

The effect of COVID-19 on mental health condition of people and treatment in China

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Abstract. COVID-19 is a virus-borne infectious disease that causes severe acute respiratory syndrome and was first found in Wuhan, China. It was widely spread all over the world and caused a huge number of deaths. Beyond that, the COVID-19 epidemic has also had a huge impact on the mental state of the population. People's mental state may become more negative. These negative mental conditions would likely trigger some unpleasant behavior. Thus, it is necessary to pay more attention to the mental effect of the pandemic. The aim of this article is to introduce the symptoms of each mental disorder separately, suggest some possible consequences when these symptoms occur, and discuss the possible factors that will influence these disorders. Then, this research will indicate some treatments and suggestions.

Keywords: COVID-19, mental health, treatment, clinical psychology, online working.

1. Introduction

COVID-19 was caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). It is quite similar to the SARS-CoV-1 that causes SARS. COVID-19, like SARS, began and quickly spread throughout the world, resulting in a large number of deaths. According to statistics, there are 1875,371 people infected with COVID-19 and 5235 people are dead in China. Thanks to the development of medicine, the death rate and severity of COVID-19 have dramatically decreased [1]. However, it is not the physical damage but the mental impact of the epidemic on people that is the real problem at the moment. This article will survey and summarize the literature on COVID-19 information in the field of clinical psychology.

Recently, plenty of researches have been conducted to find out what mental problems people may develop as a result of the epidemic, how pandemic influence people's mental state and some treatments. However, although these experiments have identified almost all possible psychiatric problems, these treatment techniques may not be perfect. Plenty of treatments are effective only in experimental conditions, which means they do not consider the realistic situation. According to the research made by Nie et al in 2021, they indicated that the mental condition of Chinese people during the pandemic is very poor [2]. People are likely to generate depression, anxiety, stress and fear, loneliness, and excitement. Recently, three domains of factors that influence mental disorders had been suggested. The first one is biological factors. Wang et al indicated that the virus, its metabolites, and the body's disproportionate immunological reaction to these foreign chemicals are biological components that contribute to fever,

dyspnea, and other clinical symptoms. The second one is social factors. During the pandemic, the panic-inducing information spread through TV, social media, radio, etc. can make the population feel anxious. The third is psychological. Due to the severe symptoms of COVID-19 and the high rate of evolution, the disease itself is a stressor. It will make people feel nervous and stressed. Indeed, many treatments have been developed to control these mental disorders. But some improvements are needed. For example, the online reappraisal exercise, mindfulness training, and online self-guided cognitive-behavioral interventions. These are all excellent guidelines for people to follow. But these treatments are hard to find, and some people do not have the awareness that they need to pay attention to their mental states. Meanwhile, some face-to-face consultations are quite expensive.

In this article, more detailed information on mental disorders and the improvement of treatments will be covered, which will help the population have less fear about COVID-19 and be more aware of their mental health. At the same time, this article will improve the treatment of mental disorders caused by the COVID pandemic.

2. Five mental disorders

This section will focus on introducing the basic information of these five problems. For example, the influential factors, possible symptoms, and some behavioral changes.

2.1. Anxiety

The most common mental disorder that happens due to the COVID-19 pandemic is anxiety. People probably feel anxious and nervous about the situation “what if I am infected by the COVID-19?” or “what if my family members are infected?”. They keep worrying about what might happen to them in the future. The main reason why they keep thinking is the widely spread information that COVID-19 is severe; infection with the COVID-19 can be painful and can have many after-effects, which can have irreversible health effects. Gender would be the biological factor that influences people’s anxiety generated. Professor Ojalehto et al in 2021 suggested that women will generate much more anxiety than men by comparing the anxiety questionnaire results [3]. They indicated that this significant difference mainly based on Obsessive-compulsive (OC) symptoms. Women had more difficulties in stopping thinking about illness, unwanted accidents, and injuries. These thoughts make women more prone to anxiety. Meanwhile, anxiety is not just a psychological change, it can also produce some behavioral differences. According to Wang et al., they claimed that people who are in quarantine frequently worry and yearn to be let out of their isolation [4]. People who are not yet infected worry about picking up a virus from others. Some people display increased sensitivity to physical changes, a disproportionate reliance on medical professionals, increased irritation, and violent behavior.

2.2. Depression

The causes of depression seem to be similar to the causes of anxiety. When people heard the severity of COVID-19 or that plenty of people were dead, the feeling of fear might force them to be depressed. However, depression is probably the least common mental problem in China. The research made by Saltzman et al in 2021 concluded that ethnicity, prior mental health problems, the experience of social isolation, and income, which are the social factors, will influence people’s depression [5]. They suggested that these four factors bonded with each other. For example, as a result of discrimination, Latin and Hispanic people in the United States usually live in low-income communities, where they have a rare chance to go outside and have mental treatment. Therefore, the possibility that they become depressed is much higher than others. However, even in China, people are required to be isolated at home, but the services provided by the government have greatly reduced the likelihood of people feeling depressed. For example, daily house-to-house delivery of daily necessities by staff, free vaccination, etc. But if someone is feeling depressed, unfortunately, they might be a dull appearance, low appetite, weight loss, loss of interest, impatience, and others. Pathological exaggeration of the illness’ severity can cause some persons to lose hope in both society and medical care. Some may even have suicidal thoughts but rare of them will actually do it.

2.3. Loneliness

In China, the main reason that people might feel lonely is the rule made by the government towards people who have close contact with COVID-19 infected patients. These people must be isolated in hospitals, hotels, or somewhere else. They are not able to see their couple, children, or parents. There is a high probability that they feel lonely during that period. Indeed, not only the isolation but also the social factor that greater perceived risk of infection, limited perceived knowledge of COVID-19, and lower appraisals of resilience are related to loneliness [6]. Their results indicated that there is a significant negative relationship between knowledge and loneliness, which means that the fewer people know about the COVID-19, the more likely they will feel loneliness. This may be due to people's fear of the unknown; the less they know about the development procedure of treatment aspects of the COVID-19, the more likely they are to feel that humans are unable to defeat the virus, leading them to believe they are on their own. In addition, if people do not have a consistent mental health trajectory when facing adversity, the feeling of loneliness then surrounds them. People with such mental disorders are likely to suicide, become depressed, use drugs, have cardiovascular disease, or even have premature mortality [7, 8].

2.4. Fear and stress

Fear and stress are the easiest mental disorders to explain. It is quite clear that all the fears and stress are coming from being afraid of death. In fact, fear and stress are the origins of the rest four mental disorders. No matter what factors influence people to generate mental problems, or what information they have heard, it's all because of fear that they develop these mental problems. Imagine if all people were immune to viruses, they would not be affected by them at all, they would not feel fear and thus would not develop anxiety, depression, loneliness, etc.

2.5. Excitement

Excitement seems to be the weirdest mental disorder among these five clinical manifestations. It might be strange to hear that COVID-19 will make people feel excited. In fact, the excitement generated by people is not a good feeling and people with other mental disorders are more likely to suffer from it. Wang et al, suggested that infection of COVID-19 will lead people to have symptoms of excitement [4]. These patients will behave differently from others. To be specific, they may not cooperate with treatments and resist them. Some of them even ask for their release from the hospital.

3. Treatment

Plenty of treatments had been developed during the pandemic period. They almost always focus on trying to reduce people's stress and fear, increase their confidence and help people change their perceptions of the epidemic so that they can overcome the mental problems mentioned above. Resilience is the ability to successfully adapt to anxiety and stress during a pandemic [9]. People with low resilience might become lonely. The method to increase people's resilience seems to be important to deal with the mental disorder of people. Joyce et al suggested that the combination of CBT and mindfulness techniques positively influence people's resilience [10]. They provide the participants the CBT or mindfulness-based interventions and compare the resilience of people after interventions with the people with no interventions. These interventions help people to form a positive outlook on the future; establish sound objectives and a drive to achieve them; enhance empathy and compassion, and pay more attention to what we can control as opposed to what we cannot. After the intervention, they noticed that people's resilience had greatly improved. In addition, due to the policy that segregation at home, it is not possible for people to attend face-to-face interventions. There are some online treatments developed. For example, online self-guided cognitive-behavioral interventions, empathy-focused telephone calls online cognitive-behavioral reappraisal exercises, etc. [9]. These remote treatments provide people with a more convenient way to receive interference. Meanwhile, these online treatments have been shown to alleviate the severity of patients' mental problems and effectively reduce costs for many years ago [11]. Therefore, the treatment of mental problems should not be confined to offline as much as physical treatment. Even

if these therapies are effective, they are worthless if people don't know where to receive them. Due to the confidential nature of psychotherapy, people rarely have access to this information, making it difficult for them to find the right treatment when they need it. What we can do is Encourage private clinics to develop some kind of online treatment platform or app. The software should be regularly updated with basic information about psychotherapy, such as the purpose of the treatment, the target group, the price, etc. This will make it easier for people to find access to these therapies. Secondly, the government should increase the importance that people attach to mental health. In China, people rarely care about their mental state and only very serious mental disorders are identified and treated, such as severe depression, schizophrenia, and so on. In fact, many people may be suffering from mental illness to a greater or lesser extent, but due to a lack of awareness, people ignore these problems. Therefore, the government should step up its efforts to promote the importance of mental health. More people should take their mental health seriously. Finally, psychotherapy is relatively expensive. The stereotype for many people in China is that those with high incomes will have a private counselor by their side. This leads to some people discovering in time that they have some psychological problems, but given the price, they may give up on the idea of treatment. Therefore, the government can provide appropriate subsidies to reduce the cost of psychological treatment so that those who want it but cannot afford it can get the right intervention.

4. Conclusion

Due to the widespread and severity of COVID-19, it can be regarded as the biggest challenge to human society. Not only does it damage people's physical health, but it also has a huge impact on their mental state. In China, thanks to the government's epidemic prevention and control policy, the number of infections and deaths is much lower than in some European countries. However, there might inevitably be some shortages of these control policies. People are not in as good a state of mind as they are physical. They might become anxious, depressed, fearful, stressed, lonely, or excited. Fortunately, all of these mental disorders can be solved. There is a wide range of treatments that are already in use in China, such as CBT and mindfulness-based interventions, online self-guided cognitive-behavioral interventions, empathy-focused telephone calls, and online cognitive-behavioral reappraisal exercises. Even all of them have been proven to be useful for dealing with mental disorders in people. The government could probably encourage the creation of more online platforms, raise awareness of mental health issues, and provide some monetary assistance to people, which would help them access timely, cheap, and conveniently located clinical treatments.

However, this article only focuses on five mental disorders. There are far more possible mental problems may be induced by COVID pandemic. Thus, the treatments and suggestions mentioned above are inadequate, more focused treatments are needed in future research.

References

- [1] Omae, Y., Kakimoto, Y., Sasaki, M., Toyotani, J., Hara, K., Gon, Y., Takahashi, H. 2022. SIRVVD model-based verification of the effect of first and second doses of COVID-19/SARS-CoV-2 vaccination in Japan. *Mathematical Biosciences and Engineering*, 19(1), 1026-1040.
- [2] Nie, Y. J., Ma, Y. Y., Wu, Y. K., Li, J. H., Liu, T., Zhang, C., Lv, C. N., Zhu, J. 2021. Association Between Physical Exercise and Mental Health During the COVID-19 Outbreak in China: A Nationwide Cross-Sectional Study. *Frontiers in Psychiatry*, 12.
- [3] Ojalehto, H. J., Abramowitz, J. S., Hellberg, S. N., Butcher, M. W., Buchholz, J. L. 2021. Predicting COVID-19-related anxiety: The role of obsessive-compulsive symptom dimensions, anxiety sensitivity, and body vigilance. *Journal of Anxiety Disorders*, 83.
- [4] Wang, J., Wang, J. X., Yang, G. S. 2020. The Psychological Impact of COVID-19 on Chinese Individuals. *Yonsei Medical Journal*, 61(5), 438-440.
- [5] Saltzman, L. Y., Lesen, A. E., Henry, V., Hansel, T. C., Bordnick, P. S. 2021. Covid-19 Mental Health Disparities. *Health Security*, 19, S5-S13.

- [6] Padmanabhanunni, A., Pretorius, T. B. 2021. The unbearable loneliness of COVID-19: COVID-19-related correlates of loneliness in South Africa in young adults. *Psychiatry Research*, 296.
- [7] Courtet, P., Oli'e, E., Debien, C., Vaiva, G., 2020. Keep socially (but not physically) connected and carry on: preventing suicide in the age of COVID-19. *J. Clin. Psychiatry*. 81
- [8] Tull, M.T., Edmonds, K.A., Scamaldo, K., Richmond, J.R., Rose, J.P., Gratz, K.L., 2020. Psychological outcomes associated with stay-at-home orders and the perceived impact of COVID-19 on daily life. *Psychiatry Res.* 289
- [9] Taylor S. 2022. Pandemics and Clinical Psychology. *Comprehensive Clinical Psychology*, 151–66.
- [10] Joyce, S., Shand, F., Tighe, J., Laurent, S. J., Bryant, R. A., Harvey, S. B. 2018. Road to resilience: a systematic review and meta-analysis of resilience training programmes and interventions. *Bmj Open*, 8, 6.
- [11] Kenter, R. M. F., van Straten, A., Hobbel, S. H., Smit, F., Bosmans, J., Beekman, A., Cuijpers, P. 2013. Effectiveness and cost effectiveness of guided online treatment for patients with major depressive disorder on a waiting list for psychotherapy: study protocol of a randomized controlled trial. *Trials*, 14.