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Review Article

Living with a Pandemic from Psycho-Social Perspectives: A Narrative Review

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Abstract

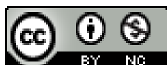
This narrative review aims to identify psycho-social issues related to the COVID-19 pandemic, especially among vulnerable populations. Through understanding the psychosocial meanings underneath, the suffering from the pandemic and the transformative experiences toward better society could be substantiated. Searching relevant studies and literature on psycho-social impacts in relation to COVID-19 was conducted from psycho-social points of view. Vulnerable populations such as the mentally ill, the poor, refugees, immigrants, the elderly, and other stigmatized groups were focused on. Reflections and plans on the worsened health disparities and increased stresses among vulnerable groups will help our society to be healthier and safer.

Keywords: COVID-19; Psycho-social impacts; Mental health; Vulnerable populations

Introduction

After WHO declared a pandemic on March 11, 2020. Many articles regarding the "pandemic blues" have dealt with various psychiatric medical issues related to sickness (1-3). A meta-analysis investigating the prevalence of mental health problems caused by COVID-19 reported depression, anxiety, distress, and insomnia (31.4, 31.9, 41.1, 37.9 % respectively) (3). There was also strong evidence that COVID-19 has deepened existing social-ethical issues such as stigma, discrimination, and equality (4-8).

COVID-19 has disproportionately affected vulnerable populations. Health inequity and system failure have been exacerbated during the pandemic (5). With the systemic medical failures, discourses on injustice, unfairness, and instability within societies have increased (4). Racism and biases against minorities during the pandemic have prevailed (6). Social inequality has increased, especially for the poorer and less literate, both in developing and developed countries (7-9). People without ready access to the Internet or other technological devices had to deal with the disadvantages regarding promoting their survival (10). Debt from unemployment and bankruptcy will make the poor poorer and the ignorant more ignorant (11). The medical system damage in crisis created long-term negative mental health issues.



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However, identifying psychological issue related to the COVID-19 pandemic, especially among vulnerable populations has not been fully discussed within medical fields. Scientific approach without comprehensive understanding socio-political context could not enact efficient health policy. Some scientists who suggested post-normal science (PNS) have reflected the limitation of orthodox scientific methodology and traditional public health system especially in Pandemic crisis (12). Authors focused on the psychosocial meanings of the suffering from the pandemic and the transformative experiences within the pandemic crisis.

Methods

A comprehensive synthetic search of relevant studies on COVID-19 and its psychological impacts on mental health was conducted using the following electronic databases: PubMed/MEDLINE, Cumulative Index to Nursing & Allied Health Literature (CINAHL), EMBASE, and Google Scholar. Search terms included the following: COVID-19, vulnerable populations, underserved population, mental health impact, disabilities, mental disorders, migrants, emigrants and immigrants, poverty, low income, unemployment, precarious, homeless, elderly/older adults, minority groups/ethnic minorities, refugees, child, and socially stigmatized groups. Published qualitative and quantitative studies, reviews, abstracts or editorials, and letters published in English were included. The psychological consequences of the COVID-19 pandemic, which disproportionately affected various susceptible groups, were identified through the synthesis of relevant articles.

Results

Different experiences in each COVID-19 pandemic phase

Bansal summarized three categories of psychological reactions to the pandemic according to subjective symptoms: 1. Fear and anxiety, 2. Hatred and stigmatization, 3. Grief and guilt (13). WHO categorized pre-, during, and post pandemic periods. The pandemic period was divided into 6 phases (14). In phase 3, sporadic infection clusters were discovered. During the first three phases, the most frequent human reactions included indifference, curiosity, and anxiety. In phase 4 when human (or animal)-to-human transmission was reported in more than two countries, fear and anxiety worsened, along with aggravated hate and stigmatization. In phase 5 and 6, quarantines became strict and healthcare systems were in danger, people became depressed, panic, angry, guilty, frustrated, helpless, and hopeless. In the post-pandemic period, memories related to pandemic remained and economic hardship continued longer than the pandemic itself in many cases. Guilt, powerlessness, and grief among the survivors who had lost intimate people may lower the overall morale of society. Patients who overcome serious COVID symptoms may experience flashbacks and become mentally and/or physically disabled (15). Working capability may decrease because of fears over the aftereffects of sickness (16), not just the physical complications *per se*, but also persistent anxiety about the possible long-term effects of virus.

COVID-pandemic and global inequality

Brooks et al. summarized the psychological impact of quarantine and isolation: "post-traumatic stress symptoms, confusion, and anger." Symptoms could be worsened by inadequate supplies/information, financial loss, stigma, and the chronic status of the illness (17). Some of the isolated might plan to commit suicide not only from the stress of confinement, but also from financial difficulties and being stigmatized. Although global urbanization with high-tech development made dense networks both in on/off line spaces (18), quarantine and isolation confronted the fragility of both on and off-line societies.

As Ebola, HIV, Zica and malaria, which were relatively confined within localized areas (19) and selectively affected only certain groups of people, the developed countries have relatively ignored

the danger of infectious diseases for several decades. Malaria, small pox, polio, and other infectious disease were relatively well-contained within less developed countries and the Western health system invested more resources for cancer, metabolic disease, obesity, and other age-related sicknesses than infectious disease. Most developed countries may have considered themselves to be immune with strong health systems. However, COVID-stricken regions were borderless and most rich countries also failed to control infection from the beginning (20).

Vaccine apartheid strategy seemed to be a plausible survival strategy for the rich countries at first. Nationalism was stronger than humanitarian egalitarianism. Human instincts desire better and more than others. Distribution of vaccine was influenced by socioeconomic conditions. The US had access to vaccine doses for 200 % of its population. Canada ordered vaccine does for 500 % of Canadian residents (21). Despite the efforts of the COVAX Program (COVID-19 Vaccines Global Access), a global initiative aimed at equitable access to Vaccine by UNICEF, the Global Alliance for Vaccines and Immunization, WHO, and the Coalition for Epidemic Preparedness Innovations, developing countries have had difficulties in acquiring enough vaccines (22).

The UN stated that 75 % of COVID vaccine administration at the beginning of vaccination was done only in just 10 countries while 130 countries were excluded (23). The effects of inequality on COVID among people and nations have deepened. Eventually G7 global leaders have agreed to share COVID-19 vaccine doses internationally and support global equitable access to vaccines. Viruses could cross borders with most unexpected way. And they have been evolved into various forms including omicron and delta-variant despite strict lock-downs all over the world.

Debates on the role of the State

Experience of unfair treatment in health system during the pandemic may aggravate persecutory feeling regarding injustice. Development of technology based on capitalism has deepened inequality in education, information, and assets. Although global poverty had been improving for decades in the late 20th and 21st century, COVID-19 and climate change contributed to an increase of extreme poverty in poor countries in 2021 (24). Deprivation of possibility and opportunity causing impoverishment should be considered to understand the origin of poverty (25). Sadly, few modern States achieved democracy and equality against poverty (26). While total global wealth grew by 4.9%, the number of ultra-high net worth individuals in the world grew by 10% (27).

Spain reported that one in three households became poorer than before during the pandemic, which means that "new poverty" was brought about by the pandemic (28). This phenomenon also occurred in Portugal (29), America (30), and Japan (31). Governments are often criticized for incapability in protecting the poor and sick. Meanwhile, some people do not want any governmental intervention amid pandemic, since freedom is the most important and irreconcilable quest for some liberal people. They claim that government should sustain strictly free society. Will Durant wrote, "freedom is the goal of the state because the function of the state is to promote growth and (national and individual) growth depends on capacity finding freedom." (32). State strategies against pandemic such as quarantine/ isolation/wearing masks/vaccination are often criticized to oppress people. Marcus and Kitayama argued that being harmonious interdependence and interconnectedness is less important to American people than seeking keeping their individuality (33). Some may imagine that Asian states less focusing on individualism may be less reluctant to follow the governmental orders than Western states. It is not yet proved with evidence that cultural attributes are more important to conformity to the States than other socio-politico-economic conditions. Some poor people may want bread and clean house than freedom itself.

COVID as an antecessor of mental illness

Economic hardship is well known to be related to mental illness (34). Shortage of medical ser-

vice, fears of infection, quarantine, and limited activities aggravate the psychological weakness of patients with chronic diseases (35, 36). Cancer-patients were advised to be cautious to visit hospitals for a while during the COVID or they missed their scheduled treatment or even operations (37). As a result, they showed high levels of anxiety and have required extra mental health counseling (37). Patients with chronic diseases or symptoms show high levels of stress, anxiety, and depression (38), which were aggravated by the pandemic crisis (39). Pre-existing physical and mental health issues could experience a deterioration in mental functions, especially within isolated medical facilities (40). Human beings have herding instincts and need others to survive both physically and psychologically (15), normal people could get mentally ill without proper interpersonal contacts.

Corona virus *per se* infiltrates nerve system by virus-human protein interactions. It may result in "delirium, psychosis, seizures, encephalitis stroke, sensory impairment, peripheral nerve diseases, and autoimmune disorders," (41) even after pandemic finished. A local study confirmed that 14.4% of population were significantly burdened from psychological distress related to COVID. Women, singles, low-income, and the unemployed were more affected by pandemic distress. Young and middle-aged were more afflicted by loneliness and boredom (42).

Children and young people

High proportions of children suffered from mental health such as depression (43), anxiety (44), PTSD (45), sleep problems (46), and behavioral symptoms (47) during the outbreak of COVID-19. Restriction of social interaction and outdoor activities were associated with children's psychological strain (44). Children in families or countries with poor living conditions have lesser chance to use on-line education with adequate supervision, which influences future incomes and lives (24). Without regular schooling, most children are less active, which may disturb sleeping and eating (48). Endocrine/immune functions and cardiopulmonary systems, would be negatively affected by sedentary life (49). Isolation and quarantine decrease the opportunity to learn empathetic communication skills (50). Some children who do not learn how to express their emotions with masks may be misdiagnosed as semi-autistic, avoidant, dysthymic, apathetic, or schizoid. Students who learn information and knowledge without human interaction may not fully understand the social contexts or dynamic structures within social institutions. On-line communication could lessen people's loneliness and anxiety to some degree. Emotional sharing, however, would not be fully achieved without face to face contact. The young generation, the so-called *iGen*, comfortable with technology (51), may not be keenly aware of the lack of healthy social contacts. Many young children lost their chance to develop affectionate relationships during the pandemic. The incidence of child abuse has been increased (52) Educational disparities is usually amplified in IT consumption. Confinement within private places causes significant differences, depending on the financial and environmental conditions (53).

Inattention to other curable diseases in developing countries

While COVID has been getting global attention for more than one year, other curable diseases like malaria and tuberculosis have been forgotten by the media. In 2019, 229 million cases of malaria were confirmed and the number of malaria deaths was estimated to be 409,000. Children under the age of 5 are the most vulnerable population affected by malaria; 67% of cases of malaria in Africa were children (54). 1.4 million people died from tuberculosis in 2019, and 10 million people, including 1.2 million children, were newly diagnosed with tuberculosis in 8 countries (India, Indonesia, China, the Philippines, Pakistan, Nigeria, Bangladesh and South Africa) (54).

Ebola/ Zica/ Malaria/Tuberculosis were often considered to be the problems of the poor, underdeveloped, unhygienic, and ignorant, so that the global impact of quarantine policy against the infected countries by the above-mentioned contagions could seem to be less serious than that of

the COVID virus. Although significantly larger numbers of cases of Ebola, cholera, malaria, and Tuberculosis than COVID-19 have been reported, the global media moguls did not fully acknowledge the world-wide importance of infectious diseases.

Burnout of medical professionals

Health professionals have been identified as a high-risk group of developing profound physical and mental impacts as a result of their direct work with COVID-19 patients (55). They are especially exposed to long working hours, enormous workload pressure, emotional distress, fear of being infected, and the lack of protection equipment and supportive working environment (56, 57). Medical professionals' burnout and shortages in the health services workforce seriously impact patients' safety and would precipitate the collapse of health care systems (58). Emerging literature reports the psychological burdens among frontline healthcare providers and medical professionals. A systematic review and meta-analysis of psychological and physical consequences among medical professionals during the pandemic reviewed 115 relevant articles. The reported mental health outcomes include depression, anxiety, burnout, post-traumatic stress disorder, psychological distress, and sleep disturbance (55).

A high rate of burnout was reported among 7500 physicians from 8 countries during the COVID-19 pandemic (59). USA and international physicians shared symptoms of burnout and loneliness. It is well-known that health care workers were more likely to experience depression, anxiety, and mental distress from witnessing COVID-related deaths and the extra burden of overwhelming numbers of patients (60). According to the data from 1,210 residents of China, residents' estimates of the possibility of their own death specifically predicted their psychological distress. Low estimates of one's own survival from COVID-19 were positively related to the degree of stress and depression on the Depression, Anxiety and Stress Scale DASS-21 (61).

Discussion

Shattered community should be repaired.

Skeptical perspectives on charity for the impoverished or the handicapped have opposed egalitarian approaches toward minorities and the vulnerable. COVID, however, taught us that even rich people cannot enjoy happiness without overall social safety. In order to keep our own well-being, we also need to protect *others* from disease and misery (62). Pure technological advances without social safety systems cannot efficiently deal with social disasters. COVID showed that a *laissez-faire* medical system, not concerning inequalities, did not function efficiently even for the rich and powerful. Without a nationwide system of control protecting the weak, the spread of the virus could not quickly be identified, prevented, or treated (59).

The tendency of projective blaming toward others such as the infected, medical professionals, aliens, refugees, enemies, Asians, Muslims, the mentally ill, politicians, government officers, etc. may continue even after the pandemic ends. Conspiracy theories, fake news, and hate crimes have plagued suffering cities since the pandemic started. Some of mass media, power elite, and online influencer even including several medical professionals are responsible for spreading wrong information. Building up new filtering or ombudsman system under the laws and democracy seems to be strongly demanded.

The wellbeing of the general population usually deteriorates during any social crisis, which makes people more suspicious of their governments than ordinary era. People's prejudices can be magnified by reading and uploading lots of fake news about COVID-19 with confirmation biases. Some extremists blame governments for not providing too strict or too loose regulations. If infected patients hid themselves from government officials and medical staff because of mistrust and misinformation, they would have fewer chances to receive preventive and therapeutic measures (63). Scientific publications and lectures and non-scientific events (political speeches and

SNS broadcasts) equally influence health belief (64). Doubts over scientific conclusions without reliable research findings may delay our actions against infectious disease, which will aggravate anxiety and ignorance (65, 66).

Being possessed by the possibility of death and sickness increase stereotypical prejudices against other groups and races (67). Discrimination among East Asian societies in the midst of the pandemic was reported; Taiwanese avoided contact with Koreans and Japanese individuals (68). Refugees or migrants have been the targets of stigmatization and rejection during the social crisis (69, 70). Hostile attitudes toward others who seem to carry or be infected by the virus may stem from survival instincts. Psychological reactions against trauma or impending danger, however, could be transferred to innocent bystanders. Even after pandemic outbreaks subside, distrust within society and of outside societies will not completely disappear. Serious health sequelae or loss of family members or financial difficulties may lead to feeling of being betrayed and abandoned. Without adequate medical literacy and communication, mistrust against professional or institutional treatment could endanger a community's integration. Along with a fair distribution of vaccines, information, and medical services, fraternity and hope for a better society should be rebuilt in today's world, as Pope Francis emphasized (71). Strong solidarity and trust within communities will be helpful in restoring the integration of the community (72).

Public health strategies should be renovated

Severe mental illnesses (SMI) were reported to be at a higher risk for severe mental outcomes in the pandemic era (73, 74), Some studies, however, suggested that SMI tend to report less psychiatric symptoms during the pandemic, maybe party because they had previously received psychiatric counseling, mental health service, and the support of healthcare professionals (75-77). Involuntary hospitalization and confinement without explanation for the SMI due to lockdown or quarantine policies made them feel extra anxiety and fear (78).

Homeless people, having various psychiatric illnesses, are at risk of being infected and carrying the contagion (79). Poor quality of housing, poverty, and deficiency of food supply may increase mental stress, which can worsen psychiatric symptoms (80).

Developing countries, especially due to the shortage of medical facilities did not have had the equipped resources or sufficient preparations to care for critically ill patients, both physically and mentally (81). The lack of food, shelter, and clothes may be more problematic for SMI patients than healthy people. Without identification of the critical and vulnerable SMI, no countries are immune to other social crises, such as riots, wars, and other politico-social upheavals.

Although burnout among health care workers can negatively affect the quality of health care and even sometimes threaten patient safety, most medical professionals have continued to do their best for their patients even in collapsing health systems. Government officers as well as HCWs, however, should not forget the lessons of the pandemic and be prepared for another impending natural disasters due to global warming. Protecting the essential health care workforce is not just humanitarian but indispensable for the growth and resilience of a nation (82). Leaders both in politics and medicine need to collaborate with each other to develop a more reliable and efficient health system. Medical professionals must help policymakers to understand scientific facts in relation to HCW's essential contribution. Burnout as a result of the sacrifices for their patients during the pandemic should be treated (83). Telemedicine, the use of virtual platforms utilizing smartphones and web-based computers, and digital health care may assist HCWs in avoiding burnout and help them treat patients effectively (57).

Philosophical meaning of death should be revisited.

Being reminded of current epidemics everyday can invite death-related thoughts and increase defensive behavior (79). Fear of death related to COVID-19 may have exacerbated existing mental

problems. Treatment programs using cognitive behavioral therapy (CBT) were efficient in reducing death anxiety (79). A randomized controlled trial conducted among patients with COVID-19 showed the effectiveness of CBT, particularly among patients with chronic disease and long hospital stays (84).

Acceptance and commitment therapists claim that they can control fear of death by helping clients imagine theirs own funeral and write their own eulogies and tombstone inscriptions (85). Watching the funerals and coffins during the pandemic may have functioned as an acceptance and commitment therapy since observing the death parades consciously and unconsciously desensitizes some people's fear of death, while it can aggravate that fear in others.

Bringing out the importance of existential perspectives on death, Yalom stressed states of being mindful of death (86). Being aware of our authentic and limited existence, we should not waste our precious time. In a pandemic, being exposed to daily news of dying patients, denial or insensitivity of death may have been prevalent

Although grief reaction may cause a serious mental illness, most people eventually overcome the suffering related to losses in the pandemic and become more resilient and mature. Yalom wrote death-confrontation could be an opportunity for personal transformation, helping people to be objective and perceptive and eventually to be actively deal with existential issues (87). Direct and indirect experience of death during the pandemic may help us to have transcendental moment, free from our ego-possessiveness. Within limited time span, place and people can be precious and meaningful, being aware of our mortality and limitedness.

Conclusion

This review identified psychosocial issues related to the COVID-19 pandemic, especially among vulnerable populations such as the mentally ill, the poor, refugees, immigrants, the elderly, and other stigmatized groups. Our findings may contribute to understanding the psychosocial meanings underneath and the suffering from the pandemic with the transformative experiences toward better society. Reflections and plans on the worsened health disparities and increased stresses among vulnerable groups will help our society to be healthier and safer. Fear of illness and death may threaten our mental well-being, but also offer us a return to the inner true self which has been distracted by the meaningless and trivial. Being reminded of our impending deaths, we may be able to discover true values in our daily lives and ourselves. Moreover, the issues of globalization, industrialization, global warming, and deforestation are intrinsically intertwined within pandemic crisis. Disasters have helped people become more conscious of hidden danger of technology and globalization than ever. As social inequalities have been starkly exposed, social trust should be re-strengthened. Eradicating corona viruses is not the ultimate goal, but the sustainable and healthy eco-systems should be restored against all the global crisis.

Journalism Ethics considerations

Ethical issues (Including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

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Conflicts of Interest

The authors declare no conflict of interest.

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