

Mass Panic Disaster Management in COVID-19 Pandemic

Hamzah Shatri^{1,2}, Edward Faisal¹, Rudi Putranto¹

¹ Department of Internal Medicine, Faculty of Medicine Universitas Indonesia - Cipto Mangunkusumo Hospital, Jakarta, Indonesia.

² Department of Epidemiology, Cipto Mangunkusumo Hospital, Jakarta, Indonesia.

Corresponding Author:

Edward Faisal, MD. Division of Psychosomatic and Palliative, Faculty of Medicine Universitas Indonesia - Cipto Mangunkusumo Hospital . Jl. Diponegoro No. 71, Jakarta 10430, Indonesia. email: efaisal.psikopaliatif@yahoo.com, psikosomatik@yahoo.com.

ABSTRAK

Pandemi infeksi virus corona 2019 (COVID-19) terjadi dalam waktu singkat. Situasi ini adalah bencana tidak terduga. Pengobatan yang belum pasti untuk infeksi virus ini meningkatkan kecemasan berlebihan. Kecemasan ini tidak hanya terjadi pada satu orang saja tapi pada sebagian besar orang sehingga menyebabkan panik massal. Panik massal adalah masalah serius yang harus segera diidentifikasi dan ditatalaksana. Manajemen panik massal akan dapat menurunkan insiden COVID-19.

Kata kunci: panik massal, kecemasan, manajemen, bencana, COVID-19.

ABSTRACT

Coronavirus disease (COVID-19) pandemic occurred abruptly. It is an unexpected disaster. Uncertain treatment for this viral infection increases excessive anxiety, which does not occur only in one person but also in majority of people; therefore, it can create mass panic. Mass panic is a serious problem that must be immediately identified and managed. Mass panic management will reduce COVID-19 incidence.

Keywords: Mass panic, anxiety, management, disaster, COVID-19.

INTRODUCTION

COVID-19 pandemic occurs very quickly.^{1,2} The Centers of Disease Control and Prevention (CDC) fact sheet describes that bad rumors, fear and anxiety about COVID-19 have already happened. The pandemic is a false alarm for someone who already had anxious personalities and anxiety can occur in any individual of all age groups. This condition is a strong trigger for someone who has a desire not to be infected, especially for those who already had a history of anxiety. Coughlin, et al.³ suggest that anxiety and depression have been known to be associated with various viral infections. The mildest disorder of anxiety is hypochondriasis;

while disorder with the most rapid exacerbation is panic attack.

Behavioral response, which is associated with the fear of coronavirus infection today, is similar to fear-related behavior of Ebola virus pandemic, which had occurred in West Africa previously. Behavior and action collectively occurs as a response to perceived threat or actual exposure to events that have the potential to cause trauma. In this case, it is the fear-related behavior on COVID-19. Every individual may have a significant contribution in accelerating the virus transmission and similar condition also applies to the Ebola epidemic. O'Leary et al.⁴ have demonstrated that there is discriminatory

attitude and 95% survivors of Ebola have experienced stigma. Such fear is not only limited to layman but also health workers. Some asymptomatic layman may have panic behavior and this situation may be catastrophic in the context of preventing the rapid spread of COVID-19.

Fear and anxiety about COVID-19 can be overwhelming and even stressful.⁵ Psychological symptoms related to COVID-19 that have been observed at population level are anxiety-driven panic buying and paranoia about attending community events. People who have been prevented from accessing their training institutions, workplaces, homes, respectively, are expected to have developed abnormal psychological symptoms. The abnormal psychological symptoms may occur because of stress, lack of autonomy and increasing concerns about income and job insecurity, etc. Another concern may include the impacts of the isolation, which can induce fear and panic in the community. Furthermore, the fear may be possibly more harmful than the COVID-19 infection itself.⁶

One of major problems found in this pandemic is mass panic. Mass panic is a crowd problem, which is the opposite of collective resilience. There is a need for good management on mass panic. People will suffer more because of 'behavioral and emotional responses' than 'physical injuries'.⁷ According to Gøtzsche in BMJ, we are all the victim of mass panic due to COVID-19.⁸ People in Hong Kong, Singapore, Indonesia, and Japan have the worst responses to the contagious COVID-19 infection. They are so afraid that it induces them to perform bulk buying.⁹ Bulk buying is one of the signs of mass panic. Further management should be done, which includes mass behavioral treatment.

DEFINITION AND EPIDEMIOLOGY

Negative emotion and reaction can impact a large group of people; therefore, it may lead to serious consequences, which are group insecurity, anxiety, worry or fear. It may also lead to distress and worsen a threatening or harmful situation. The phenomenon has been described as "herding behavior", a type

of irrational behavior that often leads to dangerous overcrowding and impaired escape. The transition of experience from individual psychology to mass psychology could happen due to herding behavior. Herding behavior is the result of social contagion. Destructive actions may result from an individual's high stress level and inability to make decisions. Loss of social identity within a group, loss of personal space, high crowd density, severe external crises or emergencies and high emotional arousal are described as non-adaptive crowd behaviors. Social attachment could delay or boost incident mass panic.^{10,11}

There are three common levels of distress, which are anxiety, fear, and panic.¹⁰ In addition to fear, the bodily sensation of physical pressure caused by close contact with other people and being confined in a limited space also has the potential to cause panic. Panic-related emotions and panic behavior may affect decision-making and causes consequent human behavior changes.¹⁰

The terms "irrationality" and "herding", which associated with "panic" are ubiquitous in the crowd dynamics. All of these terms are used for describing human escape behaviour.¹² Crowd behaviors in emergencies and disasters are divided into two categories: (1) those that are assumed to have a default of psychological vulnerability and (2) those that have emphasized psychosocial resilience. Panic typically means loss of behavioral control, rather than selfishness and mental disorder.⁷ Panic can affect evacuation efficiency, in both beneficial or detrimental ways.¹² Meanwhile, mass panic is defined as dysfunctional behavior, delusory beliefs and social pathology. In mass panic, the crowd becomes irrational and it is likely to be associated with the 'contagion' of emotion. Two and more people may share the same beliefs related to COVID-19-associated symptoms.

An irrational response is often subtle in a mass emergency situation and it may have dangerous effects. The people's ability to remain calm and react logically to the situation is blurred because of their fear and anxiety. In contrast, collective resilience is an emphasis on the people's collective capacity for recovering

and continuing to function through shared social and psychological resources.⁷ There are some unique factors associated with mass panic that should be considered for management, including environmental factors, human factors and policy factors.¹⁰

RISK FACTORS, CLINICAL FEATURES AND OUTCOME

The cognition, behavior, emotion and previous experience can directly impact the outcomes of this pandemic. The pandemic is one of emergency situations and human beings may respond to it with negative psychological feelings such as stress, panic and altered decision-making patterns. Non-adaptive behaviors such as panic behavior and crowd behavior may also be observed. Apart from the psychological impacts, human behavior can lead to serious physical consequence such as injuries or deaths. There are three stages psychological reaction in emergency situation:¹⁰

1. The pre-impact phase, which contains the threat stage and warning stage.
2. The impact phase.
3. Post-impact phase, which contain the recoil stage, rescue stage, and post-traumatic stage.

The pre-impact phase and impact phase are viewed as pre-movement process. Ignoring or denying the situations and being apathetic to the upcoming danger are common findings in this early phase. Human behavior in the pre-movement process are collecting information about the situation, collecting important belongings, and choosing an optimal way to saving own life. The most important determinants of human behavior are risk perception and decision-making. Decision-making process in this pandemic is typically conducted under time pressure. The immediate consequences of threat are stress, anxiety, and arousal.¹⁰ Clinical manifestations in crowd may not be identified exactly, but they are more easily observed in individuals.

Due to lack of evidence about clinical manifestations in crowd, the risk of mass panic can be assessed based on environmental and situational cues. A few cues that can use for identifying mass pathologies are: (1) perception

of an urgent and immediate threat to someone and/or their family; (2) belief that overprotection in situations is possible, even in the reality it may not; and (3) feelings of helplessness, especially when others are not willing or not able to help. At individual level, amidst the pandemic, the manifestations of psychological problems may include anxiety, depression, and post traumatic disorder syndrome.⁶ There are general psychological clinical manifestations during an infectious disease outbreak:⁵

- Fear and worry about their own health and relatives.
- Changes in sleep or eating patterns.
- Difficulty sleeping or concentrating.
- Worsening of chronic health problems.
- Excessive crying or irritation.
- Excessive worry or sadness.
- Unhealthy eating or sleeping habits.
- Difficulty with attention and concentration.
- Avoidance of activities enjoyed in the past.
- Unexplained headaches or body pain.
- Increased use of alcohol, tobacco, or other drugs.

In certain situation, particularly after being released from a quarantine, one could experience psychological disturbances and the clinical manifestations include:⁵

- Mixed emotions, including relief after quarantine
- Fear and worry about your own health and the health of your relatives
- Stress from the experience of monitoring yourself or being monitored by others for signs and symptoms of COVID-19
- Sadness, anger, or frustration because friends or loved ones have unfounded fears of contracting the disease from having a contact with you, even though you have been confirmed as non-contagious
- Guilt about not being able to perform normal work or parenting duties during quarantine
- Other emotional or mental health changes

MASS PANIC MANAGEMENT

Self-isolation and quarantine are the best way to reduce the spread of COVID-19, which also include screening for non-specific

COVID-19 symptoms and reporting absence of transmission. Compulsory physical distancing, hand hygiene, and mass masking are successful way to eliminate COVID-19 transmission.¹³⁻¹⁵ Stigmatization can be removed by using mask in public area. The recent recommendation for mass masking is included for asymptomatic subjects in public places. Mass masking as a public health intervention may reduce the virus transmission to other healthy people from asymptomatic infected people. While encouraging people to use mask, there is a problem of global shortage of medical mask supply. Mass mask panic have made people rush in buying mask (panic buying) for protected their self and family. Hong Kong and Italy had the same problem about panic mask buying; however, the craze has gone about more than 30 days.¹³ Now, the World Health Organization are neither against nor recommending the use of non-medical mask (e.g. cotton fabric) to reduce COVID-19 transmission.^{14,15} Medical masks and their technical specifications are designed specifically for the protection of health-care workers and it is not intended for layman.¹³⁻¹⁵

The facts are there are a lot of people in the community have misused the medical equipment as they feel having greater protection when they use medical masks, which is also used by medical officers. It is one of signs that mass panic has already happened. People continue to use medical-grade mask although they are aware that there will be a lack of supply of self protection device for medical officers.

Currently, there is insufficient supply of personal protective equipment due to panic buying and stockpiling.¹⁶ At this point, governments must prepare to handle mass panic and explore other sustainable alternatives to protect civilians as well as reaching for effective source control in community settings. Health authorities need to respond fast and make quick decision in order to stop mass panic and make advance preparations to avoid confusion and chaos in the anticipated challenges ahead.

The pandemic COVID-19 in our lives has been traumatic enough to constitute a crisis and the stress levels are nearly unmanageable. Such crises include being diagnosed with a probable COVID-19 infection or having personal contact

with COVID-19 patient; however, events of lesser severity may also constitute a crisis.¹⁷

Respond to COVID-19 depends on personal background, which is different among the community. Everyone may have different reaction to stressful situation. There are some stress coping mechanisms that someone in the community can do to make him/her feel stronger to face the stressful event. Those who already have preexisting mental health conditions should continue their medication and always be aware of new or worsening symptoms. The most important thing that can we do to reduce panic, anxiety, and fear are taking care of yourself, friends, and family. The community becomes stronger when there are people with good stress coping ability who can influence the others with positive attitudes.⁵ Things to do when facing crises are focuses on the important issues, find support, lessen the stress response, process our feeling, take care of our body, and be patient towards ourself.¹⁷

First of all, the people who is going to self-isolation or quarantine need to understand about the disease; therefore, he/she will do the isolation voluntarily without stressful thoughts.¹⁸ For community sake, things that we can do to support psychological coping mechanism are: ^{5,9,17-21}

- Doing daily routine activities. Such as maintaining daily sleep cycle and having normal eating habit.
- Planning daily timetable for sustaining mental and physical health.
- Trying to notice and limit anxiety triggers such as information or news from unknown and untrustworthy source.
- Avoiding or taking breaks from using gadgets, watching, reading, or listening to news stories, including social media, especially listening to the news about the pandemic repeatedly. Do not using gadgets during meal time, when you are in a social situation, before bedtime or in the bathroom. Set time limits for how long you would like to spend on your phone. Information overload due to global connectivity has made propensity to disruption and the people could not distinguish the fact from hoax.
- Avoiding replicate and broadcast negative news.

- Taking care of your body.
- Doing exercise regularly.
- Doing some meditation such as yoga.
- If you feel bored or you are stuck in your negative mind do take deep breaths, stretch, or meditate.
- Eating healthy food and well-balanced meals.
- Getting enough sleep.
- Doing your hobbies.
- Doing communication with distant family members or you friends with video call option.
- Avoiding alcohol, smoking, and drugs abuse.

COVID-19 affects people in the community as well as those who are in quarantine and people being released from quarantine. During quarantine, people can still perform their daily activity similar to activities they have in the community in order to reduce their stress. However, different situation may occur for those who have released from quarantine as they may experience stigma and fear-associated discrimination from others in their community. To overcome such situation, firstly we have to stay healthy and maintaining positive energy to live a fulfilling life of becoming real healthy people.⁵

Another way to reduce the impact of the pandemic is using telemental health consultation, which is one of the easiest ways to treat mass mental health problem as it is feasible and affordable. Treatment protocols should address both of physiological and psychological needs. Since psychological treatment and support may diminish the burden of comorbid mental health conditions, thus it may the wellbeing of people with mental health issues. Another challenge is to provide mental health services during isolation. Telemental health services (THS), which is carried out through videoconference, e-mail, telephone, or smartphone apps, can help people in isolation and those who are at high risk for COVID-19 including clinicians on the frontline, patients diagnosed with COVID-19 and their families, policemen, and security guards. THS can maintain psychological well-being and can help them to cope in acute and post-acute condition. The services include counseling, supervision, training, as well as psychoeducation.

THS can fill the needs of those in rural and remote area during this situation.

Communication is one of basic needs during isolation. Simple communication methods should be used more extensively to share information about symptoms of burnout, depression, anxiety, and PTSD during COVID-19. The aims of doing this are to offer cognitive and/or relaxation skills, to deal with minor symptoms and to encourage access to online self-help programs. THS can be used to monitor symptoms and also to provide support when needed.⁶

CONCLUSION

In every situation, positive thinking is the right method for reaching healthy life. With this, every individual can avoid panic, anxiety, and fear. Mass panic can also be avoided by performing prevention and promotion measures on psychological and physical problems during the pandemic. Further study should be conducted to identify the problem further and provide proper management. Currently, studies on mass panic issue are ongoing in Indonesia.

REFERENCES

1. Kampf G, Todt D, Pfaender S, Steinmann E. Persistence of Coronavirus on inanimate surfaces and their inactivation with biocidal agents. *J Hospital Infect.* 2020;104:e251.
2. Wu Z, McGoogan J, M. Characteristics of and important lessons from the Coronavirus disease 2019 (COVID-19) outbreak in China summary of a report of 72,314 cases from the Chinese center for disease control and prevention. *JAMA.* 2020:E1-4.
3. Coughlin SS. Anxiety and depression: Linkages with viral diseases. *Public Health Rev.* 2012;34:1-13.
4. O'Leary A, Jalloh MF, Neria Y. Fear and culture: contextualising mental health impact of the 2014–2016 Ebola epidemic in West Africa. *BMJ Glob Health.* 2018;3:000924.
5. Center for Disease Control and Prevention. Coronavirus Disease 2019 (COVID-19): Daily Life & Coping. USA: U.S. Department of Health & Human Services; 2020 [cited 2020 April 1, 2020]. Available from: <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/managing-stress-anxiety.html>.
6. Zhou X, Snoswell CL, Harding LE, et al. The role of telehealth in reducing the mental health burden from COVID-19. *Telemed J E Health.* 2020:1-3.
7. Drury J, Novelli D, Stott C. Representing crowd behaviour in emergency planning guidance: 'mass

- panic' or collective resilience? *Resilience*. 2013;1:18-37.
8. Götzsche PC. COVID-19: Are we the victims of mass panic? *BMJ*. 2020;368:m800.
 9. Peckham R. The COVID-19 outbreak has shown we need strategies to manage panic during epidemics 2020 April 11, 2020 [cited 2020 February 21, 2020]. Available from: <https://blogs.bmj.com/bmj/2020/02/21/robert-peckham-COVID-19-outbreak-need-strategies-manage-panic-epidemics/>.
 10. Cheng Y, Liu D, Chen J, Namilae S, Thropp J, Seong Y. Human behavior under emergency and its simulation modeling: A Review. *IJHFMS*. 2019;313-25.
 11. Gantt P, Gantt R. Disaster psychology dispelling the myths of panic. *Prof Saf*. 2012;57:42-9.
 12. Haghani M, Cristiani M, Bode NWF, Boltes M, Corbett A. Panic, irrationality, and herding: Three ambiguous terms in crowd dynamics research. *J Adv Transport*. 2019(9267643):1-58.
 13. Leung CC, Lam TH, Cheng KK. Mass masking in the COVID-19 epidemic: people need guidance. *Lancet*. 2020;395(10228):945.
 14. World Health Organization. Advice on the use of masks in the context of COVID-19 2020 April 9, 2020 [cited 2020 April 6, 2020]:[1-5 pp.]. Available from: [https://www.who.int/publications-detail/advice-on-the-use-of-masks-in-the-community-during-home-care-and-in-healthcare-settings-in-the-context-of-the-novel-coronavirus-\(2019-ncov\)-outbreak](https://www.who.int/publications-detail/advice-on-the-use-of-masks-in-the-community-during-home-care-and-in-healthcare-settings-in-the-context-of-the-novel-coronavirus-(2019-ncov)-outbreak).
 15. World Health Organization. Advice on the use of masks the community, during home care and in health care settings in the context of the novel coronavirus (2019-nCoV) outbreak 2020 April 9, 2020 [cited 2020 January 29, 2020]:[1-2 pp.]. Available from: <https://www.who.int/docs/default-source/documents/advice-on-the-use-of-masks-2019-ncov.pdf>.
 16. World Health Organization. Rational use of personal protective equipment for coronavirus disease 2019 (COVID-19) 2020 April 9, 2020 [cited 2020 February 27, 2020]:[1-7 pp.]. Available from: https://apps.who.int/iris/bitstream/handle/10665/331215/WHO-2019-nCov-IPCPPE_use-2020.1-eng.pdf.
 17. Scott E. Tips on how to cope with a crisis or trauma 2020 April 7, 2020 [cited 2019 November 10, 2019]. Available from: <https://www.verywellmind.com/cope-with-a-crisis-or-trauma-3144525>.
 18. Brooks SK, Webster RK, Smith LE, et al. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *Lancet*. 2020;395:912-20.
 19. Gould WR. The hidden stressors of technology you should be aware of 2020 April 7, 2020 [cited 2020 February, 2020]. Available from: <https://www.verywellmind.com/the-hidden-stressors-of-technology-4783960>.
 20. World Health Organization. Mental health and psychosocial considerations during COVID-19 outbreak. 2020.
 21. Whalley M, Kaur H. Guide UK English living with worry and anxiety amidst global uncertainty. UK: Psychology Tools Limited; 2020 [cited 2020]. Available from: <https://www.psychologytools.com/resource/living-with-worry-and-anxiety-amidst-global-uncertainty>.