

Sheikh Shoib,^{1*} Sheikh Mohd Saleem,² Sheikh Mohammed Shariful Islam,³ S.M. Yasir Arafat,⁴ Shijo John Joseph.⁵

Severity of depression, anxiety and stress among the people of Kashmir, India during COVID-19: An observation from telepsychiatric services

¹ Department of Psychiatry, Jawahar Lal Nehru Memorial Hospital, Srinagar, Kashmir, India.

² Demonstrator, Department of Community Medicine, Government Medical College, Srinagar, Jammu and Kashmir, India.

³ Institute for Physical Activity and Nutrition, Deakin University, Melbourne, Australia.

⁴ Department of Psychiatry, Enam Medical College and Hospital, Dhaka-1340, Bangladesh.

⁵ Department of Psychiatry, Sikkim Manipal Institute of Medical Sciences, Sikkim Manipal University, Tadong, Gangtok, Sikkim, India.

*email: sheikhshoib22@gmail.com

DOI: 10.52095/gp.2021.8115

Received: 2020-11-01; Accepted: 2021-01-01

Abstract

Objective: The COVID-19 pandemic has affected the mental health and well-being of millions of people across the globe. This study aimed to assess the severity of depression, anxiety and stress level among persons who sought teleconsultation during the lockdown period in Kashmir, India.

Materials and methods: This cross-sectional study was carried out from 21 March to 31 May 2020 in Kashmir, India. A call line was set up for people with mental health concerns and participants who signed up for the service were included in the study. The mental health services were provided by a team via teleconsultation. The Depression, Anxiety and Stress Scale (DASS-21) questionnaire was used to assess the severity of distress.

Results: A total of 293 people were interviewed during the teleconsultation service. The mean age was 37.10 (\pm 10.54) years, the majority had moderate depression, 125 (42.7%), followed by extreme severe depression, 95 (32.4%). The mean depression score on the DASS-21 scale was 13.52 \pm 4.13. A total of 276 (94.2%) patients had severe anxiety following lockdown with a mean anxiety score of 14.04 \pm 9.23. Also, 96 (32.8%) of people had mild stress with a mean stress score of 12.82 \pm 7.32.

Conclusion: The severity of depression, anxiety and stress was high in our study population highlighting the need to provide critical mental health services. Teleconsultations could be an alternative approach to provide such services in areas with public health emergencies and where medical infrastructure is limited.

Keywords

Telepsychiatric service, Depression, Anxiety, Stress, COVID-19, Kashmir, Communication blackouts

INTRODUCTION

COVID-19 cases first started emerging in Wuhan, China, in December 2019. Since then the disease has been detected in more than 200 countries around the world – including in Jammu and Kashmir. Today, the disease has attained the status of a global pandemic (MOFH, 2020) and has had a significant impact on our society, posing many challenges for the provision of mental health services (Wang et al., 2020). The lockdown and other measures like self-isolation and quarantine taken to contain the spread of the virus has affected the mental health of many people (Joseph et al., 2020). Using an online Google survey, it was reported that 16.5% of the general population was suffering from severe depressive symptoms, 28.8% from

moderate to severe anxiety, and 8.1% from severe stress (Wang et al., 2020). According to a survey conducted by the Indian Psychiatry Society (IPS), within a week of the start of the nationwide lockdown in India, the number of reported cases of mental illness in the country had risen by 20% (IPS, 2020). There is an increased surge of mental health problems like fear of COVID-19 infection, anxiety, stress, depression, and post-traumatic stress disorders among the general public and health workers during the pandemic (Rajkumar, 2020; Kar et al., 2020). In a recent study done by Verma and Mishri, 2020, they found 25%, 28% and 11.6% of people among the general Indian public were moderate to extremely severely depressed, anxious

and stressed. A high level of anxiety was found among Indians during the COVID-19 pandemic (Roy et al., 2020). Another online survey reported two-fifths (38.2%) had anxiety, 74.1% had a moderate level of stress and 10.5% of participants had depression (Grover et al., 2020). Vulnerable populations like pregnant women, older people, the medically ill, and children are more at risk, and further long-term studies were required in these populations (Madhuri et al., 2020; Vahia et al., 2020).

Delivering mental health services to people during any lockdown is a challenge. This is heightened in Jammu and Kashmir where various psychological and psychiatric disorders are already on the rise in the Kashmir valley due to the ongoing political turmoil (Shoib and Arafat, 2020a; Shoib et al., 2012). The COVID-19 pandemic along with the lockdown has presented some exceptional and complex challenges in delivering mental health services in the valley (Shoib and Arafat, 2020a). Lockdown is routinely compounded by communications blackouts in the valley and this makes it even scarier and unsafe. Just before the start of this global crisis, the government had lifted a seven-month internet communications blackout in the valley – and also restricted the internet access to 2G services (Shoib and Arafat, 2020b).

Under these circumstances of lockdown, it is difficult to get to a hospital or a clinic for consultation. Also, since modern digital platforms like Zoom or Skype could not be used due to low internet speed, consultation via phone in the form of text messages may go a long way in delivering mental health services. To date, only a few telephonic mental health services have been tried. A few telephonic psychological counselling services have been established by the health authorities in Kashmir, which provides free 24-hour services every day of the week. At the time of previous natural disasters, such as the 2007 earthquake, internet services and smartphones were not widely used in Kashmir, and so online and telephonic mental health services were not available. Recently, the Doctors Association of Kashmir (DAK) has taken the initiative to provide mental health services through telephonic and online consultations during the COVID-19 outbreak as psychological interventions in person are not advisable due to the risk of transmission of the virus between healthcare providers and patients.

As the COVID-19 pandemic gathered momentum and forced many countries to impose lockdowns, the hospital attendance rates were severely affected and this situation called for an alternative way for patients to attend appointments and access emergency care. In India, the lockdown was imposed in four phases: Phase I (25

March-14 April 2020), Phase II (15 April-3 May 2020), Phase III (4-17 May 2020) and Phase IV (18-31 May 2020). Because of this, an alternative was given to patients to consult the specialist doctors via teleconsultation. Delivering mental health services during the COVID-19 lockdown is a challenge worldwide. Therefore, the present study was conducted to understand the severity of depression, anxiety and stress among persons who sought teleconsultation during the lockdown period in Kashmir.

METHODS

Study design

This cross-sectional study was carried out on teleconsultation services provided by the mental health team to patients who approached the team from 21 March-31 May 2020 (during the lockdown). A total of 293 patients were interviewed by the first author via teleconsultation. We constituted a mental health team (psychiatrist, psychologist, and counsellor) under the supervision of the DAK in March 2020.

Participants

Participants from different parts of the union territory 18-69 years old and with the ability to respond to an online questionnaire in English were invited to participate in the study. People suffering from neurological or psychiatric disorders were excluded from the study, as were those unwilling to provide informed consent.

Data collection

The participants who called over the phone were briefed on the purpose of the survey, and then given the questionnaire over WhatsApp. The participant's queries related to the study proforma were resolved over WhatsApp by the researcher. Basic demographic and personal characteristics about gender, qualification, marital status were included in the information sheet. The DASS-21 was applied to participants before doing a psychological intervention.

Instrument

A socio-demographic and detailed clinical history was taken from each patient and they were accessed on the DASS-21 scale (Lovibond et al., 1995). The DASS-21 questionnaire is a set of three self-reported scales designed to measure the emotional state of depression, anxiety and stress. Each of the three DASS-21 scales contains

seven items, divided into subscales with similar content. The depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest/involvement, anhedonia, and inertia. The anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and the subjective experience of anxiety. The stress scale is sensitive to levels of chronic nonspecific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive, and impatient. Scores for depression, anxiety, and stress are calculated by summing the scores for the relevant items.

Data analysis

Data was entered in a Microsoft Excel spreadsheet. Continuous variables were summarised as mean and standard deviation. Categorical variables were summarised as percentages. All statistical analysis was done using SPSS 20.0.

Ethical approval

The study was conducted complying the declaration of Helsinki 1964. Ethical clearance was obtained from the institutional ethical committee before the commencement of the study (DHSK, 3 March 2020). All patients have explained the objective of the study and verbal informed consent was taken before the commencement of teleconsultation.

RESULTS

Most of the patients who took teleconsultation were females 205 (70%) and 187 (63.8%), and were 31-59 years

old (mean age 37.10 ± 10.54). Most of the calls received for teleconsultation during lockdown were from rural areas. The majority of patients had moderate depression, 125 (42.7%), followed by severe depression, 95 (32.4%). The mean depression score on the DASS-21 scale was 13.52 ± 4.13 . On the anxiety scale, 276 (94.2%) were having severe anxiety following lockdown with a mean anxiety score of 14.06 ± 9.23 . Moreover, 96 (32.8%) patients were having mild stress with a mean stress score of 12.82 ± 7.32 among the studied patients. Figure 1 describes the frequency of teleconsultation calls received during various phases of the lockdown. The exponential decrease in the number of calls over different phases of the lockdown period can be seen. A total of 105 (35.8%) calls were received during the phase I (21 days), 93 (31.7%) during the phase II (19 days), while only 12 (4.0%) during phase IV (14 days).

DISCUSSION

Due to the continuous conflict in this region, there has been an increase in psychological problems in Kashmir (Shoib et al., 2012). The COVID-19 pandemic has already had a significant impact on society and individuals (Wang et al., 2020). This study attempted to assess the severity of depression, anxiety, and stress among the population of Kashmir during lockdown through a telephone interview by DASS-21. The majority of participants had severe anxiety (94.2%), moderate depression (42.7%), and 48.5% were experiencing moderate to severe stress. The findings also supported other studies highlighting a high level of anxiety and stress in China during the COVID-19 outbreak (Liu et al., 2020). The recent survey conducted by the IPS, reported an escalation of 20% in mental illness across the country within a few weeks of lockdown. This current study is in agreement with one carried out by Verma and Mishra, 2020, were they discovered that

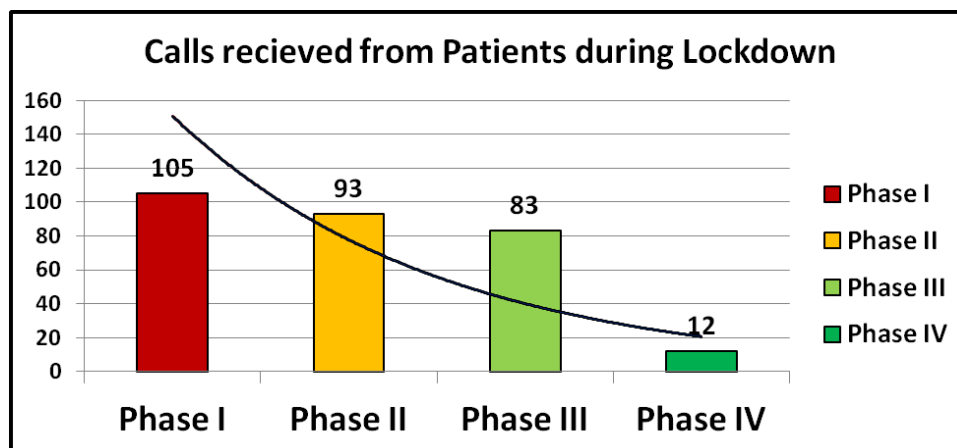


Figure 1. Frequency of calls received during various phases of lockdown.

Table 1. Severity of depression, anxiety and stress among the respondents assessed by DASS-21 (n=293).

DASS-21 Scale	Severity	Frequency (n)	Percentage (%)	Mean ± SD	Total n (%)
Depression	Mild Depression	55	18.8	13.52 ± 4.13	293 (100)
	Moderate Depression	125	42.7		
	Severe Depression	18	6.1		
	Extremely Severe Depression	95	32.4		
Anxiety	Severe Anxiety	276	94.2	14.06 ± 9.23	293 (100)
	Extremely Severe Anxiety	17	5.8		
Stress	Normal	55	18.8	12.82 ± 7.32	293 (100)
	Mild Stress	96	32.8		
	Moderate Stress	19	6.5		
	Severe Stress	94	32.1		
	Extremely Severe Stress	29	9.9		

25%, 28% and 11.6% among general Indian public were moderate to extremely severely depressed, anxious and stressed. A high-level level of anxiety was found among Indians during the COVID-19 pandemics (Roy et al., 2000). The anxiety, depression and stress level results found in our study were in agreement with findings from another online study (Grover et al. 2020).

Furthermore, the country can expect a massive mental health crisis due to unemployment, substance abuse, economic causes, financial insecurity, and domestic violence in the coming year (Naik, 2020). The exponential decrease in the number of calls over different phases of the lockdown period may be associated with inadequate communication. This finding is similar to the first phase of the emotional epidemic curve of the pandemic (Ransing et al., 2020a).

The concept of teleconsultation is an old concept that has been deployed in the past for providing services to remote and inaccessible areas. There is a huge demand for telehealth during disasters or pandemics as it has the advantage of rapid deployment of services to patients, their caregivers, and healthcare professionals (Smith et al., 2020). It also improves mental well-being and the coping mechanisms of people faced with varied health problems. Telehealth could increase the delivery of mental health services and may decrease the treatment gap for mental disorders (Zhou et al., 2020). It can be a feasible approach, with minimum utilisation of existing mental health resources, that boosts the accessibility and affordability of mental health interventions with timely

diagnosis and improved follow-up treatment. It decreases the burden on healthcare professionals delivering services in pandemics, and the risk of transmission of disease is nullified. However, quality assurance standardisation and monitoring can be a problem (Ransing et al., 2020b).

In Kashmir, the concept of telehealth is new, but it was also a big challenge to deliver online mental health services due to the restriction on internet speed to 2G (Shoib and Arafat, 2020b). The execution of online and teleconsultation services faced many difficulties because of low internet speed and reluctance among people for online counselling. Communication of vital health information was incredibly challenging in Kashmir due to the communication blockade and restrictions on internet services. There is a reliance on simple communication methods such as email and text messaging to share information about symptoms of mental health issues and to deliver mental health services. Various services like WhatsApp, email, telephone, text messages, and, rarely, video conferencing were used. In Kashmir, these services are mostly provided by voluntary organisations and by a few governmental institutions. The online psychological interventions used by the teleconsultation team during this outbreak changed our outlook and made us wiser to the augmentation of public emergency interventions, and ultimately could improve the quality of emergency interventions. In addition, Kashmir mental health resources are limited. Therefore, the mental health interventions should be targeted and adapted as appropriate to the severity of conditions, places of care, and the population group – for timely diagnosis and treatment. With the rapid increase of COVID-19 cases across Kashmir,

telecommunication mental health services are the domains that we need to prioritise. They are perfectly suited for use during pandemics and in remote locations where public health services are not available or inadequate.

Strength of the study: The study identifies the severity of depression, anxiety and stress in Kashmir highlighting the need to provide critical mental health services during public health emergencies.

Limitation of the study: There are several limitations to the study. The instrument used in methodology was not culturally validated. The responses were collected over the telephone and a thorough mental state diagnostic examination was not possible.

CONCLUSION

The study revealed that a high proportion of respondents in Kashmir had depression, anxiety, and stress-related problems during the COVID-19 pandemic. Delivering high-quality psychological and mental health services during the crisis is a major challenge—complicated by lockdown and communication blackouts. The provision of alternative treatments through technical adjustments, like online or telephonic consultation, can go a long way in delivering high-quality services.

ACKNOWLEDGEMENTS

Authors thankfully acknowledge Dr Umar Jan, Dr Asma Mushtaq, Bilal Ahmed, Dr Suhail Naik, and Dr Masood Rashid for their support in the study.

Authors' contribution: Conception & design: S Shoib, SM Saleem, SJ Joseph.

Acquisition of data: S Shoib, SM Saleem.

Data analysis: S Shoib, SM Saleem.

Drafting, critical revision and final approval of the manuscript: All authors.

Conflict of interest: There is none to declare.

Declaration of ethics: The study was conducted complying the declaration of Helsinki 1964. Ethical clearance was obtained from the institutional ethical committee before the commencement of the study (DHSK, 3 March 2020).

Funding: None.

Informed consent: Verbal consent was taken before starting the data collection.

REFERENCES

Grover S, Sahoo S, Mehra A, Avasthi A, Tripathi A, Subramanyan A, et al., Patojoshi A., Psychological impact of COVID-19 lockdown:

An online survey from India. *Indian J Psychiatry*. 2020 Jul-Aug; 62(4):354-362. doi: 10.4103/psychiatry.IndianJPsychiatry_427_20.

Indian Psychiatric Society. Position Statement on COVID-19 Pandemic, Mental Health Issues. 2020. <https://indianpsychiatric society.org/250411-2/>.

Joseph SJ, Shoib S, Sg T, Bhandari SS. Psychological concerns and musculoskeletal pain amidst the COVID-19 lockdown. *Open J Psychiatry Allied Sci*. 2020;11(2):137-139.

Kar S.K., Yasir Arafat S.M., Kabir R., Sharma P., Saxena S.K. (2020) Coping with Mental Health Challenges During COVID-19. In: Saxena S. (eds) *Coronavirus Disease 2019 (COVID-19). Medical Virology: From Pathogenesis to Disease Control*. Springer, Singapore. https://doi.org/10.1007/978-981-15-4814-7_16.

Liu S, Yang L, Zhang C, Xiang YT, Liu Z, Hu S, Zhang B. Online mental health services in China during the COVID-19 outbreak. *Lancet Psychiatry*. 2020 Apr;7(4):e17-e18. doi: 10.1016/S2215-0366(20)30077-8.

Lovibond PF, Lovibond SH. The structure of negative emotional states: comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behav Res Ther*. 1995 Mar;33(3):335-43. doi: 10.1016/0005-7967(94)00075-u.

Ministry of health of family welfare (2020). <https://www.mohfw.gov.in>. [accessed 10 July 2020].

Naik A. As India's lockdown ends, a mental health crisis is looming (18 May 2020). *World Economic Forum*. <https://www.weforum.org/agenda/2020/05/indias-lockdown-ends-mental-health-crisis-beginning/>.

Nanjundaswamy MH, Shiva L, Desai G, et al. COVID-19-related anxiety and concerns expressed by pregnant and postpartum women—a survey among obstetricians. *Arch Womens Ment Health* 2020;1-4. doi:10.1007/s00737-020-01060-w.

Rajkumar RP. COVID-19 and mental health: A review of the existing literature. *Asian J Psychiatr*. 2020 Aug;52:102066. doi: 10.1016/j.ajp.2020.102066.

Ransing R, Nagendrappa S, Patil A, Shoib S, Sarkar D. Potential role of artificial intelligence to address the COVID-19 outbreak-related mental health issues in India. *Psychiatry Res*. 2020a Aug;290:113176. doi: 10.1016/j.psychres.2020.113176.

Ransing R, Adiukwu F, Pereira-Sanchez V, Ramalho R, Orsolini L, Teixeira ALS, et al., Mental Health Interventions during the COVID-19 Pandemic: A Conceptual Framework by Early Career Psychiatrists. *Asian J Psychiatr*. 2020b Jun;51:102085. doi: 10.1016/j.ajp.2020.102085.

Roy D, Tripathy S, Kar SK, Sharma N, Verma SK, Kaushal V. Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic. *Asian J Psychiatr*. 2020 Jun;51:102083. doi: 10.1016/j.ajp.2020.102083.

Shoib S, Dar MM, Bashir H, Qayoom G, Arif T. Psychiatric morbidity and the socio-demographic determinants of patients attempting suicide in Kashmir valley: a cross-sectional study. *International Journal of Health Sciences and Research*, 2012; 2(7), 45-53.

Shoib S, Nagendrappa S, Grigo O, Rehman S, Ransing R. Factors associated with COVID-19 outbreak-related suicides in India. *Asian J Psychiatr*. 2020 Oct;53:102223. doi: 10.1016/j.ajp.2020.102223.

Shoib S, Yasir Arafat SM. Mental health in Kashmir: conflict to COVID-19. *Public Health*. 2020a Oct;187:65-66. doi: 10.1016/j.puhe.2020.07.034.

Shoib S, Arafat SMY. COVID-19 and the communication blackouts in Kashmir, India. *Lancet Psychiatry*. 2020b Sep;7(9):738. doi: 10.1016/S2215-0366(20)30338-2.

Smith AC, Thomas E, Snoswell CL, Haydon H, Mehrotra A,

Clemensen J et al. Telehealth for global emergencies: Implications for coronavirus disease 2019 (COVID-19). *J Telemed Telecare*. 2020 Jun;26(5):309-313. doi: 10.1177/1357633X20916567.

Wang C, Pan R, Wan X, Tan Y, Xu L, Ho CS, et al. Immediate Psychological Responses and Associated Factors during the Initial Stage of the 2019 Coronavirus Disease (COVID-19) Epidemic among the General Population in China. *Int J Environ Res Public Health*. 2020 Mar 6;17(5):1729. doi: 10.3390/ijerph17051729.

Vahia VN, Shah AB. COVID-19 pandemic and mental health care of older adults in India. *Int Psychogeriatr*. 2020 Oct;32(10):1125-1127. doi: 10.1017/S1041610220001441.

Verma S, Mishra A. Depression, anxiety, and stress and socio-demographic correlates among general Indian public during COVID-19. *Int J Soc Psychiatry*. 2020 Dec;66(8):756-762. doi: 10.1177/0020764020934508.

Zhou X, Snoswell CL, Harding LE, Bambling M, Edirippulige S, Bai X, Smith AC. The Role of Telehealth in Reducing the Mental Health Burden from COVID-19. *Telemed J E Health*. 2020 Apr;26(4):377-379. doi: 10.1089/tmj.2020.0068.