The Impact of COVID-19 Pandemic on the Mental Health of Health-Care Workers in India: A Qualitative Phenomenological Study

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Abstract

Background: Public health emergencies are known to affect mental health and well-being at the individual (anxiety, loneliness) and societal level (income loss, reduced access to services). The socioeconomic and health-care impacts of the COVID-19 pandemic are unprecedented with worldwide economic loss, closure of business activities, travel restrictions, social distancing, quarantine and isolation, fear of shortage of basic needs, and rapid spread of mental health problems. **Materials and Methods:** Qualitative phenomenological research with the overall aim to explore the psychological impact of the COVID-19 pandemic among healthcare workers in India was undertaken in a selected tertiary care hospital, in India. Qualitative in-depth interview was conducted to elucidate the mental health issues and problems of healthcare workers as experienced by them. We used phenomenological methodology to conduct in-depth face-to-face interview to focus on individual versions of experience combined with thematic analysis techniques for analyzing and framing the research data. Thematic analysis was carried out on data collected from 29 healthcare workers from different disciplines such as doctors, nurses, laboratory technician, paramedics, and operation theatre technicians. **Results:** Health-care workers reported various psychosocial issues and problems that they have experienced from the onset of COVID-19. From the analysis, we have generated three overarching themes, each with five subthemes. **Conclusion:** The study concludes that the health-care workers exposed to pandemic situation are vulnerable for a range of mental health issues from distress to sleep disturbances, fear and anxiety to social isolation and stigma, and loss of hope to helplessness.

Keywords: COVID-19, health-care workers, mental health, pandemic

Introduction

The outbreak of the novel coronavirus in Wuhan, China, has subsequently led to a global pandemic, a public health emergency as announced by the World Health Organization. This COVID-19 pandemic has posed a new major global health challenge.[1] Public health emergencies are known to affect mental health and well-being at the individual (anxiety, loneliness) and societal level (income loss, reduced access to services).[2,3] The socioeconomic and health-care impacts of this pandemic are unprecedented with worldwide economic loss, closure of business activities, travel restrictions, social distancing, quarantine and isolation, fear of shortage of basic needs, and rapid spread of mental health problems.[4] The major mental health issues reported were stress, anxiety, depression, insomnia, denial, anger, and fear.[5,6] One of the most affected groups was the health workers who were the direct care providers to infected patients. Working in such situations increases the risk of various psychological and mental illnesses as well as physical and emotional distress among them.[1] Various reports showed that most of the

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Access this article online

Quick Response Code:

Website:
www.jascp.org

DOI:
10.4103/jascp.jascp_48_22

health workers in COVID-19 units suffered from depression, insomnia, stigma, and frustration.[6,7] There are several factors which lead to psychological stress such as increase in the mortality rate, social distancing, quarantine duration, duty schedule, inadequate medical supplies, fear of infection, social stigma, and discrimination faced by the health worker and their families.[8,9] These factors also disturbed the interpersonal relationships in the family, neighbors, and friends.[10] Battle against the pandemic has put frontline health workers at great risk, for burnout, anxiety, and further posttraumatic stress disorder as well as the familial and social problems such as stigma and isolation. Given the insights from the previous global outbreaks and their psychological impacts, early assessment of mental health among vulnerable and at-risk group population is essential to develop appropriate interventions.[11]

There is ample literature from quantitative studies highlighting the impact of the COVID-19 pandemic on all dimensions of health including mental health. However, there is a scarcity of published literature of in-depth qualitative studies from India on the same. The qualitative study draws in-depth data from those who have lived the experiences. Evidence and frameworks generated from such studies, which are focused on a specific group of populations, can be useful in designing and developing tailored interventions which are best suited for them. Therefore, this study aims to uncover the mental health issues encountered by the health-care workers in India during the fight against the pandemic through a qualitative analysis of their experiences. This interdisciplinary research would generate evidence on the qualitative aspect of the topic which is lacking in the current literature. Understanding the mental health issues and factors that are amenable to change by intervention is essential for future planning and policy-making. The objective of the study is to explore in-depth, the impact of the COVID-19 pandemic on the mental health of healthcare workers.

MATERIALS AND METHODS

This qualitative research has been undertaken with the overall aim to explore the psychological impact of the COVID-19 pandemic among health-care workers in India. We conducted qualitative in-depth interviews (IDI) to elucidate their mental health issues and problems experienced by them.

Study design and duration

The study used a phenomenological qualitative research design to conduct in-depth face-to-face interview and focus on individual versions of experience. The study does not intend to investigate the mental health of the health-care workers using any standardized diagnostic tools or laboratory methods. Interviews were conducted over a period of 6 months.

Sample size and sampling

Health-care workers were recruited using a purposive sampling technique from Intensive care units, general wards, and diagnostic labs of selected tertiary care hospital. The justification of adopting the purposive sampling technique was to ensure the participation of healthcare workers from diverse disciplines of health-care system. Health-care workers included doctors, registered nurses, and paramedical professionals such as laboratory technician, and operation theater technician. Recruitment ended after 29 face-to-face interviews, as the ongoing analysis indicated saturation of the data.

Ethical considerations

The Institute Ethics Committee of selected tertiary care hospitals has reviewed and approved the study. Written informed consent was obtained before attend the face-to-face interview. Before the interview, all the health-care workers were informed that the interview will be audio-recorded and will only be used for the research purpose.

Guidelines for reporting

Consolidated Criteria for Reporting Qualitative Research was used to report the content of this research.

Data collection

The study recruited subjects who were 20 years or older and were able to speak and understand English or Hindi language. The timing for interview was decided in consultation with the individual participants as per their convenience. The interviews were conducted either in Hindi or English language depending on the proficiency and the choice of the participant. The interviews were conducted with open-ended questions as per the interview guide. Health-care workers were encouraged to write down the experiences which they have difficulty to express verbally. The research team did not know any participants before the study. The duration of the interview ranged from 15 to 30 min and lasted for 20 min on average.

Data analysis

Researcher audio recorded the interview with the consent of the health care workers, which were then transcribed verbatim. The interviews recorded in the Hindi language were translated into English language by a professional language expert. ATLAS.ti Scientific Software Development GmbH, Berlin, Germany v 8.3.20 was used to analyze the IDI. Transcribed verbatim was then uploaded into ATLAS ti qualitative software for data management and analysis. The six-step method of thematic analysis ("familiarize yourself with your data;" "assign preliminary codes to your data to describe the content;" "search for patterns" or "themes in codes across the different interviews;" "review themes;" "define and name themes and produce report") was used to formulate the themes (need reference). After each IDI the narratives were read and re-read, line by line, and codes were written. A codebook was also developed based on both the initial study objectives and interview guide content. Two researchers independently reviewed the interview materials, summarized and extracted meaningful statements, and formulated the themes. Conflicting opinions on the contents of a theme were discussed and resolved by another research group. Data were analyzed in three levels:

- Level 1 coding: Examined the data line by line and made codes, which were taken from the language of the subjects

- Level 2 coding: This involves comparing coded data and the creation of categories
- Level 3 coding: The researcher compared the various codes based on differences and similarities and sorted them into categories and then final themes and subthemes were generated by clubbing similar categories.

RESULTS

Out of 29 health-care workers, majority (55.17%) were women, 65.5% were aged between 31 and 40 years, 72.41% were graduate and 65.5% were registered nurses [Table 1].

Health-care workers reported various psychosocial issues and problems that they have experienced from the onset of COVID-19. From the analysis, we have generated three overarching themes, each with five subthemes [Table 2].

Theme 1: Stressors

Health-care workers reported various stressors that have varied degrees of impact on mental health. Stressors verbalized by health care workers included fighting a battle with limited resources, social isolation and stigma, managing unfamiliar conditions, concern toward patient and family, and fear for self and family to be infected.

Fighting a battle with limited resources

Majority of the subjects spoke about a shortage of resources such as a limited supply of personal protective equipment (PPE), shortage of staff, and shortage of oxygen and isolation beds as the biggest stressor. The common participant expressions are:

Table 1: Sociodemographic profile of participants (*n*=29)

Characteristics	Frequency, *n* (%)
Age	
20–30	9 (31.03)
31–40	19 (65.51)
>40	1 (3.45)
Gender	
Male	13 (44.82)
Female	16 (55.17)
Educational qualification	
Undergraduate	4 (13.79)
Graduate	21 (72.41)
Postgraduate	4 (13.79)
Occupation	
Doctor	2 (6.90)
Registered nurse	19 (65.52)
Paramedical professionals	2 (6.90)
Laboratory	3 (10.34)
O.t technician	3 (10.34)
Area of working	
ICU	14 (48.28)
Ward: COVID/non-COVID	11 (37.93)
Lab	3 (10.34)
Others	1 (3.44)

ICU: Intensive care unit

"Sudden surge of cases lead to inadequate PPE in wards. The fear of battling with unknown disease was aggravated because of this shortage."

"We had faced times when there was prominent shortage of oxygen supply, and we were afraid for patient's survival. It felt like it's our failure to meet patients need."

Social isolation and stigma

Many subjects spoke about the social isolation and stigma that they experienced during the pandemic. This includes restrictions imposed by landlords and neighbors in the community.

"One of my relative said, as you are working in a COVID area and we have kids also at home, so please avoid coming to our house."

"My Landlord made to vacate rented house, as they were afraid I may get infected in hospital and can pass infection to them."

Majority of the health -are workers expressed that they faced social isolation and stigma from their relatives and neighbors either directly or indirectly.

"I can perceive change in behavior of my neighbors and friends. They don't feel comfortable with me or my family members visit to their place because of risk of infection. So now I too avoid going to them."

"People may not say directly but you can easily understand from their behavior that they wish to maintain distance from us as we are caring for infected patients."

Managing unfamiliar conditions

Many of the nurses reported that the change in the area of work with new routines, PPE-related issues and protocols led to fear and anxiety particularly due to the COVID pandemic.

"I used to work in Trauma center but during COVID, I was shifted to COVID wards for taking care of patients. Initially it was very difficult to adjust to new routines, medicines and with new people. But now over time I am familiar with many things, but still fear of not knowing persist in mind."

"There is massive difference in managing patients in normal conditions and managing with PPE. PPE cause lots of sweating, and dehydration. I hold passing urine and even drinking water during my shift hours because of discomfort of changing PPE. I feel all these practices can badly affect my health."

Concern toward patient and family

Most of the nursing personnel expressed their concern toward patients and their family members. While the patients felt lonely and isolated, the family members were anxious about their loved one's health, but nurses felt helpless due to the change in protocols and restrictions in allowing visitors.

"Earlier patient's relatives were allowed with them, but now they stay completely alone. We try to meet their social needs but because of a greater number of patients, we can't

Table 2: Thematic analysis of interviews

Preliminary codes	Initial thematic framework	Final themes and sub themes
Altered daily routine	Stressors	Stressors
Increased job-related stress	Fighting a battle	Fighting a battle with limited resources
Fighting a war	Altered daily routine	Social isolation and stigma
Frequent change in treatment and prevention modalities	Frequent change in treatment	Managing unfamiliar condition
Physical and mental tiredness	Social isolation and stigma	Concern toward patient and family
Fear of infecting family members	Lack of preparation and PPE	Fear for self and family to be infected
Social isolation	Impaired nutritional Status	Impact on mental health
Guilt	Lack of recreational activities	Increased stress and fatigability
Working as a team	Concerns for patients	Loss of hope
Family support	No channel to release frustration	Emotional vulnerability
Sharing worries and happiness	Neglect of responsibilities toward family	Sleep disturbance
Spiritual support	Mismanaged work	Lack of psychosocial services
Impaired nutritional status	Fear of infecting family members and self	Coping aid
Disturbed family life	Impact on mental health	Working as a team
Social stigma	Physical and mental tiredness	Support of family and friends
Frustration	Increased job-related stress	Expression of feeling
Loss of self	Feeling overburdened	Spiritual support
Emotional vulnerability	Guilt and frustration	Sense of responsibility and pride
Anger	Emotional Vulnerability	
Loss of hope	Anger	
Lack of preparation	Loss of hope	
Lack of recreational Activities	Sleep disturbances	
Sense of responsibility	The trauma of watching colleague's death	
Social discrimination	Coping aid	
Overburdened	Working as a team	
Discomfort caused by PPE	Support of family and friends	
Proud feeling	Sharing worries and happiness	
Concern for patients	Spiritual support	
Lack of channel to release frustration	Sense of responsibility	
Neglect of responsibilities toward family	Proud feeling	
Mismanaged work		
Insomnia		
Trauma of watching colleague's death		
Fear of being infected		
Lack of PPE		

PPE: Personal protective equipment

individually focus on single patient. It feels bad when we see patients missing their loved ones. In many situations presence of loved alleviate suffering to much extent, which however is not possible for these patients."

"I feel very bad when we are able to provide care and spend time with patients and listen to them. I can sense loneliness felt by patient but can't help it."

Fear for self and family to be infected

Most of the health-care workers were afraid that their family members, particularly their elderly parents and young children, may get infected because of their hospital duty.

"I feel stressed and anxious by thinking about the parents. My mother is old, and my elder sister had crossed 50 years of age and then I have small children. As I come here to hospital to give care to the patients every day, and go back home. The thought of carrying this disease from patients to family members gives so much stress and tension."

There were concerns by mother who are breastfeeding and taking care of infants back at home.

"In the beginning I had to leave my premature breastfeeding child at home, and come to hospital. I was much afraid, what if I die, who will take care of my child, and what if my child get infected because of me, how will I bear that guilt."

"I have two small kids. I thought to send them back to Kerala as here I can infect them, but this is not possible because of their studies. Who will take care of their classes in Kerala? To protect my kids from infection, I even don't remove mask at home, which has caused blisters on my face. I am much tensed as I live here alone with my kids. If something happens to me, who will take care of my kids."

Theme 2: Impact on mental health

Increased stress and fatigability, loss of hope, emotional vulnerability, sleep disturbances, and lack of psychosocial

services were the common issues reported in terms of the impact of the pandemic on the mental health of the health-care workers.

Increased stress and fatigability

Nursing staff working in COVID-19 areas reported increased stress and fatigability due to the work burden, unfavorable nurse-patient ratio, change in routines, and treatment protocols.

"There were times when we were only 3 staff in ward with 30 COVID-19 patients, which means four patients per staff; and all of them were on ventilator. It was very physically exhaustive for caring patients in such conditions. As patient's relatives were not allowed with them, staff nurses were only responsible to provide emotional support to patients, which was adding to workload. Also, every medicine schedule was new to us, learning and adapting to that was another stress."

Loss of hope

Many health-care workers expressed a loss of hope about future, were frustrated about the present situation, and worried about survival.

"Personally, I feel like before pandemic we used to talk and plan about our future, but right now it's nothing like that, as we don't know what is going to happen next. So, our dreams, our future is just like on a hold at the moment as there is no vision for the future. So it feels so frustrating."

"In the beginning of 2020, I planned all my activities for the year, and places to visit, but now I have no plan in hand. We are not sure for our survival in next week or next month, so only option left is to live in present moment."

Emotional vulnerability

Several health-care workers reported impaired emotional well-being due to increased workload, change in job setting, and dealing with frequent mortality of patients in each shift.

"I feel I stay more frustrated after being posted in COVID wards because of increased workload and discomfort of wearing PPE. It's not feasible to say anything to anyone in job setting, so ultimately many times my frustration get burst out on family and my kids, for which I feel guilty later."

"In one shift that is within 6 h I have packed 4 dead bodies and I've assisted packing 3 dead bodies, it affected me mentally. I had those dreams whole night. Situation demands us to work more strongly but gathering such strength if difficult."

"Emotional changes were very high. It's difficult to see patients dying in front of our eyes and specially when we are not able to rule out why they suddenly died."

Sleep disturbances

Due to fear, anxiety, obsessive thoughts about health of family and death of patients, some health-care workers had restlessness and sleep disturbances.

"It was always in my mind that this disease is deadly. I spent many nights with openeyes with the fear of getting infected and death. Whole night same thoughts used to disturb me that who will take care of my family after me."

"During peak period, unfortunately there was shortage of bed. Patients died in front of us due to lack of needed medical care facility. First time ever in my job I experienced such situation. I used to feel so restless and did not slept properly by thinking condition of patient's relatives in such situation."

Lack of psychosocial services

Many health-care workers expressed their concern about the lack of psychological support to deal with frustrations, stress, and anxiety.

"The period was full of anxiety, stress and hopelessness. However no psychological support was available to listen to our worries. Even seniors were going through same what we were facing. We were not in a condition to ask help from them too. It was difficult time."

Some health-care workers reported that seniors behaved in unusually bad manner with their juniors out of frustration due to increased work load and responsibilities the hospital.

"There were times I unnecessarily shouted on my juniors, out of frustration. Daily increasing patient load and death rates peaked frustration level in me, and I was unable to have right way to discharge that frustration."

Theme 3: Coping strategies

Despite reporting stress, anxiety, loss of hope, frustrations, and other psychological disturbances, the health care workers expressed coping in the form of teamwork, support of family and friends, expression of feelings, spiritual support, and sense of pride in providing care to needy patients during the pandemic.

Working as a team

Many health-care workers appreciated the teamwork in the COVID areas. They reported reciprocal support from each other helped them to acclimatize to the challenges.

"Everything was new to all of us. Doctor made us familiar to upcoming new regimen. We also helped them in handling increased patient load. Working together made things easier."

Support of family and friends

Many health-care workers expressed gratitude to their spouse, parents, in-laws and children and friends for lending support during difficult times of the pandemic.

"My family supported me alot during this period. 'I was afraid to go near to my kids, so that I should not transmit infection to them. My husband used to take care of them completely which was a great help for me."

"My friends and colleagues were a great support. I used to share my worries with them and most of times used to solutions for my worries."

"*My mother-in-law handled all household responsibilities. When I used to stay in quarantine, I missed my family, but at the same time I was relaxed that my mother in law is there with them. She will take care of everything.*"

Expression of feeling

Many health-care workers felt that sharing their feelings with their loved ones, being it a friend a sibling, gave them sense of relief and strength to face the challenges during the pandemic.

"*I always share my feelings with someone else, especially with my elder sister as I feel more close to her. Sharing my COVID related concerns with her and my senior colleagues was my biggest relief as they always provide me strength to fight with situation.*"

"*Talking to friends and spending time with them is the best thing I felt, that helped to get my stress relieved.*"

"*Most of times we colleagues call each other, share positivity, worries and also our experiences with patients. This is very relaxing as we know someone is there to listen to us.*"

Spiritual support

Some health-care workers resorted to spiritual support as a coping strategy to deal with the stressful situation during the pandemic.

"*I put everything in prayer. That is my way of coping of with things like, I believe that God is there. I just have faith like that that somehow, maybe in spite of all what is going on around, I believe that something good will come out of this, I don't know how, but with that mentality, with that thought in mind, I am managing.*"

Sense of responsibility and pride

Most of the health-care workers felt proud of being a frontline worker with a selfless act of patient care taking risk of their own life. The sense of responsibility and pride that they expressed was the key motivation behind their courageous act of patient care during the pandemic.

"*Though it was difficult time, but being healthcare worker, I was my duties to do best possible for patients. And I am happy I did that. This proud feeling helped me day to day to accomplish my duties.*"

It is our duty to take care of patients. If we will not do, who else will do. Challenges comes with every type of illness, it's our responsibility to overcome those challenges to help patient to maximum possible extent.

DISCUSSION

This study explored the impact of the COVID pandemic on the mental health of health-care workers using a phenomenological method. We summarized our findings into three overarching themes, each with three subthemes.

The nurses caring for patients with COVID-19 experienced extreme stress due to limited resources to battle with pandemic as a healthcare worker, social isolation, and stigma, managing unfamiliar conditions, concern toward patient and family and fear of getting infected. These findings were consistent with the findings of previous studies on the psychological impact of other pandemics such as SARS and EBOLA outbreak.[12] The consistency of findings that the health-care workers are exposed to extreme stress during any pandemic suggests that there is a need for early stress assessment of health-care workers to mobilize the support system and to provide continuous psychological interventions.[13,14] There is a need to protect the emotional health of the frontline health-care workers to ensure the safe and quality care is provided to the patients in need.

The commonly reported psychological issues by health-care workers as an impact of the COVID-19 pandemic are stress and fatigability, loss of hope, emotional vulnerability, sleep disturbances, and lack of psychosocial services. There is a dearth of qualitative studies explored the impact of COVID on the mental health of health-care workers, however, findings of a quantitative study by Khanal *et al*.[15] The findings of the study emphasize the need for psychosocial support services for the health-care workers.

The third major theme that emerged out of the thematic analysis is on coping with the situation. Healthcare workers expressed coping with the pandemic in the form of teamwork, support of family and friends, expression of feelings, spiritual support, and sense of pride in caring the patients. A study on coping strategies of healthcare workers during the COVID pandemic by Rose *et al*. revealed that the nurses used self-motivation, ventilation by crying or screaming as a coping strategy whereas physicians disagreed with crying or screaming as their coping strategy.[16]

Implications

This study highlights the impact of COVID-19 pandemic on mental health of health-care workers. The findings suggest that early screening, appropriate support system, and interventions for the health-care workers during the pandemic to counter the potential threat to the mental health wellbeing. Further, the potential threat to the mental health wellbeing of the health-care workers during pandemic is a cause of concern for future pandemics or similar situations. Hence, there should be standard protocols in healthcare settings to protect the emotional well-being of healthcare workers in similar situations in future.

Strengths and limitation

A strength of this research study is that the health-care workers were recruited from tertiary care hospitals where the staff are involved in care of patients with COVID either directly or indirectly and the interviews were conducted face-to-face. However, the views and experiences of the health-care workers from a single setting may not be the representative of all the healthcare workers in the region or country. Two researchers were involved independently in coding and thematic analysis and the conflicting opinion on the contents were discussed

and resolved by another researcher is an added strength to the methodology.

CONCLUSION

Despite having support and resources, the health-care workers exposed pandemic situation are vulnerable to a range of mental health issues from distress to sleep disturbances, fear and anxiety to social isolation and stigma, and loss of hope to helplessness. However, many health-care workers expressed range of coping strategies to handle the pandemic. The findings of the study highlight the need for support services in terms of early screening, counseling services, child-care support for mothers with young children, and housing or hostel facilities for health-care workers.

Financial support and sponsorship

Conflicts of interest

There are no conflicts of interest.

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