

The Psychological Reaction Associated With Corona Virus Pandemic: Implication for Psychotherapists

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ABSTRACT

At the onset of corona virus pandemic (Covid 19) different countries in the globe recorded so many deaths that threw some people into panicking especially because it was sounded that the disease has no cure. The only option giving to people is to self-isolate themselves because some people may be infected with the disease without manifesting any symptoms. This led to the gradual lockdown of businesses, schools and churches to curb or minimize the spreading of the disease. This, in turn, created so many difficulties for the general population in that so many with some saving developed hoarding syndrome whereas the poorest in the society keep languishing in their wretchedness and cannot even afford to put food on the table of various families. There may be several psychological reactions that are associated with the pandemic which may play some roles in how people will cope with the threats of the disease. The present study uses qualitative design to assess a cross-section of 20 adults (10 men and 10 women) in Owerri metropolitan and found among other things feeling of fear/anxiety, stress, depression, and hopelessness. This calls for the attention of the therapist to design management and inoculation strategy on how to assist people at risk of developing these psychological reactions.

INTRODUCTION

The advent of the coronavirus (Covid-19) pandemic has greatly impacted the world economy and peaceful coexistence across the globe. As a novel virus that is quite unknown to scientists and the world health organization [WHO], the global community has continued to face unprecedented challenges associated with Covid-19 which has resulted in thousands of deaths, exponentially cases of the contagious and sporadic rise in crime (World Health Organization, 2020). Unfortunately, there is no generally approved vaccine or cure for the virus (COVID-19) as it still ravages the whole world economically and psychologically.

The only effective preventive measure according to the WHO guideline is the total lockdown of countries on the international and national levels while maintaining social distancing in terms of a business transaction, organization activities, and compliance with other medical advice (Web news, 2020; World Health Organization, 2020). Furthermore, sick people are encouraged to self-isolate themselves to avoid infecting other people or being infected; in a certain circumstance, placing people on fourteen days quarantine has been

considered an important public health control measures in preventing the widespread of the virus (WHO, 2020a).

Till date, there is a controversy on the transmission of the virus from human to human, this is based on the initial report that it could be an airborne virus (Liu, 2020; van Doremalen, et al., 2020), thus misinformation attributed to this COVID-19 has undermines the potency of the disease (Adhikari et al., 2020; Hassan et al., 2020). Similarly, the World Health Organization (2020) and the Centers for Disease Control and Prevention (2020) affirmed respectively that virus-laden respiratory droplets either inhaled or touch by a person is likely to infest the person. Since the first reported cases of COVID-19 in Wuhan, Hubei province China in late 2019, World Health Organization (2020) has declared it as a Public Health Emergency of International Concern in January 2020 and later a pandemic in March 2020 due to the disastrous casualties it inflicted to the world.

In Africa, the first reported case was in Egypt in February 2020, subsequently other African countries were recorded (Gilbert et al., 2020). Statistically, more than 44 million confirmed cases, 1,173,986 million deaths and 32,520,720

recovery have been documented (Worldometer, 2020). According to Wang et al. (2020), COVID-19 is a disease caused by severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) which manifested as cough, fever, weakness, nasal congestion, difficulty with breathing, diarrhea, lung, and other organ damage, and death in some cases.

As a highly contagious virus, the first index case of COVID-19 in Nigeria was ascertained on February 27, 2020, by an Italian citizen who was tested positive for the virus immediately after arriving in the country (Nigeria Center for Disease Control, 2020). Following this incident, there have been increasing confirmed cases of infected and consequent mortality virtually in all the 36 states of the country including the federal capital territory [FCT] (Nigeria Centre for Disease Control [NCDC], 2020).

The resultant effect of this pandemic has led to the total lockdown of the country with a strong restriction on social and religious activities, school and markets places. Although this is quite unusual to the distinctive and collectivist pattern of life in Nigeria, the imposition of social and physical distancing, compulsory use of face or nose mask seems to trigger some psychological distress among people (Olaseni, et al., 2020).

Relatively, the COVID-19 pandemic and the consequent lockdown has facilitated a plethora of social vices such as domestic violence, sexual abuse (rape), cybercrime, substance use disorders, unemployment especially among daily income earners in Nigeria (Ezenwa, 2020). For this reason, the attention of psychologists and other professional mental health practitioners are highly significant in addressing these anomalies, given the fact that the socioeconomic and psychosocial impact of covid-19 has placed the entire society in mental distress (Olaseni, et al., 2020).

Globally, there is a general state of panic which poses a strenuous threat to the general population and as well as created significant underlying psychological problems (depression, anxiety disorders, posttraumatic stress disorders, substance use disorder, and suicide) that are deleterious to mental health. Consequent to this fact, it is pertinent to understand the psychological reactions and trajectory of the COVID-19 pandemic on mental health as well as to identify measures to control and reduce the negative effects on society (Hagerty & Williams, 2020; El-Zoghby et al., 2020).

Amidst covid-19 spread, primary health system is gradually becoming overwhelmed by the number of cases of medical practitioners and other health workers (Federal Ministry of Health, 2020). This situation could create significant anxiety that may serve as a gateway to other psychological factors. Hence, there is a need for effective engagement of psychologists' for appropriate responses to COVID-19 (Ajisegiri, Odusanya, & Joshi, 2020).

Recent studies on the impact of the COVID-19 pandemic on mental health have shown that there is a positive correlation between psychological distress, disease outbreak, and quarantine (Chatterjee & Chauhan, 2020; El-Zoghby et al., 2020). Similarly, it is found that psychological distress experienced by the members of the society in response to the COVID-19 pandemic significantly influence one's coping style and mental well-being (Bao et al., 2020; Brooks et al., 2020).

Rodríguez-Rey, Garrido-Hernansaiz, and Collado (2020) research on the psychological impact of the COVID-19 pandemic in the general adult population, found that most people reported that the COVID-19 crisis had greatly impacted on their daily life, including changes in their daily routines and cancelation of important activities. The participants further reported different degrees of the psychological impact associated with the pandemic such as anxiety, depressive symptoms, and stress (loss of a jobs during health crisis). In contrast, people who received satisfying information about their mental health perceived themselves as being in good health (Rodríguez-Rey, Garrido-Hernansaiz & Collado, 2020).

Considering the devastating impact of covid-19, its strangeness, and uncertainty, there is a high degree of fear, financial stress, loss of job, work stress, loss of freedom, loneliness in many societies (Brooks et al., 2020; El-Zoghby et al., 2020). These uncertain situations have increased people's vulnerability to substance abuse, depression, suicide, rape, and other behavioural disorders (Brooks et al., 2020; El-Zoghby et al., 2020).

Indeed, the effect of this disease is far-fetched from the expectation that every geographical location, religion, the political and socioeconomic structure is affected and impede, thus precipitating negative psychological reactions (Raviola et al., 2020). As proposed by Rubin and Wessely (2020) the number of deaths and new cases been reported by the media can

predispose people to serious psychopathology and physical illness. In other words, the COVID-19 pandemic rapidly facilitates global crises and mental health burden on the general populace (Kang et al., 2020).

Comparatively, African society especially Nigeria has experienced overwhelmed outbreaks of diseases (for example, malaria, avian influenza, Ebola virus, HIV/AIDS, meningitis, Lassa fever, tuberculosis, monkeypox) in the past few years (Nigeria Centre for Disease Control, 2020) than the western society that have recorded more mortality rate of COVID-19. For example, the Nigeria Centre for Disease Control reported in April 2020, that Nigeria has recorded 1532 confirmed cases of COVID-19 and 24 deaths in 33 states and the FCT, this mortality seems quite low in comparison to the degree of mortality recorded in China and the developed country. Many underlying factors may play a role in defining these differences.

However, the emergency of the pandemic has brought about essential innovative changes in the area of mental health that urgently need timely intervention by the government and the public (Xiang et al., 2020). It has also exposed deficiency in the area of healthcare service and mental health in many countries. For example, evidence abound that the Nigerian government pays no attention to the psychological well-being and mental state of their citizens even the healthcare practitioners on the frontline combating coronavirus pandemic as financial aid and support made international organizations and local companies were not utilized resourcefully (Guardian, 2015; Web news, 2020).

Based on this, huge psychosocial implications have been on the increase in the country with regards to loneliness, depression, anxiety, and juvenile delinquency (Muanya, 2020). Loneliness effect occurs when there is a diminished social interaction that exposes several psychological factors such as major depression, bipolar disorder, suicidal ideation, obsessive-compulsive disorder, and posttraumatic stress disorders especially among aged people and mental or health challenge individuals' (Olaseni, et al., 2020). This could lead to mood-changing conditions that can complicate fragile health issues.

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM) 5th edition, the psychosocial disorder is a syndrome characterized by clinically significant

disturbance in an individual's cognition, emotion regulation, or behaviour that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning (American Psychological Association [APA], 2013). This may be induced by life experiences (e.g., parental socio-economic background, and interpersonal relationship), dysfunctional cognitive and behavioural processes, and global health crisis like the COVID-19 pandemic (Encyclopedia for children's Health, 2020)

Research has found that numerous ways of controlling or curtailing the covid-19 spread which includes quarantine, physical/social distancing, self-isolation are quite detrimental to psychological well-being and quality of life (Fiorillo & Gorwood, 2020; World Health Organisation, 2020). Moreso, a study has shown that patients who are infected with covid-19 often experience extreme fear of death from the disease and aggravated mental distress (Xiang et al., 2020). Self-isolating or confinement is linked with negative psychological states (e.g., fear, anger, and frustration) that have long-lasting effects (Brooks et al., 2020; Duan & Zhu, 2020). Indeed, the unpredictability of the health problems attach to this disease has made it more stressful to completely recover from its trauma without any psychological aid (Olaseni, et al., 2020). Hence, it is inevitable to address the negative impact of covid-19 without the application of psychotherapy.

Psychotherapy is simply the use of scientifically validated and reliable psychological techniques in the treatment of mental health problems. Through psychotherapy, psychologists help people to achieve their goals, live healthier, happier, and more productive lives (APA, 2013). Based on the above submission, literature on the psychological reactions/implications associated with the covid-19 pandemic are quite limited especially in the low-and-middle-income countries like Nigeria. This study aimed to fill the gap.

Research Question

Is there any psychological reaction associated with Covid -19 pandemic?

METHOD

Participants

Twenty (20) working-class adults participated in this study. They comprised 10 (50%) males and 10 (50%) females, who were within the age

range of 18 to 60 years, with a mean age of 45.40 years and a standard deviation of 7.44. They were selected in Owerri metropolitan, Imo State, Nigeria, through the use of a purposive sampling technique. The participants were chosen from the pool of married people with at least 5 years of experience.

Procedure

Verbal informed consent was first established with the participants before the study. The data collection was done through in-depth interviews (Open-ended questions) and written narrative from the participants about their psychological reactions (in terms of depression, anxiety, stress, substance use disorder, domestic violence, and so on) associated with the covid-19 pandemic. This was achieved by asking the participants to describe their specific experience about the pandemic, its impact on their daily adjustment, the consequent lockdown, and the inflation.

Design

The study utilized a qualitative design.

DISCUSSION

This study qualitatively found that fear/anxiety, stress, depression, and hopelessness were the most experienced psychological reactions reported by people as regards the COVID-19 pandemic. However, it was revealed that the majority of people adopt negative psychological coping strategies such as substance abuse as a way to avoid thinking about the pandemic. This is contrary to the findings of Olaseni, et al., (2020) who reported that people who are not infested with covid-19 experienced the lower prevalence of depression than their counterparts. This study finding is in incongruence with Wang et al. (2020) who found that most clinically stable COVID-19 patients suffered from severe psychological impacts which include significant posttraumatic stress symptoms.

Limitation

The present study employed an interview technique in data collection and as such lack standardization and consistency of a test. There should be caution in generalizing the outcome of this study; this is because knowledge obtained from qualitative research might not apply the same to different researchers. Future studies should consider embarking on quantitative research and employ a large sample size in the course of such study. Also, longitudinal research is encouraged to explore by other researchers.

RECOMMENDATION

The following recommendations were made in line with the outcome of this study.

There is a need for the therapists to design management and inoculation strategy on how to assist people at risk of developing these psychological reactions associated with COVID-19 pandemic.

Psychologists are encouraged to embark on serious mental health campaign to educate the masses on the psychological impacts of pandemic and how to alert the negative psychological effects.

Psychologists should engage the general public on the appropriate safety and preventive measures by sensitizing them that with the appropriate adjustment, they will survive the pandemic as they did the Ebola Virus, as well as provide a policy to support the efforts of the government. However, such an effort could help minimize feelings of distress, anxiety, and hopelessness, substance use disorder associated with the pandemic.

Efforts should be made to provide psychological service in line with the Federal Government's Presidential Taskforce on COVID-19 and the Federal Ministry of Health. This could help to checkmate the outcome of treatment of patients with covid-19 and reduce stigma surrounding the infected.

CONCLUSION

This study explored the psychological reaction associated with the coronavirus pandemic and the need for psychotherapy. Evidence from the outcome of the study revealed COVID-19 pandemic facilitate psychological reactions such as the feeling of fear/anxiety, stress, and hopelessness and increase substance abuse among the people.

REFERENCES

- [1] Adhikari, S. P., Meng, S., Wu, Y. J., Mao, Y. P., Ye, R. X., Wang, Q. Z., Sun, C., Sylvia, S., Rozelle, S., Raat, H., & Zhou, H. (2020). Epidemiology, causes, clinical manifestation and diagnosis, prevention and control of coronavirus disease (COVID-19) during the early outbreak period: a scoping review. *Infectious Diseases of Poverty*, 9(1), 29. <https://doi.org/10.1186/s40249-020-00646-x>
- [2] Ajisegiri, W. S., Odusanya, O. O., & Joshi, R. (2020). COVID-19 Outbreak Situation in Nigeria and the Need for Effective Engagement

- of Community Health Workers for Epidemic Response. *Global Biosecurity*, 1(4), 1-10.
- [3] American Psychiatric Association (APA). (2013). *Diagnostic and Statistical Manual of Mental Disorders*, American Psychiatric Association, Arlington, Va, USA, 5th edition, 2013.
- [4] Bao, Y., Sun, Y., Meng, S., Shi, J., & Lu, L. (2020). 2019-nCoV epidemic: Address mental health care to empower society. *The Lancet*, 395(10224), e37–e38. [https://doi.org/10.1016/S0140-6736\(20\)30309-3](https://doi.org/10.1016/S0140-6736(20)30309-3)
- [5] Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, J. G. (2020). The psychological impact of quarantine and how to reduce it: a rapid review of the evidence. *The Lancet*, 395(10227), 912–920. [https://doi.org/10.1016/S0140-6736\(20\)30460-8](https://doi.org/10.1016/S0140-6736(20)30460-8)
- [6] Centers for Disease Control and Prevention [CDC]. (2020). Severe outcomes among patients with coronavirus disease 2019 (COVID-19)—United States, February 12–March 16, 2020. *Morbidity and Mortality Weekly Report (MMWR)*, 69(12), 343–346. <https://doi:10.15585/mmwr.mm6912e2>
- [7] Chatterjee, K., & Chauhan, V. S. (2020). Epidemics, quarantine, and mental health. *Medical Journal Armed Forces India*, 76(2), 125–127. <https://doi.org/10.1016/j.mjafi.2020.03.017>
- [8] Duan, L., & Zhu, G. (2020). Psychological interventions for people affected by the COVID-19 epidemic. *Lancet Psychiatry*, 7(4), 300–302. [https://doi:10.1016/S2215-0366\(20\)30073-0](https://doi:10.1016/S2215-0366(20)30073-0)
- [9] El-Zoghby, S. M., Soltan, E. M., & Salama, H. M.(2020). Impact of the COVID-19 Pandemic on Mental Health and Social Support among Adult Egyptians. *Journal of Community Health*, 45, 689-695.
- [10] Encyclopedia for children’s health, (2020). Psychosocial personality disorders. Available from <http://www.Health of children.com/P/Psychosocial-Personality-Disorders.html>
- [11] Ezenwa, M. O. (2020). Psychologists in Nigeria respond to COVID-19. Available from <https://www.apa.org/international/global-insights/nigeria-respond-covid-19>
- [12] Federal Ministry of Health, Nigeria. National Strategic Health Development Plan II 2018 - 2022 [Internet]. 2019 [cited 2020 Apr 25]. Available from <https://nipc.gov.ng/nshdp-ii-final-version-health-plan-pdf/>.
- [13] Fiorillo, A., & Gorwood, P. (2020). The consequences of the COVID-19 pandemic on mental health and implications for clinical practice. *European Psychiatry*, 63(1), e32, 1–2. <https://doi.org/10.1192/j.eurpsy.2020.35>.
- [14] Gilbert, M., Pullano, G., Pinotti, F., Valdano, E., Poletto, C., Boëlle, P-Y., D’Ortenzio, E., Yazdanpanah, Y., Eholie, S. P., Altmann, M., Gutierrez, B., Kraemer, M. U. G., & Colizza, V. (2020). Preparedness and vulnerability of African countries against importations of COVID-19: a modeling study. *The Lancet*, 395(10227), 871–877.
- [15] Guardian, T. (2015). Children are dying of preventable diseases all the time in Africa. Retrieved from <https://www.theguardian.com/global-development/poverty-matters/2014/aug/13/ebola-epidemic-poor-facilities-distrust-healthcare>
- [16] Hagerty, S. L. & Williams, L. M. (2020). The impact of COVID-19 on mental health: The interactive roles of brain biotypes and human connection. *Brain, Behavior, and Immunity – Health*, 5, 1-4. <https://doi.org/10.1016/j.bbih.2020.100078>
- [17] Hassan, S. A., Sheikh, F. N., Jamal, S., Ezrh, J. K., & Akhtar, A. (2020). Coronavirus (COVID-19): A Review of Clinical Features, Diagnosis, and Treatment. *Cureus*, 12(3), e7355. <https://doi.org/10.7759/cureus.7355>
- [18] Kang, L., Li, Y., Hu, S., Chen, M., Yang, C., Yan, B. X., Wang, Y., Hu, J., Lai, J., Ma, X., & Liu, Z. (2020). The mental health of medical workers in Wuhan, China dealing with the 2019 novel coronavirus. *The Lancet Psychiatry*, 7(3), e14. [https://doi.org/10.1016/S2215-0366\(20\)30047-X](https://doi.org/10.1016/S2215-0366(20)30047-X)
- [19] Liu, Y., Ning, Z., Chen, Y., Guo, M., Liu, Y., Gali, N. K., Sun, L., Duan, Y., Cai, J., Westerdahl, D., Liu, X., Xu, K., Ho, K., Kan, H., Fu, Q., & Lan, K. (2020). Aerodynamic analysis of SARS-CoV-2 in two Wuhan hospitals. *Nature*, 582, 557-560.
- [20] Muanya, C. (2020). Maintaining Mental Sanity In The COVID-19 Pandemic. Available from <https://m.guardian.ng/life/the-place-of-mental-sanity-in-the-covid-19-pandemic/>
- [21] Nigeria Centre for Disease Control (2020). COVID-19 Outbreak In Nigeria Situation Report S/N 54. Abuja; 2020. [Internet]. 2020 [cited 2020 Apr 23]. Available from <https://ncdc.gov.ng/diseases/sitreps/?cat=14&name=An%20update%20of%20COVID-19%20outbreak%20in%20Nigeria>.
- [22] Nigeria Centre for Disease Control (2020). First Case of Coronavirus Disease Confirmed in Nigeria [Internet]. 2020 [cited 2020 Apr 1]. Available from: <https://ncdc.gov.ng/news/227/first-case-of-corona-virus-disease-confirmed-in-nigeria>.
- [23] Nigeria Centre for Disease Control. (2020). Disease information (n.d.). Available from <https://ncdc.gov.ng/diseases/a-z>
- [24] Olaseni, A. O., Akinsola, O. S., Agberotimi, S. F., & Oguntayo, R. (2020). Psychological distress experiences of Nigerians during the Covid-19 pandemic; the gender difference.

- Journal of Social Sciences & Humanities*, 2, 1-7. <https://doi.org/10.1016/j.ssaho.2020.100052>
- [25] Raviola, G., Rose, A., Fils-Aim_e, J. R., Th_erosm_e, T., Affricot, E., Valentin, C., Daimyo, S., Coleman, S., Dubuisson, W., Wilson, J., Verdeli, H., Belkin, G., Jerome, G., & Eustache, E. (2020). Development of a comprehensive, sustained community mental health system in post-earthquake Haiti, 2010-2019. *Global Mental Health*, 7(e6), 1-12.
- [26] Rodríguez-Rey, R., Garrido-Hernansaiz, H., & Collado, S. (2020). Psychological Impact and Associated Factors During the Initial Stage of the Coronavirus (COVID-19) Pandemic Among the General Population in Spain. *Frontiers in Psychology*, 11(1540), 1-23. <https://doi.org/10.3389/fpsyg.2020.01540>
- [27] van Doremalen, N., Bushmaker, T., Morris, D. H., Holbrook, M. G., Gamble, A., Williamson, B. N., Tamin, A., Harcourt, J. L., Thornburg, N. J., Gerber, S. I., Lloyd-Smith, J. O., de Wit, E., & Munster, V. J. (2020). Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1. *New England Journal of Medicine*, 382(16), 1564–1567.
- [28] Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020a). Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *International Journal of Environmental Research and Public Health*, 17(5), E1729. <https://doi.org/10.3390/ijerph17051729>.
- [29] Wang, Y., Wang, Y., Chen, Y., & Qin, Q. (2020b). Unique epidemiological and clinical features of the emerging 2019 novel coronavirus pneumonia (COVID-19) implicate special control measures. *Journal of Medical Virology*, 92(6), 568–576.
- [30] Web news. (2020). Psychologist advocates increased palliatives to cushion lockdown effect. Available from [https:// ra dionigeriaibadan.gov.ng/2020/04/20/psychologistadvocates-increased-palliatives-to-cushion-lockdown-effect/](https://ra.dionigeriaibadan.gov.ng/2020/04/20/psychologistadvocates-increased-palliatives-to-cushion-lockdown-effect/)
- [31] World Health Organisation. (2020). Advice and guidance from WHO on COVID-19. Retrieved from: [https:// www.who.int /emergencies /diseases/novel-coronavirus-2019](https://www.who.int/emergencies/diseases/novel-coronavirus-2019).
- [32] World Health Organization (2020). COVID-19. Coronavirus Disease (COVID-19) Pandemic. Available from [https:// www.who.int /emergencies /diseases/novel-coronavirus-2019](https://www.who.int/emergencies/diseases/novel-coronavirus-2019).
- [33] World Health Organization (2020). Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV). Geneva: World Health Organization. 2020c.
- [34] World Health Organization [WHO] (2020). Considerations for quarantine of individuals in the context of containment for coronavirus disease (COVID-19). Interim guidance. Available from WHO/2019-nCoV/ IHR_Quarantine /2020.2. 2020a.
- [35] Worldometer. (2020). Coronavirus (COVID-19) Pandemic Update (Live) [Internet]. Available from [https://www. World ometer.info /coronavirus](https://www.worldometer.info/coronavirus)
- [36] Xiang, Y. T., Yang, Y., Li, W., Zhang, L., Zhang, Q., Cheung, T., & Ng, C. H. (2020). Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. *Lancet Psychiatry*, 7(3), 228–229. [https:// doi.org/10.1016/s2215-0366\(20\)30046-8](https://doi.org/10.1016/s2215-0366(20)30046-8)

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