The Mental Health Impact of Quarantine in COVID-19 Pandemic

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ABSTRACT

Due to the increasing number of COVID-19 infections, most countries are facing the pressure of controlling the virus's spreading. Plenty of governments have enforced restrictions on most outdoor activities or even collective quarantine. People who have potential contact with the infection are asked to get quarantine at home. Despite quarantine can bring benefits to the public good, it also deprives people's liberty. Most studies have suggested that quarantine can cause adverse psychological effects not merely from external pressure but also the widespread emotional distress. In the present study, the research investigated the different stressors and mental health problems in quarantine and positive psychology as potential solutions based on reviewing existing literature. The difference between COVID-19 and other pandemics will also be taken into consideration. According to the analysis, the quarantine in COVID-19 is stricter, and the negative psychological implications are mainly anxiety of financial losses and the fear of infecting family members. Mental health care providers can play an essential role in addressing these apprehensions and mitigating the pressure. These results shed light on the necessity of mental health interventions in the quarantine, and the government should give attention to the quarantine-related mental illness.

Keywords: Quarantine, Mental health, Positive Psychology, COVID-19.

1. INTRODUCTION

In 2019, COVID-19, a novel coronavirus that can cause acute respiratory disease, occurred in Wuhan, China, which is highly contiguous and can quickly transmit to humans [1]. If there is no proper protective equipment available, the transmission might occur through close contact and droplet [2]. Its outbreak caught everyone unprepared, and it rapidly spread from continent to continent. According to the World Health Organization, in 2021, the outbreak of the pandemic has more than 200 million cases detected and killed over 4.5 million in more than 220 countries. So far, there are more than 680,000 new cases reported every day, and the death tolls continue to rise [1]. In order to quickly contain the epidemic, governments in advanced economies responded to the COVID-19 and adopted a range of unprecedented policies [3]. For example, most countries have enforced restrictions on outdoor activity or collective quarantine to contain diffusion [4].

In public health practice, "quarantine" refers to the separation of persons (or communities) who have been exposed to an infectious disease [5]. Plenty of the stores were asked to shut down, and people had to stay at home indefinitely. However, various problems come out accompanied by the policy implementation. From a psychological perspective, people might live in a state of confinement and feel constrained [6]. This kind of mental state can make them vulnerable and lead to various mental health issues, e.g., loneliness, fear, and insecurity. Comparing to those not quarantined, people quarantined are more likely to fear their health and fear of infecting others, especially family members. The confinement will make them lose social and physical contact with others, which will cause them to have a sense of frustration and isolation [6]. Together with the unhealthy diet and lacking usual day-to-day activities, it can cause a wide-ranging and substantial mental illness [1]. It is not saying that quarantine is not essential, but officials must avoid long-lasting quarantine and provide proper mental health care.

Positive psychology is the study focused on the good life and individual and group flourishing [7]. Positive psychology valued the contentment and satisfaction in the past, the flow of happiness in the current, hope, and optimism in the future. At the individual level, it is

about all positive individual traits, including courage, perseverance, honesty, dependability, and future-mindedness. At the group level, it is about the public virtue that can make our society better: responsibility, altruism, and tolerance [8]. Under such circumstances, approaches such as positive reframing, a positive psychology approach that helps perceive something previously viewed as negative in a positive way, can be a strong resource to help those people cope with uncertainty and keep a healthy mental state is warranted [9]. In the period of quarantine, it can help people divert attention from anxiety and elicit pleasance and reduce depressive thoughts. Positive psychology engages in working away from floundering and languishing toward positive and flourishing [10]. If people suffer from depression during quarantine, the positive mental health service can help promote well-being and intervene in mental illness.

Many research suggested that positive psychology can promote well-being and help individuals attain physical health. However, most of this research is based on previous pandemics such as SARS in 2002 and Ebola, whereas COVID-19 is more special than other pandemics. Although there are similarities between COVID-19 and SARS, the characteristics of the virus will ultimately determine whether the same measures for previous research will also be successful for COVID-19 [11]. COVID-19 differs from the other pandemics in terms of severity, infectious period, and extent of the spread between people [11]. Although Ebola and COVID-19 both can cause respiratory disease, Ebola mainly spreads in poverty-burdened countries, and mental illness is caused by physical factors such as food insecurity and facing substantial mortality. In this case, the mental disorder is common (e.g., anxiety and depressive disorder) [12].

On the contrary, mental illness in the COVID-19 is mainly caused by detachment with others and fear of infection, and the symptoms in the COVID-19 are low mood, insomnia, and depression [6]. Therefore, it might be no longer pertain to directly applying past evidence on the COVID-19 as they all develop within specific circumstances, from the different social context to the variable nature of the disease. Besides, according to the World Health Organization's report, in 2021, the more viruses circulate, the more they may change. The emerging variants which appear to be more transmissible or deadlier than the wild-type SARS-CoV-2 contain mutations in the spike protein, spurring vaccine efficacy concerns [13]. All these factors collectively exacerbate the uniqueness of COVID-19, which causes more serious impacts on people's mental health.

In this article, the uniqueness of COVID-19 will be considered, and whether positive psychology can also be applied in COVID-19 will be investigated. The present study hypothesizes that COVID-19 is more severe on mental health than the other pandemics, and positive psychotherapy can still promote well-being in this circumstance. The present study will be structured into the following parts. In the beginning, the impact of quarantine in the COVID-19 on mental health will be discussed. Then, the present study chooses positive psychology and how positive psychology help overcome the difficulties in the quarantine. Afterward, the differences between COVID-19 and the other pandemics will be demonstrated and whether it can still be helpful will be investigated. Finally, the study will consist of a summary of the importance of positive psychology in helping individuals in the period of quarantine.

2. HOW QUARANTINE IMPACTS MENTAL HEALTH

Due to the increasing number of COVID-19 infections, most countries are facing unprecedented pressure and challenge. Unfortunately, until now, the number of death and infected people is still increasing. In order to contain the diffusion of the COVID-19 virus, governments have enforced restrictions on most outdoor activities or even collective quarantine [14]. According to Brook and colleagues, quarantine is the period during which the movement of the person who has potentially been exposed to a contagious disease to ascertain if they become unwell is restricted and separated. Therefore, reducing the risk of them infecting others and preventing the disease from spreading [6].

Quarantine is often an unpleasant experience that evokes fear of contagion, infecting other people, and concerns about death [15]. It will cause lifestyle changes, including reduced physical activity, overeating, and excessive drinking [16]. Torres analyzed the relationship between stress and eating behavior and figured out that eating is an approach that can be used to cope with stress, making them feel better in the hard life [17]. However, due to reduced goods in the quarantine period, limited access to foods caused by the restricted food resources, people switch to unhealthy food [18]. People would tend to choose long-life food such as wine and snacks rather than fresh food. Leow indicates that unhealthy diets and lacking physical exercise can cause numerous health consequences, including obesity, hypertension, and hyperlipidemia, and lead to psychological effects, including worry and anxiety [19].

Previous researches indicate that quarantine can directly impact mental health. According to Brooks et al. [6], the hospital staff who have been quarantined for nine days are more likely to report detachment from society, exhaustion, irritability, insomnia, hard concentration and indecisiveness in working, worse work performance, anxiety when contact with patients, and reluctance to work. Health anxiety is common to

everyone, and it keeps people vigilant to the potential health-related threat, which helps detect early signs of health issues. Nevertheless, excessive health anxiety is detrimental, and which is more and more common is the period of quarantine [15]. People with excessive health anxiety tend to be nervous and misinterpret benign bodily sensations and changes as dangerous. In the period of quarantine, a person with high health anxiety might misinterpret the common cold and cough as a tell-tale sign that they are infected [19]. These misinterpretations, in turn, will make them more anxious and cause other maladaptive coping behaviors.

During the prolonged quarantine, unexpected interruption of work, the perception of isolation from society will be intensified, and they also have to suffer from the double pressure, such as financial problems [6]. The study suggests that the long quarantine duration is associated with a series of mental illnesses, especially post-traumatic stress symptoms, and a substantial proportion of quarantined persons are distressed [20]. Besides, the study also indicates that people in prolonged quarantine frequently show boredom, frustration, and a sense of isolation from society. Comparing with people who are not quarantined, those people worry more about themselves and their family members being infected and worry about any physical symptoms related to infection [21]. Accordingly, public health decision-makers must know the potential harm of prolonged quarantine and understand that psychological factors can play an essential role in the success of strategies.

3. WHAT IS POSITIVE PSYCHOLOGY

In this severe circumstance, positive psychotherapy (PPT) stands out as a robust psychological approach, given its triadic focus on (a) symptom alleviation and trauma-focused processes; (b) treatments that understand and promote the social determinants of wellbeing; and (c) the steering of patients towards the possibility of posttraumatic growth without dismissing and minimizing pain and grief, thus, encouraging patients to explore the possibility of posttraumatic growth [22]. Some people perceive positive psychology as a panacea for modern illness. Contrary to the panacea, however, positive psychology provides a lens that helps people interpret their world in a different view and shines the light of scientific inquiry into the previously dark and neglected corners [8].

According to Seligman and Csikszentmihalyi [8], the field of positive psychology at the personal level is about valued subjective experiences: wellbeing, contentment, and satisfaction (in the past); hope and optimism (for the future); and flow and happiness (in the present). At the individual level, it is about positive individual traits such as love and courage. At the group level, it is about the civic virtues and the institutions that move individuals toward better citizenship: responsibility, altruism, and moderation. The history of positive psychology can be dated back to Allport's idea about positive human characteristics in 1985, Maslow's research of healthy people instead of sick people in 1968, and Cowan's study about resilience in children and adolescents [7]. This research argues that positive psychology does not rely on wishful thinking, self-deception, and beliefs; it tries to adapt the scientific method to human behaviors present to those wise to understand it in its complexity [8].

4. HOW POSITIVE PSYCHOLOGY HELPS MENTAL HEALTH

Positive psychology is the study that focuses on the factors and conditions that contribute to the flourishing or promoting wellbeing of people, groups, and institutions [7]. In the quarantine period, positive psychology can help people promote the potential strengths in the body, such as courage, faith, hope, and optimism, as a buffer against mental illness. When talking about the COVID-19 across the globe, whether it is on the research report, on social media, in the work meeting, in college's lectures, within individual's friend circles, or in a supermarket, people are mostly talking about the impact of quarantine on well-bring. They complain about how it makes them feel stress, fear, and fatigue [23]. When one is talking about these things, it is drawing upon our wellbeing literacy. Wellbeing literacy is defined as an ability to comprehend and compose language to maintain or improve the wellbeing of oneself, others, or the world. This capacity promotes the freedom to choose what wellbeing means to people and what people can be and what people can do with language to maximize wellbeing [24]. Hence, language is not autonomous, which involves contexts with intention. The way one communicates about COVID-19 can have significant implications on an individual's wellbeing. Wellbeing literacy is underpinned by a capability model, a model that claims that what people can be is based on what people can do, and is based on constructivist, a theory that their behavior can shape individual, and contextualist (i.e., the meaning of the word is based on the context) epistemologies. To make it accessible, there are five necessary conditions: (a) intentionally use wellbeing literacy for oneself, others, and the world (individuals with high wellbeing literacy are not only thinking about their language, but also want to improve the wellbeing around them.); (b) sensitivity to the context; (c)proficiency in vocabulary, knowledge and language skills about the wellbeing; (d) skills of composing wellbeing vocabulary into language, including speaking and writing, and can assess to a range of modality such as books and videos; (e) the ability to listen and read wellbeing language [22].

In Bjørnsen's research in 2017 [25], she investigated 1,888 adolescents aged 15–21 years in high school and intended to find relationships between mental health positive mental health literacy. The various questionnaires are used in this research, including the Warwick-Edinburgh Mental Well-being Scale and the Norwegian version of the Adolescent Stress Questionnaire to examine their stress and mental health. The results show that hearing wellbeing literacy was significantly and positively associated with mental wellbeing. In addition, the research indicates that the adolescents who frequently use positive literacy have a higher score on mental health than those who never use it [25].

The most common experience in the period of quarantine is the sense of restriction and loss. In this case, wellbeing literacy can play an essential role in helping people promote pleasure mutually through showing care for others and listening to their stress [22]. Higher wellbeing literacy can provide individuals with more options that can help them convert the wellbeing opportunities in their internal or external environment into experiencing pleasure. Besides, they have a better chance of experiencing a sense of wellbeing directly after seeing they help others improve wellbeing and support the flourishing of the environment [24]. Language is all-pervasive, i.e., wellbeing literacy can be the most convenient approach to boost happiness, and society should provide a space for the public to talk about wellbeing. For potential pandemics in the future, building a society with higher welling literacy can also promote people's adaptiveness and better cope with adversity.

Reframing negative thoughts is also a coping technique that can assist people in recognizing self-talk when responding to stress and reframing negative thoughts. It involves helping people aware of their thought, evaluating their thoughts, and challenging the negative perception [26]. In uncertain times, reframing negative thoughts can be a powerful resource. Through attending to the appreciation, meaning, embodiments, relationships, and flow, people can reframe wellbeing and face it from a positive view [27]. Park's research in 2008, it has examined how the positive reframing of negative thoughts and unprecedented events can lead them to draw meaning and purpose from their experience. The results show that positive reframing strongly correlated with cancer adjustment. Those people quickly restored from anxiety and found life meaning [28].

In the process of reframing, it does not merely moderate the negative thoughts but also helps promote mental health. The positive aspects of adverse events are more easily recalled for the positive reframing. Besides, the reservoir of silver linings to events in the previous negative thoughts can be drawn upon in this process,

and they will consider that appreciation [9]. Owing to the pandemic, researchers find that people tend to be disorientated and frustrated, which makes them unable to focus on the positive concepts in the pandemic [27]. In this challenging circumstance, reframing negative thoughts and focus on positive attributes such as gratitude and appreciation. Facing such a depressive experience could help individuals strengthen resilience and try to overcome its negative effect. From the biological view, focusing on positive emotion can also quickly quell the adverse effects of negative experiences by reducing the reaction to the stress and then turning the body into a better-balanced state. For example, supposing the individual can focus on positive emotions (e.g., contentment and joy after a bad experience), they will have faster cardiovascular recovery, which involves reduced blood pressure and heart rate, than those who keep focusing on negative aspects [29].

However, these approaches might not always work in more severe circumstances. Individuals who have spent long periods in social isolation, deprived of religion, social relationships, and culture, cannot be done by merely mitigating their symptoms. In this case, to deal with the mental illness caused by the long period pandemic, spending more time with parents is an excellent way to moderate quarantine's impact on mental health. Spending time with family members is among the most critical relationships in people's lives, affecting their day-to-day experiences and overall happiness [30]. During the pandemic, time spent with the family has radically increased because of the lockdown. Distance learning has become the first choice for students, and most parents have to choose remote working, which provides opportunities for adolescents to stay with their parents. Several researchers have suggested that spending time with family members is associated with a sense of wellbeing, including positive emotions and meaning of life [31], and supports the efficacy of positive activity interventions to increase wellbeing [30]. Besides, the degree of parent's positive emotions and meaning of life when they are spending time with their children is strongly correlated with the possibility that parents are likely to promote their child's wellbeing. Therefore, the more positive they are when they spend time with children, the more responsive behaviors and high-quality relationships they will have [22].

Similarly, adolescents reported greater eudaimonia wellbeing on days they felt more connected to their parents [32]. Thus, in the period of quarantine, positive interaction with family members might provide valuable insights for individuals to improve wellbeing. Based on positive psychology, there are several ways an individual can interact with their family members to promote wellbeing:

Supporting their child when their child is suffering from social isolation and lack of meaning in life.

Using the technique of savoring positive emotional experiences (e.g., sharing your good feeling with others or laughing with your family member when hearing a joke) to bring up the collective agreement and lower sense of isolation [33].

Utilizing each family member's advantage and discussing how to use them in adversity and grow stronger [22].

These approaches can help promote well-being in the period of quarantine and can be a positive pattern in the family to deal with the potential existing pandemics in the future.

5. COVID-19

Compared to the severe acute respiratory syndrome coronavirus (SARS) that appeared in China in 2002 and swine flu in 2009, the condition is entirely different. Since it first appeared in Wuhan, China, in 2019, the COVID-19 has spread to nearly all countries of the world in only one year. It is very exception that a new disease can become such a severe pandemic [34]. Various reasons cause this result. The outbreak of COVID-19 came during the Spring Festival in China, which means that many people need to travel from city to city every day. The large population and the advanced public transportation, including the intro and inter-city mobility, make it easy to lead a person carrying the COVID-19 spread to the other cities [35]. Besides, globalization has altered the way we live and earn our livelihood. The rise of urbanization and the closer integration of the economy have facilitated the growth of globalization. Nevertheless, when the virus outbreak, globalization has emerged as an effective mechanism of disease transmission [36]. The pandemic was not effectively controlled in these countries until the policy such as city lockdown and quarantine were implemented.

The pattern of the epidemic is also different. SARS typically favor the temperate climate during winter and fewer season patterns in hot climates. In the tropical and subtropical regions such as Saharan Africa, the epidemic transmitted slower [34]. SARS epidemic in 2003 reported around 8000 cases with 710 deaths and was eventually brought under control by July 2003, in a matter of 8 months. Because globalization is not as common as right now, the vast majority of cases were concentrated in the countries near China [11], the mental health problems correlated with these influenzas is slight because it is quickly contained. Whereas, the research still finds that it can make people more pessimistic, develop depression, and ignore self-health [37].

The pandemics (e.g., Ebola) mainly spread in the poor countries in Africa and are hardly found in wealthy countries with advanced medical facilities. The fear aroused by Ebola is also not because of high infection but because of the graphic hemorrhagic manifestations of those infected and the bodies of those who have died [12]. Attributed to years of conflict and civil war, these countries have left their health systems largely destroyed or severely disabled, and merely one or two doctors are available for every 100,000 people. Therefore, when Ebola outbreaks, treatment units were full, and most people had to take the risk to become the primary caregivers for those infected without any protection [38]. Since the prospects of containment are slim and directly facing death every day, the fear and despair that result from it are severe and hard to cure through psychotherapy [12]. On the contrary, COVID-19's transmissibility might be higher and harder to identify, making the government unable to quickly contain the virus [11]. In other words, the quarantine in COVID-19 is stricter, and the quarantine period will be much longer than the previous pandemics. Besides, the studies report that the negative psychological implications in the quarantine are the anxiety of unexpected interruption of work and potential financial losses [6] as well as the fear of infecting other people, especially family members, and apprehension of manifesting symptoms of the disease [39]. The symptoms in the long duration of quarantine can be frustration, boredom, and insomnia. In some cases, these symptoms can last for few months after the end of quarantine [40]. These are common mental health problems and disorders found among patients and health workers, and most health professionals working in hospitals and aid centers can provide mental health care [41]. Appropriate mental health interventions can minimize the population's psychological distress; positive psychotherapy that can help mitigate the pressure and anxiety is also helpful.

6. CONCLUSION

In summary, in the present review one found that quarantine can cause wide-ranging and long-term psychological impacts. In the quarantine, people are not only suffering from unpleasant living conditions but also experiencing social isolation, being deprived of religion, and fearing of infection. People consistently report a sense of detachment from society, irritability, and insomnia in the quarantine, and will directly suffer from the diet change. However, it does not mean that governments should stop quarantine. On the contrary, positive mental health plays a vital role in the success of the quarantine in the pandemics. It is essential for the government to implement action to minimize people's unpleasant experiences. Providing enough food supplies and psychotherapy support can alleviate people's anxiety. For individuals, they also can use positive

psychology to get themselves out of painful emotions. Positive psychology is not merely a field study of pathology and damage, it also provides a lens that can help interpret their world in a more positive view and promote well-being. Therefore, implementing a series of actions to protect mental health and reduce psychological damage is necessary for this challenging circumstance.

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