

An Analysis of Mental Illnesses among People after COVID-19

Haman Wan^{1,a,*}

¹*Huamei-Bond International School, Guangzhou, 510000, China*
a. hamawan0710@163.com

**corresponding author*

Abstract: Under the large uncertainty and unknown condition all over the world, a growing number of people are developing mental illnesses after COVID-19. Anxiety, major depression disorder, eating disorder, and Post-traumatic stress disorder, all of these mental disorders are collected for the majority of mental illnesses after COVID-19. The primary aim of this paper was to determine the prevalence, causes, effects, and treatments among mental illness patients after COVID-19. By reviewing the paper that has been published, it is nearly certain that psychological disorders will occur after suffering traumatic events and the outbreak of COVID-19, which is seen as one of the most serious pandemics in the world in the last few decades, a number of populations are undergoing a high level of psychological illness. Eye Movement Desensitization and Reprocessing therapy can be one of the great therapies to treat mental illnesses after COVID-19. According to a study, Eye Movement Desensitization and Reprocessing treatment can greatly affect traumatic memories for psychological patients. After COVID-19, a growing number of populations become infected with mental disorders, therefore, the causes and some effective treatments are required. Especially those who have a previous history of psychological disorders might need some specialized intervention.

Keywords: psychiatric disorders, COVID-19, effect, treatments

1. Introduction

The majority of COVID-19 outbreak victims suffer from mental illnesses as a result of stress and unfamiliar circumstances. According to the World Health Organization (WHO), the COVID-19 pandemic is to blame for a 25% increase in the incidence of mental illnesses worldwide [1]. Mental disease has a negative impact on our physical and mental health as well as our thinking, feelings, and behavior. When dealing with the issue, the unfavorable thoughts that were hidden in our brains initially would surface with ease. Nevertheless, some treatments are also available for people. For example, medical treatment is the most common for people, drugs, electroconvulsive therapy, and other therapies which can stimulate patients' brains. Researchers today had developed many types of treatment after the pandemic. Eye Movement Desensitization and Reprocessing, known as EMDR, and Virtual reality, which is also known as VR treatment, are the two main treatments. The main purpose of this paper is to focus on the factors that lead people to suffer from mental health and summarize the treatments applied to mental illnesses people after the outbreak.

2. Symptoms of Psychiatric Illnesses

Mental illnesses have a significant impact on the human brain, affecting thought processes, emotions, and behavior. After COVID-19, people tend to have the symptoms of anxiety disorders, depression, eating disorders, post-trauma stress disorder (PTSD), suicide, and addictive behavior. People who have anxiety disorders might be irritable, have headaches, muscle aches, stomachaches, or unexplained pains, and have sleep problems. For eating disorders, they might refuse to eat certain food like the foods that they have eaten every day before they had COVID-19. Moreover, the prevalence of PTSD patients seems to be common after the pandemic, especially among healthcare workers, which includes surgeons and nurses. According to a study, Health care workers, especially those who are on the frontline, have a higher tendency to suffer from psychiatric because they are exposed to the most severe medical situations, caring for the sickest patients, and frequently witnessing death and trauma [2].

In addition, women and girls are the second biggest proportion of having mental diseases. To the data of UN Women, there are up to 47 million women and girls who are pushed into extreme poverty, more than 29% of childcare work should be done per week during the pandemic, and half of them explain that they were suffered from violent action during the pandemic [3]. In this case, the individual is depressed in both work and family life, which can lead to severe mental illness. It is important to seek professional help if people are experiencing this level of depression.

3. Reasons for Psychiatric Diseases

People can develop psychiatric diseases for a variety of reasons, including genetics, surroundings, drug abuse, and a history of head trauma.

3.1. Genetic Reason

Genes can play a significant role in influencing mental illness. Numerous mental diseases have been revealed to have a hereditary component, indicating that certain genes may raise a person's risk of getting a mental illness. While genes by themselves cannot cause mental disease, when paired with environmental circumstances, they may raise a person's propensity to develop a mental disorder. A significant, strong, and cross-diagnostic pattern, in which the genes can shape humans' brain connectivity, is positively correlated with a person's genetic risk for mental illness at the level of specific Single-nucleotide polymorphisms (SNPs) [4]. This mode is also strongly connected with polygenic risk scores for schizophrenia, alcohol use disorder, major depressive disorder, and a mixed bipolar disorder-schizophrenia phenotype. For instance, there has been evidence linking certain changes in the genes that control serotonin, a neurotransmitter that influences mood and anxiety, to an elevated chance of developing depression or anxiety disorders. Additional genes have been linked to illnesses including bipolar disorder, schizophrenia, and an autism spectrum disorder. The finding of a research project stated that schizophrenia patients' offspring will exhibit lower levels of anatomical connectivity than both healthy controls and offspring of bipolar disorder patients, and deficits appear to be a distinct connectome disturbance in those affected by, or at elevated risk for, schizophrenia [5]. Hence, individuals whose family members have explicit or implicit genes, it is also one of the reasons cause mental illnesses after COVID-19.

3.2. Environment Reason

Noting that there are other factors that affect mental disease in addition to heredity is crucial. Environmental elements including traumatic experiences in infancy, drug misuse, and stressful life events may all have a big impact on how mental illness develops. Under the uncertainty and unknown

condition, the increasing unemployment rate, decreasing income, and another emergency, for example, the sudden lockdown of the city, the death of family members and friends, and the funeral after COVID-19, all these things create a depressing atmosphere in the society. Due to the lockdown policy, social isolation or loneliness can be a risk factor for developing depression and anxiety. This can be particularly relevant for elderly people or individuals with social anxiety disorder.

According to the statistic about psychological illnesses suffering after SARS, which is a pandemic that was popular in 2008, people who had been quarantined had more severe symptoms than normal people [5]. In COVID-19, on the report of Mental Health American, in a poll of 1,119 healthcare workers, 93% stated stress, 86% claimed anxiety, 77% showed frustration, 76% reported exhaustion and burned out, and 75% said they were overwhelmed [6]. To be more specific, people who have experienced childhood trauma, such as physical or emotional abuse, neglect, or witnessing violence, can increase the risk of developing mental health issues later in life, such as depression, anxiety, post-traumatic stress disorder, and borderline personality disorder. The key environmental influences will also include those who experience chronic stress, such as persons. Chronic stress has been associated with a greater chance of developing depression, anxiety, and post-traumatic stress disorder. Chronic stress may be brought on by long-term exposure to stressful life events including poverty, unemployment, or providing care for a sick family member. In summary, although genes may affect mental disease, they work in concert with a variety of environmental circumstances to raise the chance of getting a mental illness. Understanding the intricate interactions between genetic and environmental variables may aid in the understanding of mental disease and the creation of more potent therapies.

4. The Prevalence of Mental Disorders among Populations

The causes of COVID-19-triggered psychological problems are not fully understood, but factors like age, gender, and obligation are likely to be involved. Millions of children, teenagers, and family's lives were profoundly saddened and negatively affected in 2019 as a result of the coronavirus pandemic that spread across the globe. Children and adolescents are at a vulnerable stage of development and have little capacity for interpreting events. Additionally, the most common threats during the pandemic are schools, parks, and canteen closures.

As stated in the Fair Health White Paper, March 2, 2021, it was common for teenagers aged 13 to 18 to endure major depression disorder, generalized anxiety disorder, and adjustment disorders from 2019 to 2020, the most severe period of a pandemic [7]. In addition, gender also has a significant impact on psychological health. According to Fair Health White Paper, women are almost two times as likely as men to get a mental disorder diagnosis [7]. People's occupations also influence how common mental diseases are. An accumulating work shows that during the pandemic, healthcare workers had the most severe mental disease symptoms: 12% to 20% of them experienced anxiety, 15% to 25% had depression, 8% reported sleeplessness, and 35% to 49% encountered PTSD [7]. Among the healthcare workers, the nurse encountered the most intense symptoms of mental illnesses, stated by MHA, 49 % of respondents reported that they were possible exposure, while 41% said they were dealing directly with COVID-19 patients [7]. There is still much unknown about the psychological effects of COVID-19, but some possible explanations for the outbreak of mental health issues include age, gender, and duty. It is possible that age plays a role in the severity of psychological symptoms, as those who are older may be more likely to experience anxiety and depression. Additionally, gender may be a factor, as women are more likely to experience anxiety and post-traumatic stress disorder. It is also possible that duty, or the sense of responsibility that comes with being a front-line worker, may contribute to psychological issues.

5. The Treatments for Psychiatric Illnesses

Treatments are required for people who suffer from mental diseases. In today's fast-paced environment, there are a great number of therapies available for a diverse range of illnesses.

Firstly, Virtual reality (VR) has been reported in the literature that can be used in treating psychiatric illnesses [8]. In defining VR, it provided the user with a sense of immersion in a virtual environment. This means that the patient may be treated by putting them in a virtual setting and allowing them to interact with computer-generated settings in a safe atmosphere. The virtual environment provides them a chance to immerse in the place which makes them terrified to activate and alter the structure. The research indicated that the participants who had a high level of immersion in the virtual environment had more difficulty in differentiating between the real and virtual worlds. The literature also stated that much more patients report the sanctification of VR-based therapy than traditional therapy cases. Even while VR therapies seem fresh and attractive to patients today, there are still certain drawbacks, such as equipment malfunction, high expenses, difficult setup, and so on.

Secondly, for healthcare workers who suffer from severe post-traumatic stress disorder, Eye Movement Desensitization and Reprocessing therapy, can also be one of the most efficient treatments for complex PTSD [9]. There are various ideas on how EMDR works, yet the precise process is not well known. According to one theory, EMDR helps people process and integrate traumatic experiences better by lessening the emotional intensity of painful memories. Another hypothesis claims that EMDR works by energizing the brain's information-processing machinery, enabling the reprocessing of traumatic memories in a manner that is more adaptable. Eye movement desensitization and reprocessing is a contentious therapy that asserts to heal painful memories that have persisted for a long time in only a few sessions. The client is instructed to keep in mind a picture of the trauma, a negative self-perception, unpleasant emotions, and any associated bodily sensations throughout EMDR therapy [10]. The client is told to follow the therapist's fingers while moving their eyes swiftly and laterally back and forth for 15 to 20 seconds. However, there are still some disadvantages among the treatments, for instance, it is hard for patients who had histories of childhood abuse or had specific comorbid disorders. To sum up, EMDR is a kind of psychotherapy that promotes the processing of traumatic memories using fast eye movements or other bilateral sensory stimulation. EMDR has been shown to be a beneficial therapy for PTSD and may provide significant reductions in symptoms.

6. Conclusion

To conclude, this paper summarizes the symptoms of psychiatric illnesses that occur during the pandemic, which include feeling depressed and agitated, having trouble concentrating or thinking clearly, having excessive anxieties or intense guilt emotions, experiencing significant mood swings, and even contemplating suicide. The influence of the coronavirus pandemic and many other factors like genetics is one of the other serious factors that lead people to suffer from psychiatric illnesses. Instead of just one or a few genes, outliers in numerous genes are associated with a variety of mental diseases, and each person's combination of these genes and environment is unique, even between identical twins. Moreover, the social network and the surroundings can also be one important factor that leads individuals to suffer from psychiatric disorders. The connection between person and person enables them to influence each other much more easily than in the past. The feelings and expressions that showed by them can affect others close to them. According to many studies, the prevalence of mental disorders that was suffered by COVID-19 illustrated distinctively among different gender, ages, and countries. In total, women are more likely to be infected with psychiatric disorders compared to men.

Individuals of various ages, and younger have a higher tendency to be infected with mental illnesses because of their sensitive feelings. Healthcare workers, which is the most dangerous occupation during the pandemic, are more easily to suffer. Mental disorders can lead to a number of problems, including decreased productivity, absenteeism, and increased healthcare costs. Even worse, lead to an increased risk of suicide. It is important to address this issue in order to improve the overall health of populations. Hence, the treatments are crucial for the whole globe to find out. Treatments which include VR therapy and EMDR are now novel in the world. VR therapy is the treatment that leads patients immersed in the place where the trauma happens and allows them to change the scene. EMDR therapy is what to use when the patients follow the therapist's finger and recall the negative emotions during the trauma. The shortcomings of the current paper are do not have its own experiment to investigate if the treatments are useful and cannot convince most populations to trust the VR treatment for the high cost and the low popularity.

Here are some suggestions: popularize to society the consequences of not treating mental illness in a timely manner, recruit multiple volunteers to experience VR therapy, and truthfully announce the results to the public. Future research will mainly focus on lower-cost therapy and other therapy with high efficiency and low cost. All in all, COVID-19 has effect individuals' life greatly, both their physical and mental health were hurt by the pandemic, however, people should keep a positive mind and view toward the issues instead of ignoring that.

References

- [1] Alison Brunier. (2022). *The COVID-19 pandemic triggers 25% increase in prevalence of anxiety and depression worldwide*. <https://www.who.int/news/item/02-03-2022-covid-19-pandemic-triggers-25-increase-in-prevalence-of-anxiety-and-depression-worldwide>.
- [2] Figley, C. R. (1995). *Compassion Fatigue: Coping With Secondary Traumatic Stress Disorder In Those Who Treat The Traumatized*. American Psychological Association, 6-10.
- [3] COVID-19: *Rebuilding for Resilience*. (n.d.). UN Women Headquarters. (2022). <https://www.unwomen.org/en/hq-complex-page/covid-19-rebuilding-for-resilience?gclid>.
- [4] Taquet, M., Smith, S. M., Prohl, A. K., Peters, J. M., Warfield, S. K., Scherrer, B. and Harrison, P. J. (2021). *A Structural Brain Network Of Genetic Vulnerability To Psychiatric Illness*. *Molecular Psychiatry*, 26(6), 2089–2100. <https://doi.org/10.1038/s41380-020-0723-7>.
- [5] Collin, Guusje, Scholtens, Lianne H., Kahn, René S., Hillegers, Manon H.J., van den Heuvel and Martijn P. (2017). *Affected Anatomical Rich Club and Structural-Functional Coupling in Young Offspring of Schizophrenia and Bipolar Disorder Patients*. *Biological Psychiatry*, S0006322317317122-. doi:10.1016/j.biopsych.2017.06.013
- [6] Mihashi, Mutsuko, Otsubo, Yasunao, Yinjuan, Xin, Nagatomi, Kaori, Hoshiko, Michiko, Ishitak and Tatsuya (2009). *Predictive Factors of Psychological Disorder Development during Recovery Following SARS Outbreak*. *Health Psychology*, 28(1), 91–100. doi:10.1037/a0013674.
- [7] *The Mental Health of Healthcare Workers in COVID-19*. (n.d.). Mental Health America. <https://mhanation.org/mental-health-healthcare-workers-covid-19>.
- [8] FAIR Health Releases Study on Impact of COVID-19 on Pediatric Mental Health. FAIR Health. (n.d.). <https://www.fairhealth.org/article/fair-health-releases-study-on-impact-of-covid-19-on-pediatric-mental-health>.
- [9] Maples-Keller, Jessica L, et al. (2017). *The Use of Virtual Reality Technology in the Treatment of Anxiety and Other Psychiatric Disorders*. *Harvard Review of Psychiatry*, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5421394/>.
- [10] Korn, Deborah L. (2009). *EMDR and the Treatment of Complex PTSD: A Review*. *Journal of EMDR Practice and Research*, 3(4), 264–278. doi:10.1891/1933-3196.3.4.264.