

THE PSYCHOLOGICAL EFFECTS OF COVID-19 DURING THE PERIOD OF ISOLATION AND QUARANTINE

Dr. Sini Bhadrassenan Pushpangadan, Dr. V. Vidhya* and Dr. Priya*

**Assistant Professor, Department of Zoology, St. Jude's College, Thoothoor - 629176, Kanyakumari District, M.S. University, Abishekapatti, Tirunelveli, Tamil Nadu, India.*

Assistant Professor, Department of Botany, St. Jude's College, Thoothoor - 629176, Kanyakumari District, M.S. University, Abishekapatti, Tirunelveli, Tamil Nadu, India.

Email id: siniaji2797@gmail.com

Abstract

Although quarantine is a useful strategy for preventing the spread of COVID-19, it's crucial to consider its disadvantages as well because it can seriously harm the psychological well-being of both the individuals placed under quarantine and a sizable number of people who are either directly or indirectly related to them. A study was carried out to investigate the psychological implications of being placed under quarantine. Participants, who had either been placed in isolation or quarantine, were older than eighteen. Participants who eligible were identified in the hospital's COVID-19 contacts (quarantine) and cases (isolation) records. Questionnaires were used to gather information on anxiety, post traumatic stress disorder, and perceived stress. Individuals who were isolated and quarantined expressed feelings of hopelessness, embarrassment, and mild discomfort. There is an urgent need for psychological treatments that identify and target individuals with different degrees of anxiety or depression.

Keywords: *COVID-19, isolation, quarantined, depression*

INTRODUCTION

The 2019 Corona Virus Disease (COVID-19) outbreak has been declared an international public health emergency on January 30, 2020 by the World Health Organization (WHO) as the disease, first reported from China in December 2019, continues to surge through the continents affecting many countries from Europe, America and Asia severely and is still widening its burden of disease (1). Coronaviruses (CoVs) represent a major group of viruses mostly affecting human beings through zoonotic transmission. In the past two decades, this is the third instance of the

emergence of a novel coronavirus, after severe acute respiratory syndrome (SARS) in 2003 and Middle East respiratory syndrome coronavirus (MERS-CoV) in 2012(2)(3). Coronaviruses are enveloped positive sense RNA viruses ranging from 60 nm to 140 nm in diameter with spike like projections on its surface giving it a crown like appearance under the electron microscope; hence the name coronavirus (4).

The virus is typically rapidly spread from one person to another via respiratory droplets produced during coughing and sneezing. It is considered most contagious when people are symptomatic, although transmission may be possible before symptoms show in patients. Time from exposure and symptom onset is generally between two and 14 days, with an average of five days. Common symptoms include fever, cough, sneezing and shortness of breath. Complications may include pneumonia, throat pain and acute respiratory distress syndrome. Currently, there is no specific antiviral treatment or vaccine; efforts consist of symptom abolition supportive therapy. Recommended preventive measures include washing your hands with soap, covering the mouth when coughing, maintaining 1-meter distance from other people and monitoring and self-isolation for fourteen days for people who suspect they are infected.(5).The standard tool of diagnosis is by reverse transcriptionpolymerase chain reaction (rRT-PCR) from a throat swab or nasopharyngeal swab. The infection can also be diagnosed from a combination of symptoms, risk factors and a chest CT scan showing features of pneumonia(6).

This unpredictable, fast spreading infectious disease has been causing universal awareness, anxiety and distress, all of which according to WHO are natural psychological responses to the randomly changing condition (7). To prevent the spread of the virus, individuals testing positive for the disease should be placed in isolation, (“separation of ill or infected persons from others”) (8). Although isolation and quarantine have distinct meanings in practice, they both involve the separation of an individual from their loved ones, normal activities, and routines for the purpose of infection prevention.

The psychological impact of quarantine and isolation was exacerbated by the harmful effect of limited physical activity and changes in dietary practices (9).Many psychological problems and important consequences in terms of mental health including stress, anxiety, depression, frustration, uncertainty during COVID-19 outbreak emerged progressively (10).

SIGNIFICANCE OF THE STUDY

Although there has been a lot of research on the psychological effects of quarantine, it is still important to synthesize the literature from socio-ecological theory because this model has been used as a framework for many action research studies

METHODOLOGY

The questionnaire was invented by Sir Francis Galton, a British anthropologist, explorer and statistician in late 1800 (11). As defined "A questionnaire is simply a list of mimeographed or printed questions that is completed by or for a respondent to give his opinion" (12). A questionnaire is a list of inquiries made to people in order to gather data on a subject that is statistically significant. Questionnaires, when properly designed and responsibly given, become an essential tool for making statements about individuals, groups, or entire populations.

ASSESSMENT OF THE QUESTIONNAIRES

The strength of using questionnaires is an efficient and reasonably priced technique to collect a lot of data quickly. Answers to questionnaires may be more truthful because they can be completed in private and frequently anonymously.

RESULT

The experience of quarantine was found to be emotionally overwhelming for the individuals. The findings revealed that anxiety, distress, and depression were the most frequently reported psychological difficulty experienced (13-39) It has also been found that females reported more symptoms of depression during this period (40). The negative impact of quarantine affected children in a way that their overall development got hindered because of the imposed restriction in their play activities and increased screen time. The review findings revealed that the quarantine experience took a toll on their emotional well-being (41,42). The experience of quarantine increased the vulnerability towards Post-Traumatic Stress Disorder (PTSD), phobia, somatic problems, behavioural issues, sleep disorders and even acute onset psychosis (43-54). All of them emphasize the necessity of additional psychological support designed to address issues that arise

both during and after quarantine, as doing so could have detrimental effects on people's physical and mental health.

CONCLUSION

Quarantine subjects experienced physically problems, anxiety, depression, signs of post-traumatic stress disorder, and difficulty sleeping. Young age, female gender, poverty, fear of infection, poor sleep, decreased physical activity, increased sedentary behavior, and a lack of social support are some of the major risk factors during quarantine. Even after the quarantine period ended, discrimination and financial hardships continued to be risk factors. coping strategies, exercising at home, leisure, recreational activities, preserving relationships on social media, and the accessibility of mental health providers were important protective variables. The results also emphasize how important it is to use tele mental health therapies to address the psychological repercussions of quarantine and how important it is to improve knowledge, awareness, and self-coping mechanisms in this circumstance. In conclusion, there has been an unparalleled psychological impact from the COVID-19 epidemic. Besides COVID-19, the 21st century is also the era of emerging pandemic of mental illnesses (55).

REFERENCE

1. Lai C.C., Shih T.P., Ko W.C., Tang H.J., Hsueh P.R. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and coronavirus disease-2019 (COVID-19): the epidemic and the challenges. *Int J Antimicrob Agents*. 2020;55:105924. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
2. Ramadan N, Shaib H. Middle East respiratory syndrome coronavirus (MERS-CoV): A review. *Germs* 2019; 9 : 35-42.
3. Zhong NS, Zheng BJ, Li YM, Poon, Xie ZH, Chan KH, *et al*. Epidemiology and cause of severe acute respiratory syndrome (SARS) in Guangdong, People's Republic of China, in February, 2003. *Lancet* 2003; 362 : 1353-8.
4. Richman DD, Whitley RJ, Hayden FG. *Clinical Virology*, 4th ed. Washington: ASM Press; 2016.
5. Ahmad S, Hafeez A, Siddqui SA, Ahmad M, Mishra S. A Review of COVID-19 (Coronavirus Disease-2019) Diagnosis, Treatments and Prevention. *EJMO* 2020;4(2):116–125.

6. Velavan TP, Meyer CG. The COVID-19 epidemic. *Trop Med Int Health*. 2020;25(3):278–280. doi:10.1111/tmi.13383 <https://pubmed.ncbi.nlm.nih.gov/32052514/>.
7. Kluge H.N.P. Statement – physical and mental health key to resilience during COVID-19 pandemic. <http://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/statements/statement-physical-and-mental-health-key-to-resilience-during-covid-19-pandemic> (accessed on 30th March, 2020)
8. WHO. Considerations for quarantine of individuals in the context of containment for coronavirus disease (COVID-19); 2020. Available from: file:///C:/Users/gjassim/Downloads/20200229-covid-19-quarantine.pdf. Google Scholar
9. Füzéki E, Groneberg DA, Banzer W. Physical activity during COVID-19 induced lockdown: recommendations. *J Occup Med Toxicol*. 2020;15(1):25. doi:10.1186/s12995-020-00278-932817753 [PubMed](#) [Web of Science](#) [@Google Scholar](#)
10. Duan L, Zhu G. Psychological interventions for people affected by the COVID-19 epidemic. *Lancet Psychiatry* 2020; 7:300 – 2. [Google Scholar](#) [Crossref](#) [PubMed](#)
11. www.wikipedia.com—The free encyclopedia questionnaire.
12. World Health Organizations. Research methodology (2nd ed)
13. El Keshky M.E.S., Alsabban A.M., Basyouni S.S. Archives of Psychiatric Nursing; 2020. The Psychological and Social Impacts on Personal Stress for Residents Quarantined for COVID-19 in Saudi Arabia. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
14. Fernández R.S., Crivelli L., Guimet N.M., Allegri R.F., Pedreira M.E. Psychological distress associated with COVID-19 quarantine: latent profile analysis, outcome prediction and mediation analysis. *J. Affect. Disord*. 2020;277:75–84. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
15. Fuentes-García J.P., Patiño M.J.M., Villafaina S., Clemente-Suárez V.J. The Effect of COVID-19 confinement in behavioral, psychological, and training patterns of chess players. *Front. Psychol*. 2020;11 [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
16. Giardino D.L., Huck-Iriart C., Riddick M., Garay A. The endless quarantine: the impact of the COVID-19 outbreak on healthcare workers after three months of mandatory social isolation in Argentina. *Sleep Med*. 2020;76:16–25. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
17. Kılınçel Ş., Kılınçel O., Muratdağı G., Aydın A., Usta M.B. Factors affecting the anxiety levels of adolescents in home-quarantine during COVID-19 pandemic in Turkey. *Asia Pac. Psychiatr*. 2020 [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
18. Khan A.H., Sultana M.S., Hossain S., Hasan M.T., Ahmed H.U., Sikder M.T. The impact of COVID-19 pandemic on mental health & wellbeing among home-quarantined Bangladeshi students: a cross-sectional pilot study. *J. Affect. Disord*. 2020;277:121–128. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
19. Lei L., Huang X., Zhang S., Yang J., Yang L., Xu M. Comparison of prevalence and associated factors of anxiety and depression among people affected by versus people unaffected by quarantine during the COVID-19 epidemic in Southwestern China. *Med. Sci. Mon. Int. Med. J. Exp. Clin. Res.: Int. Med. J. Exper. Clin. Res*. 2020;26 e924609-1. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]

20. Massad I., Al-Taher R., Massad F., Al-Sabbagh M.Q., Haddad M., Abufaraj M. The impact of the COVID-19 pandemic on mental health: early quarantine-related anxiety and its correlates among Jordanians. *East. Mediterr. Health J.* 2020;26(10):1165–1172. [[PubMed](#)] [[Google Scholar](#)]
21. Pandey D., Bansal S., Goyal S., Garg A., Sethi N., Pothiyill D.I., Sethi R. Psychological impact of mass quarantine on population during pandemics—the COVID-19 Lock-Down (COLD) study. *PLoS One.* 2020;15(10) [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
22. Pérez-Fuentes M.D.C., MoleroJurado M.D.M., MartosMartínez Á., Gázquez Linares J.J. Threat of COVID-19 and emotional state during quarantine: positive and negative affect as mediators in a cross-sectional study of the Spanish population. *PLoS One.* 2020;15(6) [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
23. Ruggieri S., Ingoglia S., Bonfanti R.C., Coco G.L. Personality and individual differences; 2020. The Role of Online Social Comparison as a Protective Factor for Psychological Wellbeing: A Longitudinal Study during the COVID-19 Quarantine. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
24. Youssef N., Mostafa A., Ezzat R., Yosef M., El Kassas M. Mental health status of health-care professionals working in quarantine and non-quarantine Egyptian hospitals during the COVID-19 pandemic. *East. Mediterr. Health J.* 2020:1155–1164. [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
25. Wielgus B., Urban W., Patriak A., Cichocki Ł. Examining the associations between psychological flexibility, mindfulness, psychosomatic functioning, and anxiety during the COVID-19 pandemic: a path analysis. *Int. J. Environ. Res. Publ. Health.* 2020;17(23):8764. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
26. Jurblum M., Ng C.H., Castle D.J. Psychological consequences of social isolation and quarantine: issues related to COVID-19 restrictions. *Aust. J. Gen. Pract.* 2020:778–783. [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
27. Tang F., Liang J., Zhang H., Kelifa M.M., He Q., Wang P. COVID-19 related depression and anxiety among quarantined respondents. *Psychol. Health.* 2020:1–15. [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
28. Tang W., Hu T., Hu B., Jin C., Wang G., Xie C., et al. Prevalence and correlates of PTSD and depressive symptoms one month after the outbreak of the COVID-19 epidemic in a sample of home-quarantined Chinese university students. *J. Affect. Disord.* 2020;274:1–7. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
29. Tang W., Hu T., Yang L., Xu J. The role of alexithymia in the mental health problems of home-quarantined university students during the COVID-19 pandemic in China. *Pers. Individ. Differ.* 2020;165 [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
30. Cineka A., Raj J.M. Dance and music as a therapy to heal physical and psychological pain: an analytical study of COVID-19 patients during quarantine. *Eur. J. Mol. Clin. Med.* 2020;7(6):99–109. [[Google Scholar](#)] [[Ref list](#)]
31. diCagno A., Buonsenso A., Baralla F., Grazioli E., Di Martino G., Lecce E., Fiorilli G. Psychological impact of the quarantine-induced stress during the coronavirus (COVID-19) outbreak among Italian athletes. *Int. J. Environ. Res. Publ. Health.* 2020;17(23):8867. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]

32. Gan Y., Ma J., Wu J., Chen Y., Zhu H., Hall B.J. Immediate and delayed psychological effects of province-wide lockdown and personal quarantine during the COVID-19 outbreak in China. *Psychol. Med.* 2020;1–12. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
33. Ribeiro E., Sampaio A., Gonçalves M.M., Taveira M.D.C., Cunha J., Maia Â., Soares T. Telephone-based psychological crisis intervention: the Portuguese experience with COVID-19. *Counsell. Psychol. Q.* 2020;1–15. [[Google Scholar](#)] [[Ref list](#)]
34. Saurabh K., Ranjan S. Compliance and psychological impact of quarantine in children and adolescents due to COVID-19 pandemic. *Indian J. Pediatr.* 2020;87:532–536. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
35. Xin M., Luo S., She R., Yu Y., Li L., Wang S., Lau J.T.F. Negative cognitive and psychological correlates of mandatory quarantine during the initial COVID-19 outbreak in China. *Am. Psychol.* 2020;75(5):607. [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
36. Samrah S.M., Al-Mistarehi A.H., Aleshawi A.J., Khasawneh A.G., Momany S.M., Momany B.S., Khassawneh B.Y. Depression and coping among COVID-19-infected individuals after 10 Days of mandatory in-hospital quarantine, Irbid, Jordan. *Psychol. Res. Behav. Manag.* 2020;13:823. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
37. Alkhamees A.A., Aljohani M.S., Alghesen M.A., Alhabib A.T. Psychological distress in quarantine designated facility during COVID-19 pandemic in Saudi Arabia. *Risk Manag. Healthc. Pol.* 2020;13:3103. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
38. Guo Y., Cheng C., Zeng Y., Li Y., Zhu M., Yang W., Wu S. Mental health disorders and associated risk factors in Quarantined adults during the COVID-19 outbreak in China: cross-sectional study. *J. Med. Internet Res.* 2020;22(8) [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
39. Singh S.P., Khokhar A. Prevalence of posttraumatic stress disorder and depression in general population in India during COVID-19 pandemic home quarantine. *Asia Pac. J. Publ. Health.* 2020 1010539520968455. [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
40. Ripon R.K., Mim S.S., Puente A.E., Hossain S., Babor M.M.H., Sohan S.A., Islam N. COVID-19: psychological effects on a COVID-19 quarantined population in Bangladesh. *Heliyon.* 2020;6(11) [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
41. Orgilés M., Morales A., Delvecchio E., Mazzeschi C., Espada J.P. Immediate psychological effects of the COVID-19 quarantine in youth from Italy and Spain. *Front. Psychol.* 2020;11:2986. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
42. Graber K.M., Byrne E.M., Goodacre E.J., Kirby N., Kulkarni K., O'Farrelly C., Ramchandani P.G. A rapid review of the impact of quarantine and restricted environments on children's play and the role of play in children's health. *Child Care Health Dev.* 2020 [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
43. Brooks S.K., Webster R.K., Smith L.E., Woodland L., Wessely S., Greenberg N., Rubin G.J. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *Lancet.* 2020;395(10227):912–920. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
44. Fawaz M., Samaha A. COVID-19 quarantine: post-traumatic stress symptomatology among Lebanese citizens. *Int. J. Soc. Psychiatr.* 2020;66(7):666–674. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]

45. Fawaz M., Samaha A. <? COVID-19?>The psychosocial effects of being quarantined following exposure to COVID-19: a qualitative study of Lebanese health care workers. *Int. J. Soc. Psychiatr.* 2020;66(6):560–565. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
46. Jurblum M., Ng C.H., Castle D.J. Psychological consequences of social isolation and quarantine: issues related to COVID-19 restrictions. *Aust. J. Gen. Pract.* 2020:778–783. [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
47. Tang F., Liang J., Zhang H., Kelifa M.M., He Q., Wang P. COVID-19 related depression and anxiety among quarantined respondents. *Psychol. Health.* 2020:1–15. [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
48. Tang W., Hu T., Hu B., Jin C., Wang G., Xie C., et al. Prevalence and correlates of PTSD and depressive symptoms one month after the outbreak of the COVID-19 epidemic in a sample of home-quarantined Chinese university students. *J. Affect. Disord.* 2020;274:1–7. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
49. Fernández R.S., Crivelli L., Guimet N.M., Allegri R.F., Pedreira M.E. Psychological distress associated with COVID-19 quarantine: latent profile analysis, outcome prediction and mediation analysis. *J. Affect. Disord.* 2020;277:75–84. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
50. Wielgus B., Urban W., Patriak A., Cichocki Ł. Examining the associations between psychological flexibility, mindfulness, psychosomatic functioning, and anxiety during the COVID-19 pandemic: a path analysis. *Int. J. Environ. Res. Publ. Health.* 2020;17(23):8764. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
51. Finatti F., Pigato G., Pavan C., Toffanin T., Favaro A. 2020. Psychosis in Patients in COVID-19-Related Quarantine: A Case Series. *Prim. Care Companion CNS Disord.* (Online) [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
52. Youssef N., Mostafa A., Ezzat R., Yosef M., El Kassas M. Mental health status of health-care professionals working in quarantine and non-quarantine Egyptian hospitals during the COVID-19 pandemic. *East. Mediterr. Health J.* 2020:1155–1164. [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
53. Casagrande M., Favieri F., Tambelli R., Forte G. The enemy who sealed the world: effects quarantine due to the COVID-19 on sleep quality, anxiety, and psychological distress in the Italian population. *Sleep Med.* 2020;75:12–20. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
54. Giardino D.L., Huck-Iriart C., Riddick M., Garay A. The endless quarantine: the impact of the COVID-19 outbreak on healthcare workers after three months of mandatory social isolation in Argentina. *Sleep Med.* 2020;76:16–25. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)] [[Ref list](#)]
55. Tucci V., Moukaddam N. We are the hollow men: the worldwide epidemic of mental illness, psychiatric and behavioral emergencies, and its impact on patients and providers. *J Emergencies, Trauma, Shock.* 2017;10:4–6. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]