



BRK Global Healthcare Journal, 978-1-5323-4858-7
Volume 6, Issue 1, 2022

COVID: 19 Pandemic and Mental Health Issues in America

Bernice Roberts Kennedy, PhD, APRN, PMN-CNS, BC
Research Consultant
BRK Global Healthcare Consulting Firm, LLC

Correspondences Address:
BRK Global Healthcare Consulting Firm, LLC
P.O 90899
Columbia, South Carolina, 29209
e-mail brkhealthcare@gmail.com

Abstract

In 2019, coronavirus, a respiratory virus emerged from a seafood market in Wuhan, China. Afterward, this virus spread to other countries. Currently, globally, about 6, 274, 323 deaths have been reported as a result of COVID 19 infection as of May 2022. Adverse life experiences contributed to mental illness such as the trauma caused by the COVID-19 pandemic. Many adults reported worsened of mental health due to the pandemic. During the pandemic, many Americans are struggling with mental health challenges. This is an analytical review of the literature on the impact of COVID-19 on mental health. During the pandemic, common mental health issues included (a) quarantine, social distancing, and self-isolation; (b) community members and mental health; (c) grief and multiple losses; (d) parents, children, and mental health issues; (e) mental health conditions; and (f) COVID-19 infection and existing mental health complications. A collaborative effort is needed to address the trauma brought on by the pandemic. Enduring emotional distress and fear created by COVID-19 caused trauma in children and adults. The symptoms of trauma can manifest differently in children than in adults. In the future, many of these psychosocial and mental health consequences of the pandemic will have to be addressed by behavioral health practitioners. These mental health issues will continue when the pandemic has ceased. More research is needed on COVID-19 infection during and especially after the pandemic to address and lessen mental health problems.

Copyright BRK Global Healthcare Journal, 2022, 978-1-5323-4858-7; doi>10.35455/brk12345678916

Key Words: COVID-19; pandemic, mental health, mental health disorders; behavior health practitioners.

Introduction

In 2019, coronavirus, a respiratory virus emerged from a seafood market in Wuhan, China (Chen et al., 2020; Kennedy, 2021a). Afterward, this virus spread to other countries around the globe. In the United States, COVID-19 emerged late January 2020 or the beginning of February 2020. According to the World Health Organization [WHO, 2022], globally, there are 521,920, 560 confirmed cases of COVID-19 and 6,274,323 deaths as of May 2022. Also, as of May 2022, the United States reported overall 1 million deaths due to COVID-19.

Coronavirus, SARS-CoV-2, also known as COVID 19, was declared a global pandemic in March of 2020 (Kennedy, 2021a; Schuchat, 2020). COVID-19 is a respiratory illness caused by infection with coronavirus (called SARS-CoV-2). However, there is still a lot unknown about COVID-19 related to the cause of this virus.

According to the Centers for Disease Control and Prevention [CDC,2021], mental health includes the emotional, psychological, and well-being of individuals. Mental health is a part of every stage of life from childhood and adolescents through adulthood. Also, mental health and mental illness are often used interchangeably but are not the same. An individual can experience poor mental health but not be diagnosed with a mental illness. However, a person can be diagnosed with a mental illness can experience periods of physical and mental, and social well-being. For example, common mental health conditions consist of depression, bipolar disorder, anxiety disorders, schizophrenia, attention deficit hyperactivity disorder (ADHD), dementias, borderline

personality disorder, dissociative disorders, eating disorders, obsessive-compulsive disorder, posttraumatic stress disorder, psychosis, schizoaffective disorder, insomnia, addiction, or substance, etc. Adverse life experiences contributed to mental illness such as trauma caused by the COVID-19 pandemic. During the pandemic, the mental health of adults, children, and adolescents was worsened.

During a pandemic, mass trauma (collective trauma) is when the same events or series of events traumatize a large number of people within some shared time span (Prideaux, 2021). Enduring emotional distress and fear created by COVID-19 cause trauma in children, adolescents, adults, and the community at large. The mental health and psychosocial consequences of the COVID-19 pandemic may be particularly serious for groups of people. These people consist of the following.

- Those who have been directly or indirectly in contact with the virus
- Those who are already vulnerable to biological or psychosocial stressors (including people affected by mental health problems)
- Health professionals (because of a higher level of exposure)
- Community members that are economically affected by the virus and following the medical channels.
- Those people who are following the news through numerous media channels (Center for Disease Control and Prevention, [CDC, 2022]).

Psychiatric help will continue to increase and the need for behavioral health practitioners (Panchal, Kamal, Cox, & Garfield, 2021). The pandemic created

new barriers for people already suffering from mental illnesses including substance use disorders. The current pandemic is a relatively new form of stressor or trauma.

During the pandemic, many Americans are struggling with mental health challenges (Kaiser Family Foundation, 2021a). Approximately, 30% of adults in the United States reported symptoms of anxiety and depression compared to 11% of adults before the pandemic (Kaiser Family Foundation, 2021a)

During the pandemic, children, and adolescents experienced poor mental health outcomes (Kaiser Family Foundation, 2021a). Since the pandemic, 20% of school-aged children have experienced worsened mental or emotional health (Kaiser Family Foundation, 2021a).

During the pandemic, substance abuse increased because of drug overdose especially opioids (Kaiser Family Foundation, 2021a). Deaths due to opioids have increased by nearly 30% from 2019 to 2020 (Kaiser Family Foundation, 2021a). Persons with mental health issues faced barriers to health care (Kaiser Family, Foundation, 2021a,b). Approximately, 20% of people with mental health issues reported not receiving mental health counseling or therapy (Kaiser Family Foundation, 2021a).

Many people experienced increased levels of insomnia and anxiety (Kaiser Family Foundation, 2012b). Also, many adults reported that mental health has been negatively impacted due to worry and stress over the coronavirus. There has been an increased risk of mental health conditions stress, anxiety, and depression among those who contract COVID-19. Also, there has been an

increased risk of contracting COVID-19 infection among those with preexisting mental health conditions.

Scholars have predicted that social isolation, unemployment, and financial instability will contribute to mental health conditions and suicides (Panchal et al., 2021; Piquero et al. 2021; Sher, 2020; “Workplaces That Work for Women, 2020”). Other countries have reported increased suicide due to the pandemics. However, in the United States increased suicide has been reported because of the pandemic.

During the pandemic, the loneliness and the traumatic experiences made it harder for others to feel safe in this world (Panchal et al., 2021). Social isolation contributed to more mental health conditions (e.g., depression, anxiety, stress, substance abuse). When people don’t feel safe they act out of fear resulting in violence.

Incidence and Prevalence of Mental Health

Mental health and substance use disorders are key public health issues in the United States (National Alliance on Mental Illness, [NAMI, 2022]. In the United States, 1 in 5 adults experienced mental illness each year (NAMI, 2022). Approximately, 1 in 20 U.S. adults experienced a serious mental illness each year. About, 1 in 6 U.S. youth ages 6-17 experienced a mental health disorder each year. In addition, about 50% of all lifetimes of mental illness begin by age 14, and 75% by age 24 (NAMI, 2022).

In the United States, suicide is the leading cause of death. (Hedegaard, Curtin, & Warner, 2020). Also, suicide is the second major

contributor to premature death for age groups 10 to 34 and the fourth leading cause for ages 35 to 54 (Hedegaard, Curtin, & Warner, 2020). Approximately, 11% of adults reported thoughts of suicide due to pandemic lockdown (Panchal et al., 2021).

During the COVID-19 pandemic, substance use increased to 13% because of stress related to coronavirus (Panchal et al., 2021). Overdoses have increased during the Covid-19 pandemic. Also, overdose drug death was prevalent from March to May 2020 (Panchal et al., 2021). Between 2019 to 2020, about 90,722 Americans died from drug overdose with an increase of 29% from the prior year (Brewster, 2021). Many scholars believed the rise in overdose is caused by the psychological stress resulting from the pandemic because of public health fears, social isolation, and economic problems.

Methods

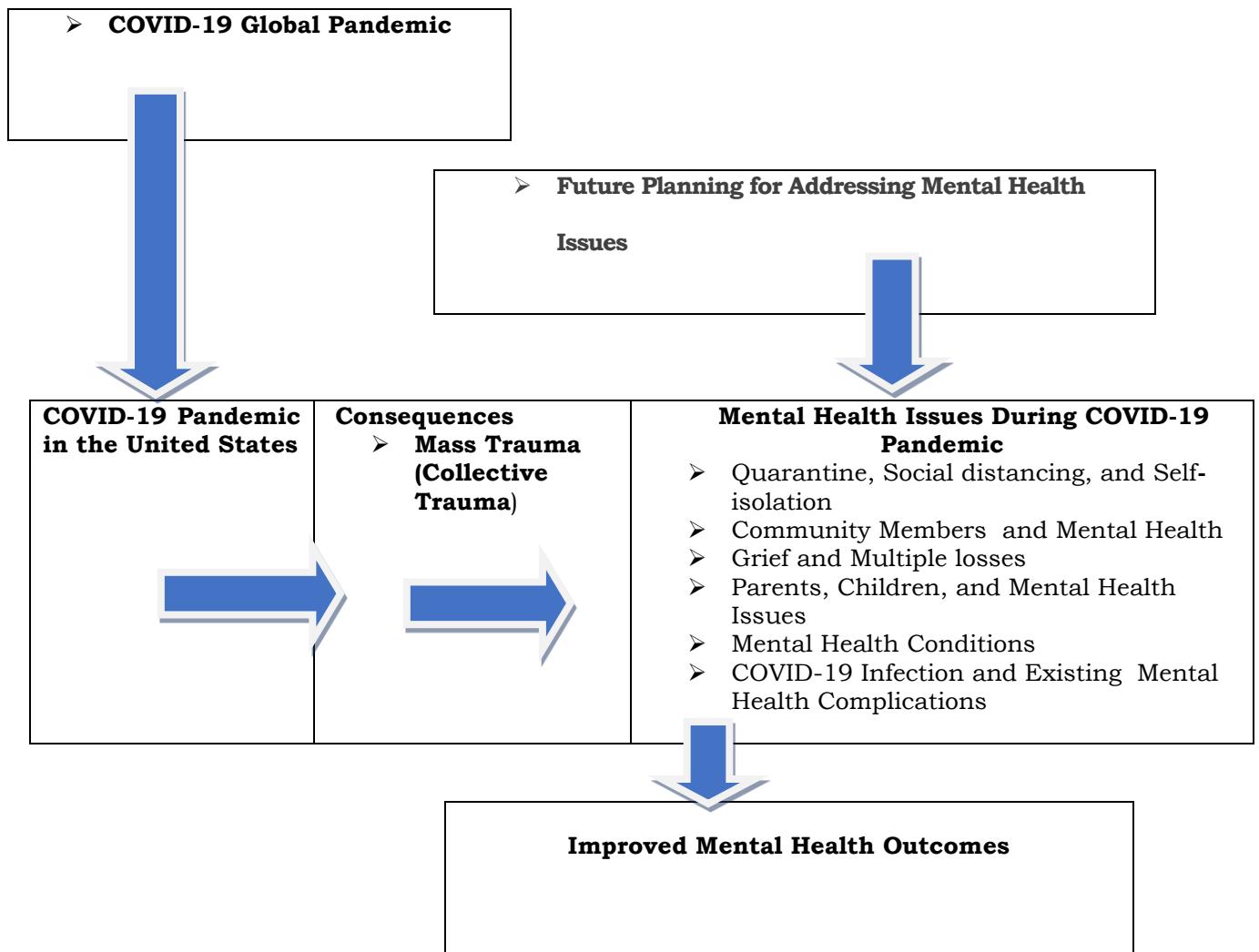
This is an analytical review of the literature on the impact of COVID-19 on mental health. A search of the literature was obtained from the databases such as ProQuest, MEDLINE, CINAHL Plus, PubMed, EBSCO, Cochrane Databases, google scholar, and ResearchGate. The period of the journal articles search was 2019 through 2022.

Conceptual Framework : COVID-19: Pandemic and Mental Health Issues in America

Coronavirus, SARS-CoV-2, also known as COVID 19, is a global pandemic (Chen et al., 2020; Kennedy, 2021a). This virus spread throughout the globe affecting numerous countries. During a pandemic, mass trauma (collective trauma) is when the same events or series of events traumatize a large number

of people within some shared time period (Prideaux, 2021). Quarantine, social distancing, and self-isolation were important interventions in the prevention of the spread of the virus (Marroquinn, Vine, & Morgan, 2020). However, quarantine, social distancing, and self-isolation had a detrimental impact on the mental health of people because of the mass home-confinement directive and stay at home order (Marroquinn, Vine, & Morgan, 2020). Please see Figure 1 below:

Figure 1: COVID-19: Pandemic and Mental Health Issues in America



The pandemic resulted in numerous mental health issues. Some mental health issues during the COVID-19 pandemic are as follows:

- Quarantine, Social distancing, and Self-isolation
- Community Members and Mental Health
- Grief and Multiple losses
- Parents, Children, and Mental Health Issues.
- Mental Health Conditions
- COVID-19 Infection and Existing Mental Health Complications

Mental Health Issues During COVID-19 Pandemic

These common mental health issues during COVID-19 will be discussed individually.

Quarantine, Social Distancing, and Self-isolation

During the pandemic, people reacted to the COVID-19 individually and collectively (Maaravi, Levy, Gun, Confino, & Segal, 2021). They experience stress numerous stressors (Maaravi et al., 2021) Quarantine, social distancing, and self-isolation had a detrimental impact on the mental health of people because of the mass home-confinement directive and stay- at-home orders (Sher, 2020).

Research reported the psychological sequelae of quarantined, social distancing, and self-isolation for the community, healthcare professionals, and frontline workers (Sher, 2020). It revealed numerous emotional outcomes, including stress, depression, irritability, insomnia, fear, confusion, anger,

frustration, boredom, and stigma were associated with quarantine, some of which persisted after the quarantine was lifted.

Public health actions such as social distancing to reduce the spread of COVID-19 infection resulted in isolation and lonely and increased stress and anxiety for adults and children (Panchal et al., 2021). However, increased loneliness and reduced social interactions are well-known risk factors for several mental disorders especially schizophrenia, major depressive disorder, and anxiety disorder (Kennedy, 2021b; Ma et al., 2021).

Community Members and Mental Health Issues

Some groups may be more vulnerable than others to the psychosocial effects of pandemics (Kennedy, 2021a,b). Some community members were motivated to comply with quarantine to reduce the risk of infecting others and to protect the community's health. However, emotional distress tempted some to consider violating their orders, social distancing, or mask use. The stay-at-home orders issued by jurisdictions differ among various government and public health authorities resulting in distress among community members not sure how long the pandemic will last.

The community experienced numerous stress due to the change in cultural practices (Kennedy, 2021 a,b). Family members were not able to attend church and experienced changes in the way they participate in church (e.g., Zoom, Facebook, or outside in cars). Also, family members were not able to attend funerals of family members and experienced changes in funeral attendance (e.g., Zoom, Graveside services, and limited attendants).

The pandemic disproportionately affected the health of the communities of color (Kaiser Family Foundation , 2021c). For example, non-Hispanic Black adults (48%) and Latino adults (46%) reported more symptoms of anxiety/and depressive disorder than Non-Hispanic White Adults (Kaiser Family Foundation, 2021c).

Grief and Multiple Losses

During COVID-19 pandemic, people experienced multiple losses (e.g., death of family members, community members, or church members; job loss, change in work practices, social contact, houses) (Albuquerque. & Santos, 2021; Kennedy, 2021a,b). Also, they experienced multiple losses but were unable to attend traditional funeral services. During the pandemic, children experienced grief due to the death of parents and caregivers. Some families and community members felt guilty about contracting the infection and infecting others ending in the death of love-ones. Also, some family members felt guilty about not being able to visit or being with loved-one in the hospitals (Kennedy, 2021 a, b).

In the United States, more than 140, 000 children under the age of 18 lost a parent, custodial grandparent, or grandparent caregiver (Hillis et al., 2021; National Institutes of Health, 2021). About 1 out of 500 children in the United States experience COVID-19 associated with orphanhood or death of a grandparent caregiver (Hillis et al., 2021; National Institutes of Health, 2021).

Racial and ethnic minorities accounted for 65% of those children who lost a primary caregiver during the pandemic (Hillis et al., 2021; National Institutes of Health, 2021). These children experienced mental health issues such as loss

and grief, sexual risk behavior, increased suicide, violence, sexual abuse, and exploitation.

Mental health needs to be addressed because of the loss of a parent figure that reshapes a child's life (Hillis et al., 2021; National Institutes of Health, 2021). Evidence-based interventions are needed to address this trauma and the future mental health needs of these children. The health inequities need to be addressed related to the increased risk of minority groups contracting COVID-19 infection and dying from COVID-19. This increased risk place minority groups at a greater risk of losing a parent or caregiver.

Parent, Children, and Mental Health

During the pandemic, parents and children reported social isolation, loneliness, anxiety, substance use, and depression (Panchal et al., 2021). At the beginning of the pandemic, parents reported the worsening of their mental health and the mental health of themselves and their children (Panchal et al. 2021). Factors contributing to the worsening of mental health in young children are the disruptions in their routine and caregiving or stress in the home, lack of childcare due to school closures, and reduced access to health care because of social isolation.

During the pandemic, parents experienced stress and poor mental health outcomes (Panchal et al., 2021). They reported difficulties balancing work and childcare, income insecurity, loss of income, and difficulties paying for household expenses. The poor health of parents adversely affects the mental health of their children. In addition, children of low socioeconomic status were

at risk for mental health issues and poor access to mental healthcare compared to children of high-income socioeconomic status.

Parents were often worried about their children (“Workplaces That Work for Women,” 2020). Factors resulting in parents worrying about their children are (a) the inability to provide for their children due to loss of a job; (b) unable to assist children with homework when homeschooling; (c) unable to work at home when children were sent home due to COVID-19; and (d) the inability to take care of loved ones (e.g., parents, sick family members) because of social isolation. During the pandemic, children worried about their parents (“Workplaces That Work for Women,” 2020). Factors regarding children worrying during the pandemic are (a) being homeless; (b) loss of parent’s job and hungry; (c) not being able to attend school; (d) not being able to participate in activities; (e) virtual school; and (f) not being able to see other family members such as grandparents, classmates, friends, cousins, aunts, uncles, etc.

In a national survey, of parents with children < 18, researchers examined health status, insurance status, food insecurity, use of food resources assistance, resources, childcare, and the use of health care services since the pandemic (Patrick et al., 2020). Findings reported a worsening in the mental health of parents and children. Since the pandemic, about 1 in 4 parents reported worsening in mental health, and 1 in 7 parents reported worsening in the behavioral health of their children (Patrick et al., 2020). The worsening of the parent's mental health occurred along with worsening behavior health for children in nearly 1 in 10 families. Factors affecting the worsening of mental

health are delays in healthcare visits, loss of childcare, and worsening food security.

Mental Health Conditions

COVID-19 infection resulted in post-traumatic stress syndrome (Prideaux, 2021). One study reported that in a hospital ward, nurses and doctors working with critical care patients in isolation that 20% experience post-traumatic effects. These experiences were surrounding daily death, resource contracts, and vivid imageries of tubes and life support machines. Also, health professionals experience a moral injury in deciding what patients would live or die. In 2020, patients presented to the emergency department with SARS-CoV-2 (Janiri et al., 2021). When they recovered from COVID-19 infection, referrals were made to post-recovery health to a post-acute care service for monitoring. Patients with PTSD were more frequently women (64 [55.7%]), reported higher rates of history of psychiatric disorders, and more persistent medical symptoms in the post-illness stage.

During the pandemic, depression, anxiety, sleep disruptions, and thoughts of suicide increased in many adults (Kaiser Family Foundation, 2012c). These adults experienced mental health issues because of the transition to remote work, loss of income or employment, and closure of universities.

During the COVID-19 pandemic, approximately 4 in 10 adults reported symptoms of anxiety or depression (Kaiser Family Foundation, 2012c). Also, many adults reported difficulties with sleeping or eating, increased alcohol

consumption, or substance use because of worrying about the stress of the coronavirus.

During COVID-19 the pandemic, people have increased their use of alcohol or drugs to cope with the pandemic (CDC, 2021). However, substance use worsen anxiety and depression and increased health problems (e.g., cirrhosis, cancer, etc.) People with substance use disorders, notably those addicted to tobacco or opioids were more likely to have a worse health outcomes if they get COVID-19 infection. During the pandemic, parents with children reported their children showed increased symptoms of depression, anxiety, and psychological stress (Panchal et al., 2021). Children attending school virtually experienced worsened mental or emotional health than children attending school in person. Also, children displayed increased irritability, clinging, fear, insomnia, and poor appetite. In children, anxiety and depression were associated with loneliness during COVID-19. The isolation with the pandemic is associated with separation anxiety from parents or caregivers and fears of family and themselves becoming infected.

COVID-19 pandemic had a negative outcome in children with an existing mental health diagnosis (Bussières et al., 2021). The symptoms often appeared to be the result of changes to daily routines (e.g., home confinement), while in other cases, the symptoms seemed more directly related to the pandemic itself (e.g., fear of contamination).

Suicides have increased during the pandemic because of social isolation (Sheri, 2020). Also, suicides have been associated with unemployment and

financial insecurity (McIntyre & Lee, 2020). Health professionals were at an increased risk for suicide because of being at the forefront of the pandemic crisis. This group experienced a personal risk of contracting the virus and coping with death and loss. For example, nurses especially constantly fear getting infected, high stress, and feeling helpless as they watch patients deteriorate and die alone (Byon et al., 2020). Scholars predicted that health professionals will experience post-traumatic stress, depression, and anxiety 3 years after the pandemic is over. In addition, it has been predicted that first respondents with the emergency medical system are vulnerable to suicide or attempts but will not seek help when needed.

COVID-19 Infection and Existing Mental Health Complications

Social isolation was used to prevent the spread of infection during the pandemic (Kennedy 2021 a,b; Ma et al., 2020). However, for mental illness, social isolation is a form of stress related to mental illness. Public health actions such as social distancing to prevent the spread of COVID-19 infection resulted in isolation and loneliness and increase stress and anxiety (Kennedy, 2021b). Increased loneliness and reduced social interactions are well-known risk factors for several mental disorders, including schizophrenia, major depressive disorder, and anxiety disorder (Kennedy, 2021 a,b; Ma, 2020).

Social isolation promotes oxidative stress and hypothalamic pituitary adrenal (HPA) axis activation and weakens the expression of genes that control inflammation and regulate the glucocorticoid response (Ma et al., 2020). This process is the potential biological mechanism of many kinds of mental diseases,

including anxiety disorder, depression disorder, and schizophrenia. Therefore, social isolation has a negative effect on patients with existing mental health conditions. In a study by Ma et al. (2020) in patients with a diagnosis of schizophrenia suffered social isolation due to COVID-19 and experienced psychological burden and developed a weak inflammatory state leading to worsening in anxiety and sleep quality.

COVID-19 infection led to neurological and mental complications, such as delirium, agitation, and stroke (Liu et al., 2021). People with pre-existing mental, neurological, or substance use disorders are more vulnerable to SARS-CoV-2 infection. They may stand a higher risk of severe outcomes and even death. COVID-19 infection caused strokes, seizures, and Guillain-Barre syndrome (a condition that causes temporary paralysis) (Crescione, 2021).

COVID-19 can increase the risk of developing Alzheimer's disease, Parkinson's disease, Multiple sclerosis, Myasthenia gravis, and epilepsy (Dewanjee, Vallamkondu, Kalra, Puvvada, & Reddy, 2021). Some person recovering from COVID-19 reported (a) not feeling like themselves; (b) experiencing short-time memory loss; (c) an inability to concentrate; and (d) just feeling differently than they did before contracting the infection (Sharma et al., 2021).

Children and adolescents with attention-deficit/hyperactivity disorder and autism are more prone to psychological distress during the pandemic due to loss of daily routines (e.g., school closures and home confinement) (Pecor et al., 2021).

Future Planning for Addressing Mental Health Issues

Trauma has a long-term effect if left untreated therefore the impact of COVID-19 could remain long after the pandemic is under control (Bridgland et al., 2021). After the pandemic is over, there will be uncertainty about how many people will be experiencing mental health conditions. If trauma is not treated it may result in poor health outcomes (e.g., physical, and mental health), the risk of suicide or self-harm, and a greater risk of substance use.

A collaborative effort is needed to address the trauma brought on by the pandemic (Kennedy, 2021a). Enduring emotional distress and fear created by COVID-19 caused trauma in children and adults. The symptoms of trauma can manifest differently in children than in adults.

In the future, many of these psychosocial and mental health consequences of the pandemic will have to be addressed by behavioral health practitioners (Kennedy, 2021a,b). Persons with preexisting physical or psychological conditions are more vulnerable to negative psychosocial and mental health consequences. The increase of mental health problems (e.g., depression, anxiety, PTSD, substance use disorders, insomnia, domestic violence, extreme stressors, etc.) may exacerbate or induce psychiatric problems. After the pandemic is over, its effects on the mental health and well-being of the general population, health professionals, and vulnerable people will remain for a long time.

During the COVID-19 pandemic, people experienced multiple losses (e.g., death of family members, community members, or church members; job loss, change in work practices, social contact, houses) (Albuquerque. & Santos, 2021;

Kennedy, 2021a,b). Also, they experienced multiple losses due to deaths of their loves-ones but were unable to attend traditional funeral services. During the pandemic, children experienced grief due to the death of parents and caregivers. Some families and community members felt guilty about contracting the infection and infecting others ending in the death of their loved-one. Also, some family members felt guilty about not being able to visit or being with loved ones in the hospitals (Kennedy, 2021). Therefore, behavioral health practitioners and faith-based organizations need to assist with the grieving process because of their multiple losses.

During COVID-19 the pandemic, people have increased their use of alcohol or drugs to cope with the pandemic (CDC, 2021). However, substance use worsen anxiety and depression and increased health problems (e.g., cirrhosis, cancer, etc.). People with substance use disorders, notably those addicted to tobacco or opioids are more likely to have the worse health outcomes if they get COVID-19 infection. Therefore, treatments for substance use will be vital for improving mental health outcomes during and after the pandemic.

McIntyre and Lee (2020) proposed that the prevention of suicide needs to be taken in the context of the COVID-19 pandemic related to unemployment and financial insecurity. This is a critical public health priority in need of government support for employers to reduce the massive increase in unemployment in the labor market. Those recovering from Covid-19 infection were twice as likely to be diagnosed with a mental health disorder (Desai, Lavelle, Boursiquot, & Wan, 2022). About 25% of persons with COVID-19 infections

experienced symptoms related to brain and nervous system or cognitive impairment with trouble learning and concentrating (Desai et al., 2022; Crescione, 2021; Dewanjee et al., 2021; Sharma et al., 2021). While symptoms tend to go away once someone recovers, some Covid survivors experience lasting-long-term effects.

Psychosocial services are increasingly delivered in primary care (Sherman et al. 2017). Persons with mental health issues resulting from the COVID-19 pandemic may access primary care. Assessing, identifying, and treating severe psychosocial consequences and referring these clients to the behavioral health practitioners if needed are vital interventions for primary care. Also, persons may access the emergency department with a mental health issue with another comorbidity (Weiss et al., 2016). A need to make proper referrals for mental health issues or existing mental health conditions is vital.

Evidence-based interventions are needed to improve the health outcomes of those who experience the death of parents or caregivers due to COVID-19 infection (Hollis et al. 2021). Hillis et al. (2021) suggested the need to prioritize supporting families bereaved by the COVID-19 pandemic and promoting services for those in need of kinship or foster care. Programs and policies are needed to promote child resilience by encouraging stability, nurturing, and relationships.

Conclusion

Future planning to address the mental health consequence of the COVID-19 pandemic will require a collaborative effort. Behavioral health practitioners need to treat many of these psychosocial and mental health consequences of the

COVID-19 pandemic. These mental health issues will continue when the pandemic has ceased. More research is needed on COVID-19 infection during and especially after the pandemic to address and lessen mental health problems.

References:

Albuquerque, S. & Santos, A. R. (2021). In the same storm, but not the same boat": Children grief during the COVID-19 pandemic. *Frontier Psychiatry*, <https://doi.org/10.3389/fpsy.2021.638866>.

Brewster, J. (2021). More than one mass shooting per day has occurred in 2021. *Forbes*, <https://www.forbes.com/sites/jackbrewster/2021/04/16/>. more-than-one-mass-shooting-per-day-has-occurred-in b6e264932.

Bridgland, V.M.E., Moeck, E.K., Green, D.M., Swain, T.L., Nayda, D.M., Matson, L.A., et al. (2021) Why the COVID-19 pandemic is a traumatic stressor. *PLoS ONE* 16(1): e0240146. <https://doi.org/10.1371/journal.pone.0240146>.

Bussières, E., Malboeuf-Hurtubise, C., Melleur, A., Mastine. T., Héault, E., Chadi, N, Montreuil, M., Généreux, M., Camdem, C., & PRISME-COVID Team (2021). Consequences of the COVID-19 pandemic on children's mental health: A meta-analysis, *Frontier Psychiatry*. <https://doi.org/10.3389/fpsy.2021.691659>.

Byon, H.D., Sagherian, K., & Kim, Y., Limpcomb, J., Crandall, M., & Steege, M. (2021). Nurses' experience with Type II Workplace Violence and underreporting during the COVID-19. *Workplace Health & Safety*, <https://doi.org/10.1177/21650799211031233>.

Center for Disease Control and Prevention (CDC, 2021). COVID-19 and people at Increased Risk, <https://www.cdc.gov/drugoverdose/resources/covid-drugs-QA.html>.

Centers for Disease Control and Prevention (CDC, 2022). Quarantine and Isolation, <https://www.cdc.gov/coronavirus/2019-ncov/your-health/quarantine-isolation.html>.

Chen, N, Doing, X , Ou, J., Gong, F., & Han, Y., et al., (2020). Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study. *The Lancet*, 395, 10223, 507-573. [https://doi.org/10.1016/S0140-6736\(20\)30211-7](https://doi.org/10.1016/S0140-6736(20)30211-7).

Crescione, M. (2021). Vaccine side effects vs. COVID-19 damage? There's no comparison. *Healthline Media*, <https://www.healthline.com/health/what-happens-if-you-get-covid-between-vaccine-doses#bottom-line>.

Desai, A., Lavelle, M., Boursiquot, & Wan, E. Y. (2022). Long-term

complications of COVID-19. *American Journal of Physiology-Cell Physiology*, 322(1):C1-C11. doi: 10.1152/ajpcell.00375.2021.

Dewanjee, S., Vallamkondu, J., Kalra, R.S., Puvvada, N., & Reddy, H. (2021) . Emerging COVID-19 Neurological Manifestations: Present outlook and patient neurological challenges in COVID-19 pandemic, *Molecular Neurobiology*, 58 , 4694-4715, <https://doi.org/10.1007/s12035-021-02450-6>.

Hedegaard H., Curtin, S.C.,& Warner ,M.(2020). Increase in suicide mortality in the United States, 1999–2018. NCHS Data Brief, no 362. Hyattsville, MD: National Center for Health Statistics. 2020.

Hillis, S. , Blenkinsop, A., Villaveces, A., Annor, F.A.,Liburd, L., Massetti, G., Demissie, Z., Mercy, J.A., Nelson, C.A.,Zewditu, D., Cluver, L., Flaxman, S., Sherr, L., Donnelly, C.A., Ratmann, O., & Unwin, H.J.T. (2021). COVID-19-Associated orphanhood and caregiver death in the United States , *Pediatrics*. DOI: 10.1542/peds.2021-053760.

Janiri, D., Carfi, A., Kotzalidid, G.D., Bernabei, R., Landi, F., & Sanii, G. (2021). Posttraumatic stress disorder in patients after severe COVID-19 infection. *JAMA Psychiatry*, 78 (5) 567-569.

Kaiser Family Foundation (2021a). Mental Health and Substance Use State Fact Sheets, <https://www.kff.org/statedata/mental-health-and-substance-use-state-fact-sheets/>.

Kaiser Family Foundation (2021b). Mental Health Impact of the COVID-19 Pandemic: An Update, <https://www.kff.org/coronavirus-covid-19/poll-finding/mental-health-impact-of-the-covid-19-pandemic/>.

Kaiser Family Foundation (2021c). The Implications of COVID-19 Mental Health and Substance, <https://www.kff.org/coronavirus-covid-19/issue-brief/the-implications-of-covid-19-for-mental-health-and-substance-use/>.

Kennedy, B.R. (2021a). African American and COVID-19: A multifaceted Model of Biopsychosocial/Spiritual/Cultural Factors addressing disparities in increased COVID-19 infection. *Journal of Cultural Diversity*, 28 (4), 88-97.

Kennedy, B.R. (2021b). COVID19: Mental Health Issues [PowerPoint slides]. The 2021 South Carolina Faith Community Nurses Association Annual Conference “Resilience, Resources and Faith in The Midst of a Pandemic.”

Liu, L., Ni, S., Yan, W., Lu, Q., Zhao, Y., Xu, Y. et al. (2021). Mental and neurological disorders and risk of COVID-19 susceptibility, illness severity and mortality: A systematic review, meta-analysis and call for action, *eClinical Medical*, 40, 101111, <https://doi.org/10.1016/j.eclinm.2021.101111>.

Ma, J., Hua, T., Zeng, K., Zhong, B., Wang, G., & Liu, X. (2020). Influence of social isolation caused by coronavirus disease 2019 (COVID-19) on the psychological characteristics of hospitalized schizophrenia patients: a

case-control study. *Translational Psychiatry*, 10 (1), DOI: 10.1038/s41398-020-01098-5.

Maaravi Y., Levy, A., Gur, T., Confino, D. & Segal, S. (2021) . The Tragedy of the Commons: How Individualism and Collectivism Affected the Spread of the COVID-19 Pandemic. *Frontier Public Health.*, 9:627559. doi: 10.3389/fpubh.2021.627559.

Marroquinn, B., Vine, V. & Morgan, R. (2020). Mental health during the COVID-19 pandemic: Effects of stay-at-home policies, social distancing behavior, and social resources. *Psychiatric Research Journal*, 293: 113419, doi: 10.1016/j.psychres.2020.113419PMCID: PMC7439968

McIntyre , R. S. & Lee, Y. ((2020). Preventing suicide in the context of the COVID-19 pandemic. *World Psychiatry*, 19 (2), 250-251.

National Alliance on Mental Illness [NAMI, 2022]. Mental Health By the Numbers, <https://www.nami.org/mhstats>.

National Institutes of Health (2021). More than 140,000 U.S. children lost a primary or secondary caregiver due to the COVID-19 pandemic, <https://www.nih.gov/news-events/news-releases/more-140000-us-children-lost-primary-or-secondary-caregiver-due-covid-19-pandemic>.

Panchal, N., Kamal, R., Cox, C. & Garfield, R. (2021). The Implications of COVID-19 for Mental Health and Substance Use. Kaiser Family Foundation, <https://www.kff.org/coronavirus-covid-19/issue-brief/the-implications-of-covid-19-for-mental-health-and-substance-use/>.

Patrick, S. W., Henkhaus, L, Zucjafiisem, J., S., Lovell, K., Halvorson, A., Loch, M., Letterie,M., & Davis, M. (2020). Well- being of parents and children during the COVID-19 Pandemic: A National Survey. *Pediatric* 146 (4) <https://doi.org/10.1542/peds.2020-016824>.

Piquero, A., R., Jennings, W.G., Kaukinen, C., & Knaul, F.M. (2021). Domestic violence during COVID-19 pandemic-Evidence from a systematic review and meta-analysis. *Journal of Criminal Justice*, 74, <https://doi.org/10.1016/j.jcrimjus.2021.101806>.

Pecor, K.W., Barbayannis, G., Yang, M., Johnson, J., Materasso, S., Borda, M., Garcia, V. & Ming, X. (2021). Quality of life changes during the COVID-19 pandemic for caregivers of children with ADHD and/or ASD, *International Journal of Environmental Research and Public Health*, 18(7), 3667; <https://doi.org/10.3390/ijerph18073667>.

Prideaux , E. (2021). How to heal the 'mass trauma' of Covid-19, *BBC News*, <https://www.bbc.com/future/article/20210203-after-the-covid-19-pandemic-how-will-we-heal>.

Sharma, P. , Bharti, S.,& Garg, I., (2021) Post COVID fatigue: Can we really ignore it? *Indian Journal of Tuberculosis*, doi: 10.1016/j.ijtb.2021.06.012[.

Sher, W. (2020). The impact of the COVID-19 pandemic on suicide rates. *QJM*, 13 (10), 707-712.doi: 10.1093/qjmed/hcaa202.

Sherman, M.D., Miller, L.W., Keuler, M., Trump, L., & Mandrich, M.. (2017). Managing behavioral health issues in primary care: Six Five-Minute Tools. *Family Practice Management*, 24 (2) 30-33.

Schuchat, A. (2020). Public Health Response to the Initiation and Spread of Pandemic COVID-19 in the United States, February 24–April 21, 2020, *Center for Disease Control and Prevention*, 69 (18), 551-556.

Weiss, A. J., Barnett, M.L., Heslin, K.C. & Stocks, C. (2016). Trends in Emergency Department Visits Involving Mental and Substance Use Disorders, 2006–2013, Healthcare Cost and Utilization Project, Agency for Healthcare Research and Quality, <https://www.hcup-us.ahrq.gov/reports/statbriefs/sb216-Mental-Substance-Use-Disorder-ED-Visit-Trends.pdf>.

Workplaces That Work for Women, (2020). The Impact of Covid-19 on Working Parents (Report), <https://www.catalyst.org/research/impact-covid-working-parents/>.

World Health Organization [WHO, 2022]. WHO Coronavirus (COVID-19) Dashboard. <https://covid19.who.int/>.

Bernice Roberts Kennedy, PhD, APRN, PMH-CNS, BC, is a research consultant at BRK Global Healthcare Consulting Firm, LLC, P.O. 90899, Columbia, South Carolina, 29290. Dr. Kennedy may be reached at: brkhealthcare@gmail.com