

THE STATE OF ANXIETY, DEPRESSION, AND STRESS IN HOSPITALIZED PATIENTS WITH CONFIRMED COVID-19 INFECTION

SUBHASIS MITRA, DALIA MITRA, ABHIJIT DUTTA*

Department of Medical Research and Data Management, Sanjiban Hospital, Howrah, West Bengal, India. Email: drabhijitdutta1@gmail.com

Received: 17 February 2021, Revised and Accepted: 28 March 2021

ABSTRACT

Objectives: In the past few months, the COVID-19 pandemic has drastically invaded the globe with its high infectivity. In this situation, people's mental health is of utmost importance but poorly reported, especially in patients. We conducted this cross-sectional study among laboratory-confirmed hospitalized patients to evaluate the burden of depression, anxiety, and stress symptoms.

Methods: We used depression, anxiety and stress scale 21 (DASS-21) to evaluate respective mental health components. A total of 114 hospitalized patients participated in this study. Of which, 65.79% were male patients.

Results: The reported depression, anxiety, and stress were 77.2%, 84.2%, and 54.4%, respectively. An inverse relationship of the total DASS-21 score was found with the age of the participants.

Conclusion: Such a high prevalence of mental health outcome suggests the need for further evaluation and addressing the problem with immediate concern.

Keywords: COVID-19, Mental health, Prevalence, Anxiety, Depression, Stress.

© 2021 The Authors. Published by Innovare Academic Sciences Pvt Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>) DOI: <http://dx.doi.org/10.22159/ajpcr.2021v14i5.41135>. Journal homepage: <https://innovareacademics.in/journals/index.php/ajpcr>

INTRODUCTION

The expeditious spread of coronavirus disease since December 2019 has put the world into a state of worry and panic. The unknown nature of high infectivity and significant deaths were closely running with several mental health issues among different populations [1]. In India, despite stringent community measures and nationwide lockdown, the spread has been enormous. Through November 2, 2020, a total of 8,229,313 confirmed cases and 122,607 deaths were reported in the country, which put it in the second position worldwide next to the United States [2]. The situation has undoubtedly impacted people's lives, including their mental health in an adverse manner [1]. The rise of massive literature in the past few months also includes data on mental health conditions, especially among health care workers and non-infected people [3]. However, it is difficult to assess the mental state in hospitalized patients with COVID-19 due to the lack of studies.

Sanjiban is a 500-bed dedicated referral COVID-19 hospital situated in West Bengal, India. Since April 2020, it has treated more than 4500 cases. These patients, as a group, are pretty vulnerable to develop psychological issues. Keeping the necessity in mind, a routine mental health evaluation of the hospitalized patients has been integrated as a part of the preliminary assessment plan.

METHODS

We used the depression, anxiety and stress scale 21 (DASS-21) to assess the mental state of patients as it is a convenient and easy to response tool. DASS-21 is a self-reported 21-item questionnaire designed to measure anxiety, depression, and stress. Each item has four possible responses on a Likert scale of 0–4, in ascending order of severity. To measure depression, anxiety, and stress, a predefined cutoff of >9, >7, and >14 was used in this study [4]. All the statistical analyses were done using SPSS software (Version 25.0. Armonk, NY: IBM Corp.); frequency variables were reported as percentages and continuous data as mean±standard deviation. The interrelationships between the

total DASS-21 score and independent variables were assessed through univariate analysis.

We approached 122 consecutive patients; of these, 116 (95.08%) agreed to participate in the survey. Two forms were rejected for incomplete data, and finally, 114 responses (93.44%) were analyzed.

RESULTS

In the study participants, 75 (65.79%) were male, and 39 (34.2%) were female; the mean age was 50.48±15.21 with a range of 19–82 years. Most of the patients were employed and belonged to different socioeconomic classes. The detailed demographic characteristics are provided in Table 1. The state of depression, anxiety, and stress was 77.2%, 84.2%, and 54.4%, respectively. This further was subdivided into a different category of severity as given in Table 2.

Among different variables, our analysis found a significant negative relationship of total DASS-21 score with age (standardized coefficient $\beta = -0.217$, $p = 0.02$).

DISCUSSION

This study revealed a significant prevalence of anxiety, stress, and depression in hospitalized patients with COVID-19. A study was conducted in China to evaluate the psychological status of newly recovered patients and individuals under quarantine. The reported depression and anxiety were 29.2% and 21.1% in patients affected by the disease [5]. Another study by Paz *et al.* [6] compared depression and anxiety prevalence in suspected and confirmed cases. They estimated 22.9% and 24.2% depressive and anxiety symptoms.

In contrast to the studies mentioned above, our findings suggest a higher prevalence of depression and anxiety among patients. In addition, the measured stress was also significant among the same population. The extraordinarily high prevalence may be due to several

Table 1: Sociodemographic and clinical characteristics (n=114)

Variables	Mean±SD/n (%)
Age, Mean±SD	50.48±15.21
Female, n (%)	39 (34.2)
BMI, Mean±SD	24.9±4.6
BMI category, n (%)	
<18.5	7 (6.1)
18.5–24.9	53 (46.5)
25–29.9	40 (35.1)
>30	14 (12.3)
Socioeconomic status, n (%)	
High	23 (20.2)
Middle	73 (64.0)
Poor	17 (14.9)
Duration of hospital stay (in days), median (range)	6 (1–28)
Symptoms, n (%)	
Fever	72 (63.2)
Cough	65 (57.0)
Rhinorrhea	62 (54.4)
Throat pain	26 (22.8)
Shortness of breath	18 (15.8)
Chest pain	15 (13.2)
Gastrointestinal symptoms	9 (7.9)
Headache	46 (40.4)
Anorexia	67 (58.8)
Myalgia	72 (63.2)
Weakness	68 (59.7)
Others	22 (19.3)
Comorbidity (any), n (%)	64 (53.5)
Hypertension	26 (22.8)
Diabetes mellitus	28 (24.6)
Hypothyroidism	8 (7.2)
COPD	8 (7.2)
Asthma	6 (5.2)
Cardiovascular diseases	7 (6.1)
Renal diseases	4 (3.5)
Malignancy	2 (1.8)
Others	6 (5.2)

factors, including hospital-induced stress, seeing or experiencing the adverse events occurring in neighboring patients, and situational panic.

CONCLUSION

Future studies with a larger sample size should be carried out to know the stringent prevalence estimates and potential influencing factors. These data might help stakeholders and policymakers to take essential decisions on further actions to mitigate this problem.

ACKNOWLEDGMENT

Authors like to acknowledge *Mr. Tapan Mallik*, Psychologist, Sanjiban Hospital; *Ms. Tiyasa Das*, *Ms. Anupama Adak*, and *Ms. Pamela Rana* for their extraneous effort in the assessment and data collection for this study. Also, like to thank the members of OMRDM, *Dr. Sumantra Das* and *Dr. Madhumita Nath* for their support in conducting the study process.

Table 2: Status of depression, anxiety, and stress symptoms according to depression, anxiety, and stress scale-21 (n=114)

Category	Depression n (%)	Anxiety n (%)	Stress n (%)
Total	88 (77.2)	96 (84.2)	62 (54.4)
Mild	22 (19.3)	8 (7.0)	15 (13.2)
Moderate	24 (21.1)	26 (22.8)	22 (19.3)
Severe	21 (18.4)	15 (13.2)	15 (13.2)
Extremely severe	21 (18.4)	47 (41.2)	10 (8.8)

AUTHORS' CONTRIBUTIONS

Subhasis Mitra: Conceptualization, funding acquisition, investigation, resources, software, supervision, validation, visualization, writing-review, and editing.

Dalia Mitra: Conceptualization, data curation, funding acquisition, investigation, methodology, project administration, resources, supervision, validation, visualization, writing-original draft, writing-review, and editing.

Abhijit Dutta: Conceptualization, data curation, formal analysis, funding acquisition, investigation, methodology, project administration, software, supervision, validation, visualization, writing-original draft, writing-review, and editing.

CONFLICTS OF INTEREST

Authors' have nothing to disclose related to this study.

FUNDING

This study received no external funding and was entirely initiated and conducted by the "Office of Medical Research and Data Management (OMRDM)" of Sanjiban Hospital, Howrah, India.

REFERENCES

- Pfefferbaum B, North CS. Mental health and the Covid-19 pandemic. *N Engl J Med* 2020;383:510-2.
- World Health Organization. WHO Coronavirus Disease (COVID-19) Dashboard WHO Coronavirus Disease (COVID-19) Dashboard. Geneva, Switzerland: World Health Organization; 2020. Available from: <https://www.covid19.who.int/region/searo/country/in>. [Last accessed on 2020 Nov 03].
- Krishnamoorthy Y, Nagarajan R, Saya GK, Menon V. Prevalence of psychological morbidities among general population, healthcare workers and COVID-19 patients amidst the COVID-19 pandemic: A systematic review and meta-analysis. *Psychiatry Res* 2020;293:113382.
- Lovibond SH, Lovibond PF. Manual for the Depression Anxiety Stress Scales. 2nd ed. Australia, Sydney: Psychology Foundation of Australia; 1995.
- Zhang J, Lu H, Zeng H, Zhang S, Du Q, Jiang T, et al. The differential psychological distress of populations affected by the COVID-19 pandemic. *Brain Behav Immun* 2020;87:49-50.
- Paz C, Mascialino G, Adana-Díaz L, Rodríguez-Lorenzana A, Simbaña-Rivera K, Gómez-Barreno L, et al. Anxiety and depression in patients with confirmed and suspected COVID-19 in Ecuador. *Psychiatry Clin Neurosci* 2020;74:554-5.