

COVID-19 PANDEMIC AND ITS IMPACT ON MENTAL HEALTH AMONG HEALTHCARE FEMALE WORKERS IN INDIA: A SYSTEMATIC REVIEW

Rashni Chatterjee¹ & Suman Chakrabarty²

Workload during COVID-19 was drastically increased and has exerted an influence on the mental health of working women especially healthcare workers in India. This review paper systematically summarizes 30 research articles retrieved from electronic databases i.e., Google Scholar, PubMed, Academia, and Research Gate selected from the year 2020 to 2023, focusing on the association of mental health of healthcare workers in India with the COVID-19 pandemic by using the PRISMA flow diagram. The mental health of healthcare workers was severely impacted due to various factors such as pressure from seniors, discrimination from families, and fear of affecting family members and duty hours. Major mental health issues reported were stress, anxiety, depression, insomnia along with anger and fear. Curbing traditional parochial attitudes and norms (regarding gender discrimination) can positively impact the overall health of female workers. Appropriate psychological support can make them fit as 'prevention is better than cure'.

Keywords: Mental health, working women, COVID-19, Pandemic, India, systematic review

Introduction

The COVID-19 pandemic has posed significant challenges to the economy and human mental health worldwide. Consequently, the World Health Organization (WHO) declared this pestilence as a 'public health

¹ *Rashni Chatterjee* is a Junior Research Fellow in the Department of Anthropology, West Bengal State University, Barasat, West Bengal, India. Correspondence regarding this article must be sent to: rashnichatterjee1996@gmail.com

² *Suman Chakrabarty* is an Associate professor, Department of Anthropology, Mrinalini Datta Mahavidyapith, Birati, Kolkata, West Bengal, India

emergency of international concern' on the 30th of January 2020 and as a 'pandemic' on the 11th of March 2020 (WHO, 2020). The pandemic has profoundly impacted human life, causing unprecedented loss. Societal norms often compel women to prioritize domestic responsibilities such as household chores, childcare, etc. (Sharma et al., 2016). With these obligations, working women tend to face immense pressure, managing both household and official work simultaneously, exacerbating their mental health concerns. During lockdowns, such responsibilities surged, taking a toll on their mental well-being. Healthcare workers, particularly women, experienced severe mental health impacts. In India, 38% of frontline healthcare workers are women (Anand et al., 2016). Prolonged work hours and fear of infection were associated with anxiety, insomnia, and depression (Chatterjee et al., 2021). Bharathi et al., (2020) observed that the COVID-19 pandemic has disproportionately affected women's health and well-being. Married healthcare workers experienced heightened anxiety and depression, exacerbated by fears of infecting their families, leading to increased stress (Mathur et al., 2020; Rekha et al., 2022). Associated with the pandemic, suicide cases were also reported from Maharashtra, Uttar Pradesh, Assam, and Kerala (Cullen et al., 2020). Further, the lockdown has also had a significant impact on mental health, psychology, well-being, etc. A study conducted among 159 adults during the initial lockdown phases revealed a significant psychological burden on Indians as anxiety and depressive symptoms increased over time, disproportionately affecting women (Gopal et al., 2020). Cases of domestic violence in Uttar Pradesh, Bihar, Haryana, and Punjab surged to a 45% increase within 25 days of lockdown though many of such cases were not reported from rural areas as women hesitate to reveal domestic abuse due to fear (Kundu & Bhowmik, 2020). Lockdown restrictions have also led to decreased physical activity, resulting in fatigue, headaches, and weight gain (Pandey & Pathak, 2023).

Though the World Health Organization (WHO), on May 5, 2023, notably declared the COVID-19 pandemic as 'no longer a global health concern' (WHO, 2023), this review focuses on and incorporates existing research reports from 2020 to 2023 with a specific aim to provide insights on the status of mental health among women healthcare workers during the post-pandemic period.

Review Strategy and Design

The present review was primarily carried out by consulting literature concerning the mental health of working women in India. The review included cross-sectional studies published in English from March 2020 to June 2023,

focusing on depression, anxiety, and insomnia prevalence among women aged 18 and above. Specific keywords viz., *mental health, working women, and India*, were used during the search process. Full-text articles were retrieved from databases i.e., PubMed, NCBI, ResearchGate, and Google Scholar. Additionally, relevant articles were also identified through cross-referencing.

Inclusion and exclusion criteria were established to ensure the relevance and quality of selected articles (*Table 1*). A total of 220 articles were screened, and 188 were excluded for failing to meet inclusion criteria. 30 articles met the criteria and were included in this review. For the systematic review process, the PRISMA Flow Diagram was considered (*Figure 1*).

Figure 1: Search strategies by PRISMA flow chart

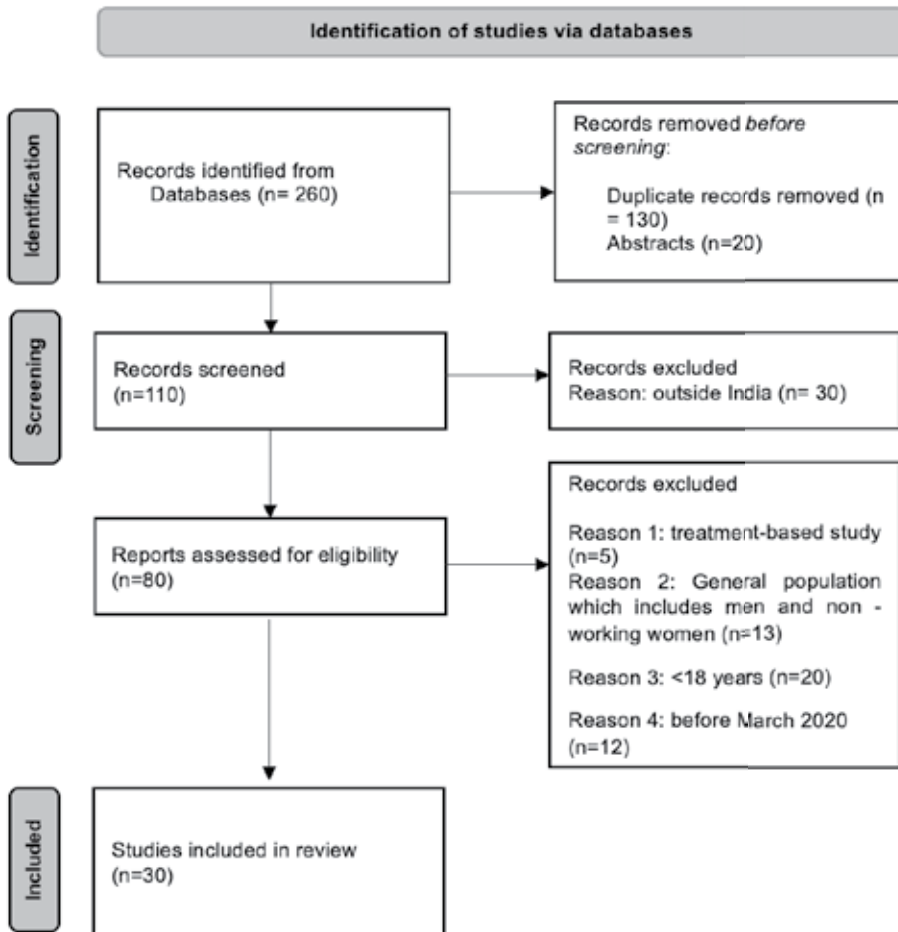


Table 1: Inclusion and exclusion criteria

<i>Inclusion Criteria</i>	<i>Exclusion Criteria</i>
1. Full-text articles were limited to India only	1. Abstracts, review paper, and not based in India
2. Mental health status-related studies from March 2020 to June 2023.	2. Before March 2020
3. Mental health status-related studies were limited only among working women	3. General population which includes men and non-working women
4. Targeted working women >18 years of age	4. <18 years
5. Community-based as well as comparative study	5. Treatment-based and patient-related study

Results and Discussion

Our analysis of the literature (*Table 2*) indicates that healthcare workers experienced severe mental health impacts during the pandemic, with significant increases in psychological distress, anxiety, and depression. Women participating in self-help groups reported moderate depression and anxiety levels, while mitigation of mental illness is seen among those engaging in indoor games and listening to music (Behera et al., 2022). Mental health conditions were positively associated with pressure from seniors due to patient load, discrimination from co-workers or family members, fear of affecting family, and loss of family members (Suryavanshi et al., 2020). Prolonged duty hours contributed to mental health issues and increased the risk of depression (Chatterjee et al., 2021; Parikh et al., 2022). The risk of COVID-19 infection emerged as a substantial stress factor (Poddar et al., 2020; Menon et al., 2020; Parthasarathy et al., 2021). Medical practitioners (i.e., nurses) on the other hand, were disproportionately vulnerable to stress. Further, the status of mental health among working women was positively correlated with age, particularly among individuals aged 40-49 years. The vulnerability under this age group may be attributed to being married and the increased stress on being potentially infecting loved ones (Khanam et al., 2020; Parikh et al., 2022). Prolonged PPE use and menstruation during duty hours contributed to fatigue among healthcare workers, while lack of pandemic experience sparked anxiety (Dar et al., 2021; Parikh et al., 2022). Conversely, healthcare workers with over 10 years of experience were more likely to experience insomnia due to continuous performance evaluations, leading to psychological distress and burnout.

Healthcare workers navigated complex challenges, including decision-making dilemmas, resource tensions, critically ill patient care, and balancing patient and family needs, further exacerbating mental distress (Rekha et al., 2023). Vulnerable groups such as children, older adults, frontline

workers, and individuals with pre-existing mental health conditions, were disproportionately affected by mental illness (Roy et al., 2020). Various research has shown that nurses suffered more than doctors due to prolonged work hours, lack of family support, continuous patient care, and extended family separation leading to heightened anxiety (Ramdurg et al., 2022). Similar findings have shown significant increases in anxiety, depression, and insomnia among female healthcare workers during the pandemic (Dabholkar et al., 2020; Jagiasi et al., 2021; Sunil et al., 2021; Visi et al., 2022). Healthcare workers experienced heightened psychological distress and struggled to cope with these challenges, leading to increased distress (Siddiqui et al., 2023).

Table 2: Mental health status among healthcare Female workers in India

<i>Studied area</i>	<i>Sample size</i>	<i>Study design</i>	<i>Assessment tools</i>	<i>Outcome of the study</i>	<i>Reference</i>
1. Across India	202	Cross-sectional online survey	ISI, PHQ-4, PHQ-2, PSS	Severe anxiety, depression along with severe insomnia.	Sunil et al., 2021
2. Across India	458	Cross-sectional online survey	GAD-2, GAD-7, CESD, ISI	High prevalence of anxiety, depression, and insomnia.	Jagiasi et al., 2021
3. West Bengal, North Kolkata, India	152	Cross-sectional online survey	DASS-21	Anxiety level significantly increased. Severely affected.	Chatterjee et al., 2020
4. Kashmir, India	59	Cross-sectional online survey	Self-reported stress questionnaire, IES-R	Severe psychological problems. Stress increased due to the burden of an increase in the quantity of work.	Khanam et al., 2020
5. Eastern India	171	Cross-sectional online survey	PSS-10	The stress level was significantly higher.	Poddar et al., 2020
6. West Bengal, South Kolkata, India	79	Cross-sectional online survey	PSS-10, ISI-7, PSQI	Enormous stress and sleep difficulties.	Chatterjee et al., 2021
7. Odisha, India	218	Cross-sectional online survey	PHQ-9	Moderate depression and depression	Behera et al., 2022
8. Karnataka, India	1420	Cross-sectional online survey	PHQ-4, GAD-2	Anxiety and depression were highest.	Parthasarthy et al., 2021.
9. Meghalaya, India	150	Cross-sectional online survey	PHQ-9, GAD-7, ISI	More prone to suffer depression, moderate to severe forms of depression, anxiety, insomnia.	Visi et.al; 2022

10. Across India	101	Cross-sectional online survey	PHQ-9 GAD-7	Moderate to severe depression and anxiety.	Suryavanshi et al., 2020.
11. Maharashtra	24	Cross-sectional online survey	Face-to-face and online interviews with self-reported questionnaires.	Severe anxiety, fear, anger irritability and insomnia.	Dabholkar et al., 2020
12. Across India	406	Cross-sectional online survey	HADS scale	Depression and anxiety	Gupta et al., 2021
13. Across India	339	Cross-sectional online survey	Self-reported online questionnaire	Sleep difficulties with paranoia and distress	Roy et al., 2020
14. Across India	102	Cross-sectional online survey	GAD-7, CESD-D scale	Depression and anxiety	Sharma et al., 2020
15. Across India	188	Cross-sectional online survey	PHQ-9, PSS-10	Depression and stress	Das et al., 2020
16. Across India	92	Cross-sectional online survey	DASS-21	Moderate level of anxiety	Sahoo and Behera, 2020
17. Tamil Nadu, India	120	Cross-sectional online survey	PSS	Moderate and severe levels of stress	Rajeswari, 2021
18.	358	Cross-sectional online survey	DASS-21	Moderate to severe depression, anxiety and stress	Sukumaran et al., 2021
19. Across India	526	Cross-sectional online survey	GHQ-5, IC-MR-NIOH	Psychological distress including depression, anxiety and PTSD	Menon et al., 2022
20. Delhi, India	43	Cross-sectional online survey	PHQ-9, GAD-7, IES-R	Prevalence of adverse mental health symptoms	Sharma et al., 2021
21. Across India	62	Cross-sectional online survey	DASS-21, ADNM-6	Depression, anxiety and acute stress	Mathur et al., 2020
22. Across India	249	Cross-sectional online survey	DASS-21	Higher prevalence of anxiety and depression	Ramdurg et al., 2022
23. Ahmadabad, India	548	Cross-sectional online survey	GHQ-28	Sleep disturbances	Parikh et al., 2022
24. Across India	234	Cross-sectional online survey	DASS-21	Moderate and severe anxiety	Jakhar et al., 2021
25. Mangalore, Karnataka, India	183	Cross-sectional online survey	PHQ-9, GAD-7, ISI	Unfavourable mental health condition	Rekha et al., 2023
26. Across India	244	Cross-sectional online survey	DASS-21, ISI	High, moderate and severe levels of anxiety, stress and insomnia	Selveraj et al., 2020

27.	Kashmir, India	52	Cross-sectional online survey	HADS-14	Significantly higher risk of anxiety and depression	Dar et al., 2021
28.	Himachal Pradesh, India	87	Cross-sectional online survey	PHQ-ADS	Severe depression and anxiety with high PHQ-ADS scores.	Garg et al., 2022
29.	Delhi, India	53	Cross-sectional online survey	GHQ-12	Significantly higher levels of psychological distress	Siddiqui et al., 2023
30.	North India	163	Cross-sectional online survey	GAD-7, PHQ-9, PSS-10	Moderate to high-level stress, depressing symptoms	Wilson et al., 2020

Conclusion

Though women play significant roles in their families, at times they face discrimination and are often neglected. Studies showed that there was a rise in psychological issues among healthcare female workers during the pandemic especially due to the absence of mental and physical support. Setting aside societal norms and actively contributing to household chores could contribute towards long-term physical and mental health benefits for women. However, further research is necessary to fully understand these emerging health concerns.

Abbreviations

ISI: Insomnia Severity Index; PHQ-4: Patient Health Questionnaire; PSS: Perceived Stress Scale; DASS-21: Depression, Anxiety, and Stress Scale; SSD: Screener for Somatoform Disorder; GAD-2 & GAD-7: Generalized Anxiety Disorder; CESD: Centre for Epidemiologic Studies Depression; PSS – 10: Perceived Stress Scale; PSQI: Pittsburgh Sleep Quality Index; PHQ-SADS: Somatic, Anxiety, and Depressive Symptom Scales; PHQ-9: Patient Health Questionnaire-9; IES-R: Impact of Event Scale – Revised; GHQ: General Health Questionnaire; QOL- BREF: Quality Of Life; PSQI: Pittsburgh Sleep Quality Index; PTSD: Posttraumatic Stress Disorder; PTSD-SS PTSD: Self-Rating Scale; IES-R: Impact of Event Scale-Revised; PSS: Perceived Stress Scale; SAS: Self-rating Anxiety Scale; CES-D: Center for Epidemiologic Studies Depression Scale; PHQ-9: Patient Health Questionnaire-9; GAD-7: General Anxiety Disorder-7; ISI: Insomnia Severity Index; HAMD: Hamilton Depression Rating Scale; HAMA: Hamilton Anxiety

Rating Scale; SDS: Self-Rating Depression Scale; PCL-5 PTSD: Checklist for DSM-5; HAD: Hospital Anxiety and Depression Scale; OCD: Obsessive-compulsive disorder; PFI: Professional Fulfillment Index; MBI: Maslach Burnout Inventory; SCL-90-R: Symptom Checklist-90-Revised; AIS: Athens Insomnia Scale; HADS: Hospital Anxiety and Depression Scale; GHQ SCALE: The 12-Item General Health Questionnaire (GHQ-12).

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