to ask the creator for harmony, welfare, safety, and protection from real and unseen things (Ubaidillah, 2021).

In response to the COVID-19 outbreak, there was a piece of information among the local community in Java, which spread via the social media such as WhatsApp groups in March 2020, telling people to cook a local cuisine namely *lodeh*. *Lodeh* is a traditional Javanese cuisine that consists of seven types of vegetables boiled with coconut milk. The local community in Java believes that *lodeh* will help them to avoid *pageblug* or outbreaks, such as COVID-19 (Rahiem & Rahim, 2021). For the pre-modern Javanese Mataram people, and it has been continued until now by the traditional Javanese villagers, when it was *pageblug*, people cook seven colors of *Lodeh* consisting of *kluwih* (breadfruit), snake beans, eggplant, *melinjo* skin (Gnemon tree or nuts), pumpkin, young *melinjo* leaves (like joint-fir spinach), and *tempe* (soybean snack). The people then believe that they will be safe from any disaster. Some local community in urban Surabaya still believe with that and continue to consume *lodeh* together with neighbors in order to prevent COVID-19 infection. They also use local wisdom in response to the COVID-19 outbreak as a form of cultural practice amid the pandemic such as the practice of the so-called *Tegal Desa*, a ritual of village clean up.

The *Tegal Desa* ritual of village clean up usually performed by particular communities in Surabaya with the serving of *tumpeng* (cone-shape rice dish serving with

vegetables and meats) before the first day of Islamic holy month begin, i.e. Ramadan. However, because of the Large-Scale Social Restriction was taken place during May to August, the ritual was pushed back to October. This ritual is carried out in some areas in Western region of Surabaya, namely in Sememi Sub-district and in Kebraon Sub-district. The local community in Sememi and Kebraon are considered as *Abangan* – based on Geertz's (1976) categorization (Geertz, 1976). *Abangan* is the local community that still believes in *slametan*, which refers to inherited tradition. Leather puppet is performed as part of the *Tegal Desa* ritual in Sememi and Benowo Sub-districts. This ritual aims to protect the local area from disaster or outbreak.

Whereas, the local community in Mojo Sub-district cannot carry out the *Tegal Desa* ritual, they chose another initiative in dealing with the pandemic, such as a personal religious approach. Because they were not allowed to gather, Mojo residents chose to stay at their respective houses while simultaneously participate in an online *istighosah* from Saudi Arabia (Middle East). This sub-district community's behavior reflects – according to Geertz (1976) – the *Priyayi* community. *Priyayi* consists of bureaucrats and intellectuals who live in the urban area. They avoid crowds and gathering. They adhere to the health protocols and show a high level of compliance with regulations. According to Geertz (1976), *Priyayi* tends to be strict, discipline, and formal. While the local community in Simolawang Sub-district, Simokerto District, held *Burdah* (an Islamic term of poem of the cloak) prayer around the area during the pandemic's early times. This prayer aims to ask for protection from the outbreak (Geertz, 1976). The local community in Simolawang prefers the religious approach, which, according to Geertz (1976) categorized as *Santri*. *Santri* put their faith in Islamic rituals.

As one of the traditional *slametan* rituals, the *Tegal Desa* ritual boosts spiritual well-being (Dein et al., 2020). Aside from the local community in Java, India has its unique way to mitigate COVID-19 transmission (Sutomo et al., 2021). They sing “Go, Corona go!” to boost faith and spiritual well-being. There is also a ritual to drink cow urine, which is meant to kill the COVID-19 virus (Tagat & Kapoor, 2020). Meanwhile, some African-American communities in the United States use their knowledge-based and traditional language approaches to boost spiritual well-being among their community and mitigate the COVID-19 transmission (Airhihenbuwa et al., 2020).

In Surabaya, aside from collective efforts, the people also do personal coping through a spiritual approach. In facing of the pandemic and lower their panic level, people pray

according to their respective beliefs. Some of the Moslems pray by reciting particular surah such as Surah *Al-Fatihah*, *Al-Falaq*, *Al-Ikhlās*, and *An-Nās*. Some others pray by reciting *Al-Baqarah* Verse and Salvation Prayers. Those who are not fluent in Arabic and Al-Qur'an prefer to pray in the Javanese or Indonesian language. The same goes for the Catholics; they pray according to their priest's advice.

When the COVID-19 outbreak occurred, the Moslems community in Northern Surabaya have found some online articles about prayers, such as "Teach your kids this prayer to avoid the COVID-19 outbreak", "Prayers to avoid dangerous disease and COVID-19 outbreak", "On today's latest compilation of news and prayers to avoid the coronavirus", and many more. It appears that prayers offer them faith or confidence toward health and well-being (Masters & Spielmans, 2007). In contrast, the local community in Western Surabaya still upholds communal rituals such as *Tegal Desa*. This communal ritual gathers the local community, neighbors, friends, and family in the neighborhood, despite no gathering rule amidst the COVID-19 pandemic.

Optimism, prayers, calm, and positive thought will boost someone's conviction and eventually heal chronic disease. Optimism, positive thoughts, and prayers have an accurate correlation to health and immunity. When people pray, they will feel satisfied, relieved, peaceful, and calm because they felt inner peace, which is useful to face the anxiety due to the COVID-19 pandemic. This conviction helps the healing process (Choidab et al., 2020). When people pray, their prayers go upwards, while the outbreak comes down from the sky. Eventually, the prayers and the outbreak will encounter, and it will prevent the people who pray from getting infected (Choidab et al., 2020).

According to Jim et al. (2015), there is a correlation between faith and spirituality with healthier physical conditions (Jim et al., 2015). It means that every sick patient needs faith and spirituality as part of comprehensive treatment. Faith and spirituality must be carried out simultaneously and not favoring one over the other. During the COVID-19 pandemic, faith and spirituality become the stimulus to get closer to God. Wiederhold (2020) also argued that faith and spirituality help people to maintain better physical condition (Wiederhold, 2020). It is apparent in Japan and Greece; someone with a higher level of religiosity have lower cardiovascular and diabetes risk factors. In Saudi Arabia, the more religious someone, the more obedient. In Thailand, religious women have lower diabetes risk factors.

After the COVID-19 spread in Indonesia, including Surabaya, many started to consume immune boosters as recommended in the media. Meanwhile, 21.6 percent of total respondents consume herbs and spices, such as ginger, temulawak, lemongrass, tamarind, honey, date palm, and black seeds. When the price of herbs and spices rise, 51.4 percent of the respondents shift to Vitamin C, 16.2 percent shift to fruits (lemon, lime, and oranges), and 10.8 percent shift to multivitamins. According to Alkhatib (2020), functional meals, including herbs, will maximize the immunity to prevent and tackle the pathogenic virus's transmission. Antiviral meals include fruits, vegetables, olive oil, fish, beans, and herbs. Consuming herbs and herbal medicine provide nutrition by food functional compounds. A new lifestyle that encourages people to consume antiviral foods will provide better public health. During the COVID-19 pandemic, the local community in Benowo District, Western Surabaya have started to cultivate herbal plants as a new habit during social distancing. Because some of them stayed at home, and this new habit will ease access to herbs and avoid physical contact with others. This behavior will prevent COVID-19 local transmission.

Mani et al. (2020) have observed the Database of PubMed and successfully gather 55 papers on the use of herbs and herbal medicines to prevent contagious disease, including COVID-19 (Mani et al., 2020). China is the most prominent country in herbal medicine processing. Chinese medication has contributed to the development of herbal medicines to prevent illness. In fact, Chinese herbal medicines were highly effective in treating SARS patients. It was introduced as one of the treatment options during the SARS epidemic and will be useful to treat COVID-19 patients (Ang et al. 2020; Huang et al. 2020). Herbal medication is highly effective in relieving COVID-19 infection before medical sciences introduce antibiotic treatment.

The local communities in Indonesia have used spiritual and cultural-based approach in facing disasters from time to time. President Joko Widodo said in the opening ceremony of National Culture Week (termed as PKN) 2020 in Jakarta. PKN 2020 was held with a grand theme of “Shared Spaces #IndonesiaBahagia” (happy Indonesia) and the narration to emphasize a “culture resilience.” The theme in PKN 2020 comes from the COVID-19 pandemic condition, which provides new challenges for the Indonesian cultural people. Based on the PKN official website, the health protocols that the WHO and the government enforce are related to the health tradition in Indonesia. The tradition to wash hands, reject catastrophe or locally term as ‘*tolak bala*,’ self-isolation, and village clean up, teach about the relationship between human and nature, as well as its implication on health, human body

resilience, and neighborhood. In Indonesia, particularly in Surabaya the second major city, which the research took place, the local communities continue to practice and perform some local/traditional believes as part of culture resilience, such as reject catastrophe or *tolak bala*, village cleanups, consuming herbal medicines, and citing prayers according to the respective beliefs. In addition to the health protocols, spiritual and cultural-based activities are also essential for Indonesian people in facing the COVID-19 pandemic.

CONCLUSION

There are various people's perceptions and behavior toward the COVID-19 pandemic. Different groups of people give different reactions. In this research, there are three groups of people based on their panic level in facing the COVID-19 pandemic: those who are not panic, quite panic, and extreme panic. The majority of Surabaya residents are categorized as quite panic. The local community in Surabaya have remained to practicing cultural and spiritual approaches to reduce their panic level during the pandemic. They took several efforts, such as consuming immune booster according to the information in mass media. The immune booster consists of herbs and spices, vitamin C, and even fruits. Besides, the locals carried out the cultural rituals and religious performance and communal prayers when facing the COVID-19 pandemic. The local community in Surabaya as majority of them are the Javanese, continue to believe that the rituals and religious practices could protect their area from an outbreak's danger. Aside from the cultural rituals, the local community in Surabaya sub-districts carried out a spiritual/religious practices to reduce their panic level. In some areas of Surabaya, the locals avoid crowds and chose to do personal coping mechanisms by praying according to their respective beliefs. For the Moslems, some of them pray by reciting particular Surah in Koran and some others pray by performing communal *slametan* and *sholawat*. Those who are not fluent in Arabic words and Koran prefer to pray in the Javanese or Bahasa languages. The same goes for the Catholics, which pray according to their priest's advice.

REFERENCES

- Airhihenbuwa, C. O., Iwelunmor, J., Munodawafa, D., Ford, C. L., Oni, T., Agyemang, C., Mota, C., Ikuomola, O. B., Simbayi, L., & Fallah, M. P. (2020). Peer reviewed: culture matters in communicating the global response to COVID-19. *Preventing Chronic Disease*, 17.
- Ang, L., Lee, H. W., Choi, J. Y., Zhang, J., & Lee, M. S. (2020). Herbal medicine and pattern identification for treating COVID-19: a rapid review of guidelines. *Integrative*

- Medicine Research*, 9(2), 100407.
- Choidab, A. R., Mudakir, A., Mubarak, A. S., Ramadayanto, A., & Supriadi, B. (2020). *Interaksi Agama dan Budaya di Masyarakat*. Prodi S2 Studi Agama-Agama UIN Sunan Gunung Djati Bandung.
- Dein, S., Loewenthal, K., Lewis, C. A., & Pargament, K. I. (2020). COVID-19, mental health and religion: An agenda for future research. In *Mental Health, Religion & Culture* (Vol. 23, Issue 1, pp. 1–9). Taylor & Francis.
- Geertz, C. (1976). *The religion of Java*. University of Chicago Press.
- Hisham, I. N., Townsend, G., Gillard, S., Debnath, B., & Sin, J. (2021). COVID-19: the perfect vector for a mental health epidemic. *BJPsych Bulletin*, 45(6), 332–338.
- Holmes, E. A., O'Connor, R. C., Perry, V. H., Tracey, I., Wessely, S., Arseneault, L., Ballard, C., Christensen, H., Silver, R. C., & Everall, I. (2020). Multidisciplinary research priorities for the COVID-19 pandemic: a call for action for mental health science. *The Lancet Psychiatry*, 7(6), 547–560.
- Huang, J., Wu, L., Ren, X., Wu, X., Chen, Y., Ran, G., Huang, A., Huang, L., & Zhong, D. (2020). Traditional Chinese medicine for corona virus disease 2019: A protocol for systematic review. *Medicine*, 99(35), e21774.
- Hui, D. S., Azhar, E. I., Madani, T. A., Ntoumi, F., Kock, R., Dar, O., Ippolito, G., Mchugh, T. D., Memish, Z. A., & Drosten, C. (2020). The continuing 2019-nCoV epidemic threat of novel coronaviruses to global health—The latest 2019 novel coronavirus outbreak in Wuhan, China. *International Journal of Infectious Diseases*, 91, 264–266.
- Jim, H. S. L., Pustejovsky, J. E., Park, C. L., Danhauer, S. C., Sherman, A. C., Fitchett, G., Merluzzi, T. V., Munoz, A. R., George, L., & Snyder, M. A. (2015). Religion, spirituality, and physical health in cancer patients: A meta-analysis. *Cancer*, 121(21), 3760–3768.
- Lazzari, C., Shoka, A., Nusair, A., & Rabottini, M. (2020). Psychiatry in time of COVID-19 pandemic. *Psychiatria Danubina*, 32(2), 229–235.
- Mani, J. S., Johnson, J. B., Steel, J. C., Broszczak, D. A., Neilsen, P. M., Walsh, K. B., & Naiker, M. (2020). Natural product-derived phytochemicals as potential agents against coronaviruses: A review. *Virus Research*, 284, 197989.
- Masters, K. S., & Spielmans, G. I. (2007). Prayer and health: Review, meta-analysis, and research agenda. *Journal of Behavioral Medicine*, 30, 329–338.
- Perdana. (2020, September 21). Gangguan Ginjal Komorbid Terbanyak yang Sebabkan Kematian Pasien Covid-19. *Suara Surabaya*.
- Rahiem, M. D. H., & Rahim, H. (2021). The Sultan and the Soup. *Journal of Ethnic and Cultural Studies*, 8(1), 43–65.
- Shigemura, J., Ursano, R. J., Morganstein, J. C., Kurosawa, M., & Benedek, D. M. (2020). Public responses to the novel 2019 coronavirus (2019-nCoV) in Japan: Mental health consequences and target populations. *Psychiatry and Clinical Neurosciences*, 74(4), 281.
- Siegel, M. (2006). *Bird flu: everything you need to know about the next pandemic*. Wiley.
- Sikhangezile, N., & Modise, M. A. (2020). Social distancing, cultural and psychological effects on learners in a rural setting in Zimbabwe. *Journal of Ethnic and Cultural Studies*, 7(3), 200–209.
- Sohrabi, C., Alsafi, Z., O'Neill, N., Khan, M., Kerwan, A., Al-Jabir, A., Iosifidis, C., & Agha, R. (2020). World Health Organization declares global emergency: A review of the 2019 novel coronavirus (COVID-19). *International Journal of Surgery*, 76, 71–76.
- Sutomo, S., Sagala, S., Sutomo, B., Liem, W., & Al Hamid, H. (2021). Strengthening the strategic and operational response for reducing COVID-19 transmission in Indonesia.

- Kesmas: Jurnal Kesehatan Masyarakat Nasional (National Public Health Journal)*.
- Tagat, A., & Kapoor, H. (2020). Go Corona Go! Cultural beliefs and social norms in India during COVID-19. *Journal of Behavioral Economics for Policy*, 4(S), 9–15.
- Ubaidillah, U. (2021). Interpreting ruh as an ecological spirituality in relation to Islam and Java mysticism. *El Harakah*, 23(1), 139.
- Utomo, B., Chan, C. K., Mertaniasih, N. M., Soedarsono, S., Fauziyah, S., Sucipto, T. H., Aquaresta, F., Eljatin, D. S., & Adnyana, I. M. D. M. (2022). Comparison Epidemiology between Tuberculosis and COVID-19 in East Java Province, Indonesia: An Analysis of Regional Surveillance Data in 2020. *Tropical Medicine and Infectious Disease*, 7(6), 83.
- Wiederhold, B. K. (2020). Turning to faith and technology during the coronavirus disease 2019 crisis. In *Cyberpsychology, Behavior, and Social Networking* (Vol. 23, Issue 8, pp. 503–504). Mary Ann Liebert, Inc., publishers 140 Huguenot Street, 3rd Floor New
- Yoo, E.-H., Chang, S. H., Song, D.-Y., Lee, C. H., Cheong, G. Y., Park, S., Lee, J. H., Lee, S., Kwak, S.-G., & Jeon, C.-H. (2022). Comprehensive laboratory data analysis to predict the clinical severity of coronavirus disease 2019 in 1,952 patients in Daegu, Korea. *Annals of Laboratory Medicine*, 42(1), 24.