# MINI REVIEW ARTICLE



# The Role of Interventions to Manage and Reduce Covid-19 Mortality Rate of the COVID-19 Patients worldwide

Jaffar Abbas <sup>1,\*</sup>, Jinzhu Ling <sup>2</sup>, Arash Ziapour <sup>3</sup>, & Kanwar Hamza Shuja <sup>4</sup>

# Abstract

**Background:** Chronic illness, such as chronic contagious diseases including human immunodeficiency virus and tuberculosis, refer to higher levels of psychological problems as compared with the healthy peoples (Kuan et al., 2019; Van Den Heuvel et al., 2013). Previous studies illustrate depression symptom logy typically soar after illness, for instance, anthrax scares and herpes exposure (Gale et al., 2018; Mason & Lyons, 2003).

**Methods:** Review of currently published research papers, which discuss the mortality rate of the COVID-19, are available at PsycINFO, PubMed, and LISTA.

**Results:** Even Though the impact of the novel coronavirus (COVID-19) triggered psychological disorders and declining mental health, it has not been widely investigated; scholars expect that coronavirus will have massive effects, mainly based on immediate public responses and situation.

**Conclusions:** Mental health professionals exclusively have taken positions to assist both their greater society, and patients comprehend the potential effect of the COVID-19, help communities, families, patients, and tackle this alarming threat.

Keywords: COVID-19, Mental Health, Interventions to Reduce Covid-19 Mortality Rate.

<sup>4.</sup> M.Phil. Scholar, National Institute of Psychology, Center of Excellence, Quaid-I-Azam University, 45329, Islamabad, Pakistan. Correspondence concerning this article: Dr. Jaffar Abbas, Antai College of Economics and Management, Shanghai Jiao Tong University (SJTU), Minhang Campus, Shanghai, China. Email: Abbas512@sjtu.edu.cn.



Foundation University Islamabad

© The Author(s). 2020 Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. The images or other third party material in this article is included in the article's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this license, visit http://creativecommons.org/licenses/by/4.0/. The Creative Commons. Public Domain Dedication waiver (http://creativecommons.org/publicdomain/zero/1.0/) applies to the data made available in this article unless otherwise stated in a credit line to the data.

Antai College of Economics and Management (ACEM), Shanghai Jiao Tong University (SJTU), Postcode 200240, Shanghai, China.

<sup>2.</sup> Professor, School of Media and Communication (S.M.C.), Shanghai Jiao Tong University, Postcode 200249, Minhang Campus, Shanghai, China.

<sup>3.</sup> Health Education and Health Promotion, Health Institute, Kermanshah University of Medical Sciences, Kermanshah, Iran.

#### Background

The worldwide influence of coronavirus (COVID-19) has been intense, or the public health intimidation it reflects is the most critical condition seen in a chronic infectious disease since the 1918 H1N1 influenza plague. Here the present study has discussed the findings of the latest epidemiological modeling and impact on human mental health (Jaffar Abbas, Muhammad Aqeel, et al., 2019; Ferguson et al., 2020). This study model was incorporated policymaking globally in recent weeks to suppress the harmful intensity of COVID-19 on human's health. This study helps people how to tackle and avoid the effects of COVID-19 with the absence of a vaccine. It introduces the role of various potential public health measures to minimize the impact of the COVID-19 (J. Abbas et al., 2019; Yoosefi Lebni et al., 2020).

These measures are recognized nonpharmaceutical interventions, which intended at suppressing contact rates in the people and thus suppressing transmission of the novel virus. The study findings recommended that the efficacy of any one intervention in separation could expect to restrict, involving multiple interventions and precautionary measures with a mixed approach to have a significant impact on the transmission of the virus. This study also recommended two possible basic strategies, such as mitigation and suppression. (1)mitigation strategy primarily concentrates on slowing the process of transmission; however, it does not mainly prevent the epidemic increase. It helps decline peak healthcare needs while looking after those people who are at the most at threat of the profound illness through contamination. (2) The suppression helps to minimize the rapid spread. This policy aims to reverse the epidemic development, decreasing cases reports from higher to lower levels or sustainable that condition forever. Every plan has its main confrontation. This study provides the best possible mitigation strategies, such as combining home quarantine of the suspect cases and maintain the social separation of the older or those people who are suspected. They are at the most risk of Chronic illness. They might decrease the peak of the healthcare need by decreasing two out of three by declining death rate 50% lower than forecasted (Aqeel et al., 2020; Shuja et al., 2020). Conversely, the consequential mitigated epidemic could remain chances result in thousands or millions of casualties. The health systems have faced overwhelmed with a high number of patients (Azhar et al., 2018; Pouresmaeil et al., 2019). In this situation, many countries able to achieve their goals, the second option as suppression is favored policy choice. Several countries are trying to improve the performance of the business industry by following suppression and mitigation policies and recommended work from home (Jaffar Abbas, Jaffar Aman, et al., 2019; Jaffar Abbas, Iftikhar Hussain, et al., 2019). These policies are useful in restoring tourism activities to boost economic activities, which provides mental relief to ordinary people (Aman et al., 2019). Many countries have adopted these strategies to decrease mental stress and provided better healthcare facilities (Lebni et al., 2020).

In the current situation of the world, suppression modestly demands a mixture of social distancing for the whole populace, house isolation of suspect cases, or household quarantine for their family relative. It might request to add up universities, colleges, and school closures. However, it requires documented policies to restrict social ties. The extreme environment could have harmful effects on mental health systems because of increased absence. Industries have initiated corporate social responsibility and started policies to manage the mental health of their employees under the challenging situation of the pandemic (Jaffar Abbas, Shahid Mahmood, et al., 2019). Social media platforms have played a critical role in providing useful news and health updates during the outbreak of the infectious disease COVID-19 (Jaffar Abbas, Jaffar Aman, et al., 2019). The business firms used their entrepreneurial business networks to communicate with their customers, suppliers, and various stakeholders during the spread of the pandemic (Jaffar Abbas, Saqlain Raza, et al., 2019; Mamirkulova et al., 2020).

The primary aim of the suppression strategy serves the severe intervention combination, which is incredible and equally useful to decrease the transmission process. It helps in sustaining the rapid spread of the pandemic until a medicine becomes accessible (probably one and a half year or more) if many scholars predict that transmission may rapidly recover if interferences are relaxed. This study has shown that irregular social distancing - stimulated by trends in illness examination - could permit interventions to be comfortable shortly in relative temporary bases, other than actions will demand to refine it if suspect cases are again increased. Finally, practice in China, South Korea adopted the suppression strategy. At present, the United Kingdom and the United States have demonstrated that suppression is one of the best possible approaches to a temporary basis in developing countries. Whether it is useful in the medium and long term in developing countries and the economic and social costs of interventions accepted to date are likely to reduce the mental stress through mitigation and suppression strategies. However, this topic still needs researchers' attentions to conduct further studied to control the lethal effects of this infectious disease around the world.

### Funding

This study has not received any external funding.

**Conflict of Interest:** The authors are well informed and declared no competing interests.

#### Acknowledgment

The authors are thankful to all the participating respondents' who contributed to this current study.

## Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding authors on reasonable request.

### **Author's contributions**

JA (Abbas): Study design, literature search, first draft, manuscript revisions, and approval of the final version. JL: literature search, first draft, manuscript revisions, approval of the final version. AZ: Literature search, manuscript revisions, approval of the final version. KHS (Shuja): Literature search and manuscript revisions to the final version.

# Ethics approval and consent to participate

This review article has sought approval from Shanghai Jiao Tong University (SJTU). The authors received written consent from all the contributors.

#### **Competing interests**

The authors declare to have no competing interests.

Received: 11 November 2019 Accepted: 25 July 2020 published online: 01 August 2020

## REFERENCES

Abbas, J., Aman, J., Nurunnabi, M., & Bano, S. (2019). The Impact of Social Media on Learning Behavior for Sustainable Education: Evidence of Students from Selected Universities in Pakistan. Sustainability, 11(6), 1683. <u>http://www.mdpi.com/2071-1050/11/6/1683</u>

Abbas, J., Aqeel, M., Abbas, J., Shaher, B., A, J., Sundas, J., & Zhang, W. (2019, Feb 1). The moderating role of social support for marital adjustment, depression, anxiety, and stress: Evidence from Pakistani working and nonworking women. J Affect Disord, 244, 231-238. <u>https://doi.org/10.1016/j.jad.2018.07.071</u>

Abbas, J., Aqeel, M., Jaffar, A., Nurunnabi, M., & Bano, S. (2019, 2019/07/01). Tinnitus perception mediates the relationship between physiological and psychological problems among patients. *Journal of Experimental Psychopathology, 10*(3), 2043808719858559. <u>https://doi.org/10.1177/2043808719858559</u>

Abbas, J., Hussain, I., Hussain, S., Akram, S., Shaheen, I., & Niu, B. (2019). The Impact of Knowledge Sharing and Innovation on Sustainable Performance in Islamic Banks: A

Mediation Analysis through a SEM Approach. Sustainability, 11(15), 4049. <u>https://www.mdpi.com/2071-</u> 1050/11/15/4049

 Abbas, J., Mahmood, S., Ali, H., Ali Raza, M., Ali, G.,
 Aman, J., Bano, S., & Nurunnabi, M. (2019). The Effects of Corporate Social Responsibility Practices and
 Environmental Factors through a Moderating Role of Social Media Marketing on Sustainable Performance of Business Firms. Sustainability, 11(12), 3434.
 <a href="https://www.mdpi.com/2071-1050/11/12/3434">https://www.mdpi.com/2071-1050/11/12/3434</a>

Abbas, J., Raza, S., Nurunnabi, M., Minai, M. S., & Bano, S. (2019). The Impact of Entrepreneurial Business

Networks on Firms' Performance Through a Mediating Role of Dynamic Capabilities. *Sustainability*, *11*(11), 3006. <u>https://www.mdpi.com/2071-1050/11/11/3006</u>

Aman, J., Abbas, J., Mahmood, S., Nurunnabi, M., & Bano, S. (2019). The Influence of Islamic Religiosity on the Perceived Socio-Cultural Impact of Sustainable Tourism Development in Pakistan: A Structural Equation Modeling Approach. Sustainability, 11(11), 3039. https://www.mdpi.com/2071-1050/11/11/3039

Aqeel, M., Shuja, K. H., Abbas, J., Rehna, T., & Ziapour, A. (2020). The Influence of Illness Perception, Anxiety and Depression Disorders on Students Mental Health during COVID-19 Outbreak in Pakistan: A Web-Based Cross-Sectional Survey. *BMC public health*.

 Azhar, A., Abbas, J., Wenhong, Z., Akhtar, T., & Aqeel, M. (2018, 2018/07/09). Linking infidelity stress, anxiety and depression: evidence from Pakistan married couples and divorced individuals. *International Journal of Human Rights in Healthcare*, 11(3), 214-228. https://doi.org/10.1108/IJHRH-11-2017-0069

Ferguson, N. M., Laydon, D., Nedjati-Gilani, G., Imai, N., Ainslie, K., Baguelin, M., Bhatia, S., Boonyasiri, A.,
Cucunubá, Z., & Cuomo-Dannenburg, G. (2020). Impact of non-pharmaceutical interventions (NPIs) to reduce COVID-19 mortality and healthcare demand. *London: Imperial College COVID-19 Response Team, March, 16*.

Gale, S. D., Berrett, A. N., Erickson, L. D., Brown, B. L., & Hedges, D. W. (2018, Mar). Association between virus exposure and depression in US adults. *Psychiatry Res*, 261, 73-79. <u>https://doi.org/10.1016/j.psychres.2017.12.037</u>

Kuan, V., Denaxas, S., Gonzalez-Izquierdo, A., Direk, K.,
Bhatti, O., Husain, S., Sutaria, S., Hingorani, M., Nitsch, D., Parisinos, C. A., Lumbers, R. T., Mathur, R., Sofat, R.,
Casas, J. P., Wong, I. C. K., Hemingway, H., & Hingorani,
A. D. (2019, Jun). A chronological map of 308 physical and mental health conditions from 4 million individuals in the
English National Health Service. *Lancet Digit Health*, 1(2), e63-e77. <u>https://doi.org/10.1016/S2589-7500(19)30012-3</u>

Lebni, J. Y., Abbas, J., Khorami, F., Khosravi, B., Jalali, A., & Ziapour, A. (2020). Women's Challenges to Return to Normal Life after Self-Immolation in Kurdish Regions of Iran: A Qualitative Content Analysis. *Frontiers in Psychiatry*, 11, 778. https://doi.org/10.3389/fpsyt.2020.00778

Mamirkulova, G., Mi, J., Abbas, J., Mahmood, S., Mubeen, R., & Ziapour, A. (2020, 2020/08/05/). New Silk Road Infrastructure Opportunities in Developing Tourism Environment for Residents Better Quality of Life. *Global* 

*Ecology and Conservation*, e01194. https://doi.org/10.1016/j.gecco.2020.e01194

Mason, B. W., & Lyons, R. A. (2003, May). Acute psychological effects of suspected bioterrorism. *J Epidemiol Community Health*, 57(5), 353-354. <u>https://doi.org/10.1136/jech.57.5.353</u>

Pouresmaeil, M., Abbas, J., Solhi, M., Ziapour, A., & Fattahi, E. (2019). Prioritizing health promotion lifestyle domains in students of Qazvin University of Medical Sciences from the students and professors' perspective. *Journal of education and health promotion*, *8*, 228-228. https://doi.org/10.4103/jehp.jehp\_250\_19

Shuja, K. H., Aqeel, M., Jaffar, A., & Ahmed, A. (2020, Spring). COVID-19 Pandemic and Impending Global Mental Health Implications. *Psychiatr Danub*, *32*(1), 32-35. <u>https://doi.org/10.24869/psyd.2020.32</u>

# **Publisher's Note**

Foundation University Islamabad remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Van Den Heuvel, L., Chishinga, N., Kinyanda, E., Weiss, H., Patel, V., Ayles, H., Harvey, J., Cloete, K. J., & Seedat, S. (2013). Frequency and correlates of anxiety and mood disorders among TB-and HIV-infected Zambians. *AIDS care*, *25*(12), 1527-1535.

Yoosefi Lebni, J., Abbas, J., Moradi, F., Salahshoor, M. R., Chaboksavar, F., Irandoost, S. F., Nezhaddadgar, N., & Ziapour, A. (2020, Jul 2). How the COVID-19 pandemic effected economic, social, political, and cultural factors: A lesson from Iran. *Int J Soc Psychiatry*, 20764020939984. <u>https://doi.org/10.1177/0020764020939984</u>