

# Tools for the evaluation of the psychological impact of COVID-19: A practical guide for Family physicians and Primary Care Practitioners

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## ABSTRACT

The COVID-19 pandemic has affected the global population significantly and has resulted in physiological, psychological, social, and behavioral changes among the individuals. The prominent mental health effects of COVID-19 on the general and clinical populations have been well recognized. The family physicians and primary care practitioners from various disciplines are likely to encounter patients who are experiencing psychological distress manifested in the form of anxiety, depression, stress, insomnia, increased substance use, or other symptoms. This narrative review is aimed to present a bird's eye view of the psychological impact of COVID-19 on the general population and the various tools that are used to evaluate them. Besides, we intend to suggest a set of tools/questionnaires that can be used by the family physicians and primary care practitioners for generating data on the psychological impact of this pandemic.

**Keywords:** COVID-19, family physicians, primary care practitioners, psychological distress, psychometrics

## Introduction

COVID-19, a global pandemic, has resulted in a significant impact on the physiological, psychological, social, and behavioral aspects of individuals.<sup>[1,2]</sup> The psychological effect of the pandemic is pervasive and is expected to affect the mental health condition at the present moment as well as in the future.<sup>[3]</sup> The lasting effect on the psychological and emotional health is expected to be significant not only to the frontline healthcare workers, who were directly involved in the care and prevention of COVID positive patients but also to the general and clinical populations.<sup>[4]</sup>

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The common psychological conditions that are prevalent in these groups are depression, anxiety, distress, post-traumatic stress disorder (PTSD), panic attacks, phobia, insomnia, and increased substance addiction.<sup>[5-7]</sup>

Several studies have been done on the various population groups (e.g., the general population, healthcare workers, and patients from different clinical specialties) to study the psychological impact of the COVID-19 pandemic. It has been found that the impact of the social isolation due to the COVID-19 crisis has led to increased levels of anxiety, distress, and various other psychological conditions among the general population as well as the other clinical populations.<sup>[8]</sup> Researchers have used several psychometric tools such as depression anxiety and stress scale (DASS-21), patient health questionnaire (PHQ-2/9), impact

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of events scale -revised (IES-R), and various other modified tools designed especially for the COVID-19 pandemic. Psychiatrists and clinical psychologists are likely to encounter patients who have psychological issues because of COVID-19. However, primary care and family physicians are the first ones to encounter such patients and then these patients are referred to psychiatrists, if needed. As trusted first responders to any medical emergency, primary care physicians and family doctors are the ones who often set the course for the treatment. However, because their training does not generally extend deep into psychiatry, they may find themselves ill-equipped to properly identify when there are psychological causes to physical symptoms in a patient. Even if they want to gain a clearer idea of the patient's mental health, they may feel hamstrung by the lack of vocabulary in which to communicate to further ascertain their initial impressions. Therefore, it becomes necessary for the primary care practitioners family physicians and to have broad ideas about these tools to study the impact of the pandemic on their respective populations. This narrative review aims to present a synthesis view of the psychological impact of COVID-19 on the general population along with the details of various tools that are used to evaluate them. Besides, we intend to suggest a set of tools/questionnaires that can be used by family physicians and primary care practitioners for generating data on the psychological impact of this pandemic.

## Methodology

An exhaustive literature search was planned to study the psychological impact because of the COVID-19 pandemic on different population groups and the various psychometric tools that have been used for the evaluation purpose. The search engines used to conduct the electronic literature searches were PubMed and Google Scholar. A combination of keywords was used to make the searches such as (nCOV or 2019-nCOV or COVID-19 or SARS-COV-2 or COVID or CORONA\*) AND (Psychology or Psychosocial or Psychiatry or “mental health” or “psychological impact” or “psychosocial impact” or “Common psychological reactions” or depression or anxiety or fear or PTSD) AND (“general population” or “healthcare worker” or doctors or children or “elder people”). The articles published in English language were included in the study.

## Factors affecting psychological functioning

Multiple factors have contributed to the psychological impact during the time of COVID-19. The changes in the social scenario such as practising of social distancing, restricted movement, and lockdown have led to severe behavioral and psychological changes in the lives of the individuals.<sup>[9]</sup> The imposition of lockdown has initiated the culture of work from home, online classes, and restrictions on social gatherings and visiting religious places because of which people are struggling to deal with stressors, regulate their emotions, and to develop resilience toward this difficult situation. Along with social changes, people's fear about getting the disease and uncertainty of the future is also causing severe mental and emotional changes at the individual,

community, and international level. Apart from these, various factors that contributed to the mental health conditions of the clinical population were found to be overwhelming psychological pressure from COVID-19 and worrying about the management of disease.<sup>[10]</sup> The susceptible environment and traumatising experiences has also impacted the emotional state of an individual.<sup>[11]</sup>

## Psychological impact due to COVID pandemic

Researchers all across the globe have studied various population groups such as healthcare workers, general population, as well as a variety of clinical populations namely, cancer, paediatrics, and obstetrics.<sup>[12,13]</sup> The psychiatric conditions that have been identified as important and the common tools that are used to evaluate them are being listed below:

1. Anxiety is one of the most common reactions to an uncertain situation. The uncertainty about the health, work, and finances is making it difficult for the people to deal with this pandemic in a healthier way. A systematic review and meta-analysis has studied the anxiety among healthcare workers, general population, and clinical population.<sup>[14]</sup> The overall prevalence of anxiety was found to be 33%, maximum in the clinical population followed by general and healthcare workers. A number of validated tools have been used to study the anxiety because of the pandemic such as Beck Anxiety Inventory, DASS-21, the Generalized Anxiety Disorder-2/7 (GAD-2/7), the Hamilton Anxiety Rating Scale (HAM-A), the Hospital Anxiety and Depression Scale (HADS), PHQ-2/9, and the Zung Self-Rating Anxiety Scale.<sup>[13]</sup>
2. Depression is also found to be common during the pandemic as people feel less interested in their daily activities, feel more hopeless and helpless as they are unable to deal with the circumstances.<sup>[15]</sup> Studies to date have been conducted on the various groups of population and the overall prevalence of depression is found to be 28% and a few studies have reported moderate to severe levels of depression. Beck Depression Inventory (BDI), the Centre for Epidemiologic Studies-Depression Scale (CES-D), the Children's Depression Inventory—Short Version (CDI), DASS-21, the Edinburgh Postnatal Depression Scale (EPDS), the Hamilton Depression Rating Scale (HAM-D), HADS, PHQ-2/9, and the Zung Self-Rating Depression Scale are some of the tools that have been commonly used.<sup>[13]</sup>
3. Stress is defined as a state of physical and emotional tension, arising because of an event which disturbs our homeostasis.<sup>[15]</sup> The stress level is found to be associated with sex, profession, economic status, and residence. A systematic review and meta-analysis by Thapa *et al.*<sup>[13]</sup> found 40% overall prevalence of stress among both general and healthcare professionals. The stress have been assessed using tools such as DASS-21, IES-R and Perceived Stress Scale -4 (PSS).
4. Post-traumatic stress symptoms has been assessed using IES-R, insomnia was measured using Insomnia Severity

Index (ISI), sleep quality was assessed using Pittsburgh Sleep Quality Index (PSQI), alcohol related problems using the scale Alcohol Use Disorder Identification Test (AUDIT). The subjective well-being and psychological impact have been assessed using Warwick Edinburgh Mental Wellbeing Scale (WEMWBS).

5. Apart from these validated tools, several studies have also adopted modified tools to study the psychological, social, and behavioral impact of COVID on the lives of individuals such as COVID-19 Peri-traumatic Distress Index (CPDI), Coronavirus Anxiety Scale (CAS). Several other surveys have also been designed to assess the psychological health during the pandemic.
6. However, the psychological impact of COVID-19 on the various groups of population can be assessed by using validated tools. Some of these tools need specialized training and should be used preferably by psychologists or psychiatrists.

### Which tool to use: practical suggestions

A brief description of the most commonly used tools, their merits, and limitations are given in Table 1. Of the tools currently available, any one tool alone does not suffice to cover the entire spectrum of psychological impacts such as stress, depression, insomnia, phobia, addiction, etc. Therefore, there is a necessity to design a tool that assesses the overall psychological impact on the individual because of COVID-19. Making use of different tools to evaluate the impact can be tiresome for the participant and practitioner as well. Thus, some of the questions or directions of enquiry are presented in Table 2. Table 3 presents a set of questions that can be used by family physicians and primary care practitioners while screening patients with COVID-19. This could be helpful for family physicians and primary care practitioners from fields other than psychology and psychiatry,

to identify the individuals who have been severely impacted. The evaluation will help in providing the patients with the appropriate intervention and can then be referred to the psychiatrist or psychologist for further investigations and treatment through a proper channel.

Whether an evaluation should be initiated would depend upon the clinical needs of the case, and expression of distress that is recognized by the practitioner. Treatment can be initiated by the family physicians and primary care practitioners when they feel that case can be handled at their end, and further red flag signs (like suicidality, violence, complicated withdrawals) are not present. Whether to refer to a mental health colleague would be determined by severity of symptoms, precedence of the current medical condition of the patients, and pragmatic issues in establishing and executing a referral. Telemedicine can be of help in the current times for additional mental health evaluation of patients screened to have significant issues.

To conclude, several tools are available for assessment of psychological impact of COVID-19 among patients coming to family physicians and primary care practitioners. Different tools would have their own strengths and weaknesses. It is important to recognize that the use of these tools can help to more reliably ascertain the presence of a psychiatric disorder or mental health issue that needs care and intervention. Utilization of these tools by the family physicians and primary care practitioners would help to provide better mental health care of those patients who are currently distressed due to COVID-19.

The pandemic has impacted the social-behavioral and psychological health of individuals.<sup>[16]</sup> To assess changes such as in lifestyle and preventive practices several tools have been developed during the COVID period.<sup>[17-19]</sup> These tools have

**Table 1: Common psychological tools and scales being used for psychological assessment during COVID 19 pandemic**

Instrument	Merits	Demerits
Generalized Anxiety Disorder-7 (GAD-7): Measures generalized anxiety symptoms over the course of the last 2 weeks (7 items, 4-point Likert Scale meaning 0=never to 3=nearly every day). The Depression, Anxiety, and Stress Scale -21 (DASS-21): A self-report questionnaire consists of 21 items, 7 items per subscale assessing depression, anxiety and stress.	Brief questionnaire Association with depression, self-esteem, life satisfaction and resilience. Assesses stress, anxiety and depression using a single instrument.	Doesn't include standard criterion measures to assess convergent and discriminant validity Lack of full scalar invariance across some countries. Cut-off scores for diagnosis not robustly determined.
Patient Health Questionnaire-9 (PHQ-9): A self-administered screening tool for assessment of depression.	A brief questionnaire that focuses on the 9 diagnostic criteria for DSM-IV depressive disorders.	Telephonic validation and the time for patients to complete the PHQ-9 have not been determined.
The Impact of Event Scale-Revised: This is a 22-item scale which is rated on a 0 (not at all) to 4 (extremely) level. Scale scores are formed for the three subscales, which reflect intrusion (8 items), avoidance (8 items), and hyperarousal (6 items).	Retains an emphasis on assessing the basic phenomena of intrusion and avoidance.	Results may not generalize beyond individuals who have Experienced a serious life events/trauma. Does not clarify on the significant life events.
CoViD-19 Peritraumatic Distress Index (CPDI): A 24-item scale with content referring to anxiety, depression, specific phobias, cognitive change, avoidance and compulsive behaviour, physical symptoms and loss of social functioning in the past week. Items are rated on a 5-point scale ranging from 0 ("not at all") to 4 ("extremely").	Non-intrusive and can be administered online. It can be used for identification of vulnerable individuals early and offer them psychological intervention	Does not provide thresholds for different diagnoses.

**Table 2: Screening to identify psychological distress due to COVID 19 pandemic**

Construct	Features	Sample questions
Depression	Pervasive and persistent sadness Lack of enjoyment in pleasurable activities	'In the last 2 weeks, have you been feeling sad, depressed or hopeless all through the day?' 'In the last 2 weeks, do you have little interest or pleasure in doing things?'
Anxiety	Feeling anxious Worrying	'Have you been feeling anxious, nervous or on the edge?' 'Are you not able to control worrying?'
Stress	Inability to cope with personal problems	'Do you find yourself unable to cope with your personal problems?'
Insomnia	Difficulty in falling asleep	'Do you find it difficult to fall asleep nowadays?'
Substance use	Increase in alcohol use, smoking and other drugs	'Are you consuming alcohol, tobacco or other drugs more frequently than previous?'

**Table 3: A suggested strategy for mental health evaluation of the general practice patients during COVID 19 pandemic**

Depression, Stress and Anxiety Scale (DASS-21)	21 Questions to assess the depression, stress and anxiety among the patients
Sleep Quality	In the past few months, did you find any change in your sleep routine? In the past few months, did you feel lethargic during the entire day due to insufficient sleep? In the past few months, did you find it difficult to initiate sleep after hitting the bed?
Alcohol/substance addiction	In the past few months, did you notice any increase in the consumption of alcohol?
Phobia	In the past few months, did you refrain yourself from going out even when it is very necessary?
Distress	In the past few months, did you feel tired out for no good reason? In the past few months, did you feel so restless you could not sit still?
Attention to media	In the past few months, did you feel that you have been constantly monitoring news or social media for COVID-19 updates?

been used to conduct cross-sectional studies, to examine the impact of the COVID situation on lifestyle related behaviors and preventive practices.<sup>[20-23]</sup> Therefore, there stands a need to develop a tool that can be used by the Family physicians and Primary Care Practitioners to study the psychological impact of the pandemic among the general population. The contribution of this paper is also to suggest the line of enquiry that can function as a substitute in the current absence of a comprehensive psychological tool which can be easily accessed and understood by doctors whose specialisation does not lie in the psychological and psychiatric fields.

### Key Points

1. The psychological effect of the pandemic is pervasive and is expected to affect the mental health condition at the present moment as well as in the future
2. The changes in the social scenario such as practising of social distancing, restricted movement and lockdown have led to severe behavioural and psychological changes in the lives of the individuals
3. The psychiatric conditions that have been identified as important are stress, Depression, Anxiety, PTSD, Insomnia, Alcohol Abuse, etc.
4. Validated tools as well as several adopted modified tools have been used to assess the psychological health during the pandemic
5. As one tool is not enough to cover the entire range of psychological effects, there is a necessity to design a tool that assesses the overall psychological impact on the individual because of COVID-19
6. Utilization of these tools by the family physicians and primary care practitioners would help to provide better mental health

care of those patients who are currently distressed because of COVID 19.

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### Conflicts of interest

There are no conflicts of interest.

### References

1. Balkhi F, Nasir A, Zehra A, Riaz R. Psychological and behavioral response to the coronavirus (COVID-19) pandemic. *Cureus* 2020;12:e7923.
2. Grover S, Sahoo S, Mehra A, Avasthi A, Tripathi A, Subramanyan A, *et al.* Psychological impact of COVID-19 lockdown: An online survey from India. *Indian J Psychiatry* 2020;62:354-62.
3. Holmes EA, O'Connor RC, Perry VH, Tracey I, Wessely S, Arseneault L, *et al.* Multidisciplinary research priorities for the COVID-19 pandemic: A call for action for mental health science. *Lancet Psychiatry* 2020;7:547-60.
4. Maciaszek J, Ciulkowicz M, Misiak B, Szczesniak D, Luc D, Wieczorek T, *et al.* Mental health of medical and non-medical professionals during the peak of the COVID-19 pandemic: A cross-sectional nationwide study. *J Clin Med* 2020;9:2527.
5. Pappa S, Ntella V, Giannakas T, Giannakoulis VG, Papoutsis E, Katsaounou P. Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: A systematic review and meta-analysis. *Brain Behav Immun* 2020;88:901-7.
6. Rajkumar RP. COVID-19 and mental health: A review of the existing literature. *Asian J Psychiatr* 2020;52:102066. doi: 10.1016/j.ajp. 2020.102066.
7. Salari N, Hosseini-Far A, Jalali R, Vaisi-Raygani A,

- Rasoulpoor S, Mohammadi M, *et al.* Prevalence of stress, anxiety, depression among the general population during the COVID-19 pandemic: A systematic review and meta-analysis. *Global Health* 2020;16:57.
8. Managing mental health during COVID-19 [Internet]. American Medical Association. [cited 2020 Dec 12]. Available from: <https://www.ama-assn.org/delivering-care/public-health/managing-mental-health-during-covid-19>.
  9. McCloskey B, Heymann DL. SARS to novel coronavirus - old lessons and new lessons. *Epidemiol Infect* 2020;148:e22.
  10. Wang Y, Duan Z, Ma Z, Mao Y, Li X, Wilson A, *et al.* Epidemiology of mental health problems among patients with cancer during COVID-19 pandemic. *Transl Psychiatry* 2020;10:263. doi: 10.1038/s41398-020-00950-y.
  11. Zhang Y, Xie S, Wang P, Wang G, Zhang L, Cao X, *et al.* Factors influencing mental health of medical workers during the COVID-19 outbreak. *Front Public Health* 2020;8:491.
  12. Ng DW, Chan FH, Barry TJ, Lam C, Chong CY, Kok HC, *et al.* Psychological distress during the 2019 Coronavirus Disease (COVID-19) pandemic among cancer survivors and healthy controls. *Psychooncology* 2020. doi: 10.1002/pon.5437.
  13. Thapa SB, Mainali A, Schwank SE, Acharya G. Maternal mental health in the time of the COVID-19 pandemic. *Acta Obstet Gynecol Scand* 2020;99:817-8.
  14. Luo M, Guo L, Yu M, Jiang W, Wang H. The psychological and mental impact of coronavirus disease 2019 (COVID-19) on medical staff and general public - A systematic review and meta-analysis. *Psychiatry Res* 2020;291:113190. doi: 10.1016/j.psychres.2020.113190.
  15. Rehman U, Shahnawaz MG, Khan NH, Kharshiing KD, Khursheed M, Gupta K, *et al.* Depression, anxiety and stress among Indians in times of Covid-19 lockdown. *Community Ment Health J* 2020:1-7. doi: 10.1007/s10597-020-00664-x.
  16. Kumari A, Ranjan P, Sharma KA, Sahu A, Bharti J, Zangmo R, *et al.* Impact of COVID 19 on psychosocial functioning of peripartum women: A qualitative study comprising focus group discussions and in-depth interviews. *Int J Gynaecol Obstet* 2020. doi: 10.1002/ijgo.13524.
  17. Kumari A, Ranjan P, Vikram NK, Kaur D, Sahu A, Dwivedi SN, *et al.* A short questionnaire to assess changes in lifestyle-related behaviour during COVID 19 pandemic. *Diabetes Metab Syndr* 2020;14:1697-701.
  18. Chopra S, Ranjan P, Malhotra A, Sahu A, Dwivedi SN, Baittha U, *et al.* Development and validation of a questionnaire to evaluate the impact of COVID on lifestyle related behaviors: Eating habits, activity and sleep behavior. *Public Health Nutr* 2020;1-24.
  19. Castro-Sánchez E, Alexander CM, Atchison C, Patel D, Leung W, Calamita ME, *et al.* evaluation of a personal protective equipment (ppe) support programme ('ppe helpers') for staff during the covid-19 pandemic in London. *J Hosp Infect* 2020. doi: 10.1016/j.jhin.2020.12.004.
  20. Ranjan P, Bhattacharya A, Chakrawarty AC, Das R, Kumar A, Pandey S, *et al.* Association between self-reported adherence to preventive practices and probability of turning COVID-19 positive: A cross sectional analytical study. *Cureus* 2020;12:e11815.
  21. Cureus | Assessment of Preventive Practices Followed by General Public During COVID-19 Pandemic-A Cross-Sectional Survey From India [Internet]. [cited 2020 Dec 12]. Available from: <https://www.cureus.com/articles/44136-assessment-of-preventive-practices-followed-by-general-public-during-covid-19-pandemic---a-cross-sectional-survey-from-india>.
  22. Agarwal A, Ranjan P, Saraswat A, Kasi K, Bharadiya V, Vikram N, *et al.* Are health care workers following preventive practices in the COVID-19 pandemic properly?-A cross-sectional survey from India. *Diabetes Metab Syndr* 2021;15:69-75.
  23. Chopra S, Ranjan P, Singh V, Kumar S, Arora M, Hasan MS, *et al.* Impact of COVID-19 on lifestyle-related behaviours- A cross-sectional audit of responses from nine hundred and ninety-five participants from India. *Diabetes Metab Syndr* 2020;14:2021-30.