

Health Pandemic and Experience of COVID-19 Infected Health Workers: A Qualitative Study

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ABSTRACT Due to the rapid spread of the COVID-19 disease, the world communities were faced extreme stress to deal with the pandemic. The World Health Organisation (WHO) was decided to declare COVID-19 as a pandemic on March 11, 2020. COVID-19 pandemic was brought extreme challenges on health workers including nurses and ward attendants' work in the healthcare service. The objective of this study was to explore the impact on health workers of India. This study was conducted among nurses and ward attendants and they were known for their service through the COVID-19 pandemic. This study was included 20 respondents where 10 of them were nurses and the other 10 were ward attendants at the hospital. The interview method was used to collect the data, and the interviews were conducted between November 2020 and February 2021. The interviews were conducted over the phone. Data was analysed with the help of Graneheim's qualitative content analytical approaches. This study found that health workers were faced anxiety, fear of death, social isolation, loss of hope about future, separation anxiety from family members, etc. They were faced with uncertainty of their own life and even family members due to higher death rate among health workers and also patients.

INTRODUCTION

The World Health Organisation (WHO) was declared COVID-19 as a pandemic in the month of March 11, 2020. This disease was originated in Wuhan city of China. The patients infected with this disease are faced with several problems like fever, fear, headache, muscle ache, diarrhoea, vomiting, high blood pressure, nausea, etc. The patient faced psychological stress like loneliness, anxiety of death, insomnia, etc. At the initial stage of spread, the nature of this disease was unknown to medical science. For the same cause, service providers like health workers are faced with vulnerability to fight against this disease. Health service providers like nurses and ward attendant belong to such categories who face with the risk of their life. Their work natures are to stay in close contact with patients.

Health workers are an important human resource in health services and they work hard to save the patients' life and for that, they put their own life at risk. A patient's safety is dependent on the safety of health workers (Chang et al. 2020). Health workers like nurses' novel duties are to give care to patients (Liu et al. 2020). Ward attendants are also part of the health service providers section and their roles are to take care

of patients and provide food and medicine at regular intervals. Nurses play critical roles and responsibilities during the COVID-19 pandemic and they are the frontline workers to give patients care in the hospital (Jackson et al. 2020). They put their life at risk due to high exposure to infection from patients. They are trying to protect themselves from infection with the help of several safety measures like masks, ventilators, eye cover, robes, gloves and face shields, etc. (Adams and Walls 2020). Health workers are faced with some misconceptions, which are circulated over media and other social networking platforms about the disease and its transmission nature and they become confused to deal with those misconception issues. They play several important functions to provide health service and also work for public awareness about several preventive methods and other myths about the disease (WHO 2020). Nurses are involved in actively stopping the spread of disease through their service. They deserved a healthy work environment to excel their efforts to manage the pandemic situation (Chen et al. 2020). They face mental stress, anxiety, etc (Huang et al. 2020), which impact decision-making ability and quality interaction with patients (Kang et al. 2020). They face more risk of their life at the initial stage of outbreak of disease because they are not familiar with how to use

PPE for long hours. Besides, nurses from low-income counties face problems of insufficient supply of PPE (Mahase 2020). They experience problems of stigmatisation, loneliness and loss of trust in their own communities (McMahon et al. 2016). There are several studies that have focused on issues like the psychological pressure of health workers (Chen et al. 2020), but there are no studies that focus both on physical and mental stress on health workers and their experience during their journey in the pandemic. This study aims to explain and understand the experience of healthcare workers (nurses and ward attendants) of India. This study is qualitative in nature about the life experience of health workers in the fight against COVID-19. This study found that health workers have gone through a severe threat to their life. The current study will help to understand COVID-19 warriors' or health workers', both nurses' and ward attendants' experience.

Objective of the Study

The objectives of the study were:

- a. To explore physical stress experienced by health workers in the fight against COVID-19.
- b. To examine different psychological stress experienced by health workers.

METHODOLOGY

This study is both qualitative and quantitative in nature. The study covered nurses and ward attendants who worked in a COVID-19 centre during their service to the nation. The respondents are collected for interviews on their personal willingness to participate in this current study. The data are collected between November 2020 to February 2021. This research prepares a questionnaire to focus on the particular aim on health workers' experience during their service against COVID-19 and the questions are prepared by focusing on the following points:

1. What are the difficulties faced in providing the service to patients?
2. What is their mental status while they deal with this abnormal situation?

3. What is their negative thought experience at the hospital?
4. How does society treat them and their family members?
5. What is the physical infrastructure difficulties they face to provide service to patients?

This study uses a purposeful sampling method to select respondents, and the snowball sampling method is also used to collect the respondents. The interview was conducted among 20 health workers (see Table 1), both nurses and ward attendants from across India. Among 20 respondents, 10 respondents worked in the nursing section as nurses, and the other 10 respondents are ward attendants (see Table 1). Interviews were conducted over the telephone due to difficulties to meet them physically due to the risk of infection from COVID-19 disease. The interview duration is 30 to 40 minutes for every respondent. The interview is conducted in several languages like Bengali, Hindi and Assamese and later transcribed into English. This study used Graneheim's qualitative content analytical approaches, because content analysis's main purpose is to elicit and organise the meaning from collected data and make an effort to bring a real conclusions from it (Bengtsson 2016). To keep confidential the name of respondents, a code is used like (P1, P2, P3...) instead of the name of the respondents.

Table 1: Demographic profile of respondents (n=20)

<i>Characteristics</i>	<i>Frequency (N)</i>	<i>Percentage (%)</i>
<i>Age Groups</i>		
20-30	5	25
31-40	10	50
41-50	5	25
<i>Designation</i>		
Nurse	10	50
Ward attendants	10	50
<i>Education Level</i>		
Nurse (B.Sc. Nursing)	10	50
Ward attendants (Graduate)	10	50

RESULTS

COVID-19 and Impact on Health Workers

This study found that health workers, both nurses and ward attendants, experience severe

risk while providing service to patients and faced several difficulties even during their own isolation period after getting infected. This study divided the experience of health workers into several sections like anxiety for death, social stigma and isolation, hopelessness about life, and separation anxiety from family members and society. Their common threat of infection in this disease is due to the strange nature of the disease and are faced with the uncertainty of their life because of higher numbers of the death rate.

Negative Thought, Anxiety of Infection and Threat of Death

Respondents shared that negative thoughts come into their minds during their duty periods and after infection from this disease. About nine-

ty percent of respondents feel diminished self-worth of life while dealing with endless numbers of COVID-19 patients (see Table 2). One of the ward attendants stated, “*I am highly concerned about my life because I need to deal with COVID-19 patients directly at an isolation ward. I had a horrible experience once when I got infected and I worried too much. It is a very strange experience for my family members as well (P1).*” It is one hundred percent of health workers who share that have a fear of infection from this disease. Health workers experience such an extreme level of fear due to higher numbers of death report in the media. Eighty-five percent of the respondents stated that they have gone through the threat of death (see Table 2). At the initial stage of this pandemic, there is a general thought that for health workers who get infected with

Table 2: Variables indicating health workers' life experience during COVID-19

<i>Variables</i>	<i>Frequency</i>	<i>Percentage</i>
<i>1 Negative Thought, Anxiety of Infection and Threat of Death</i>		
1.1 Feel diminished self-worth	18	90
1.2 Negative thought or depression	19	95
1.3 Fear of infection	20	100
1.4 Threat of death	17	85
1.5 Worry to transmit disease to family member	20	100
<i>2 Threat of Social Stigma</i>		
2.1 Unfamiliarity to meet society member	20	100
2.2 Disease carrier to common people	18	90
2.3 False rumour of COVID-19 positive	15	75
2.4 Prejudices and dishonest behaviour	19	95
<i>3 Desperateness</i>		
3.1 Hopeless about future of life	16	80
3.2 Fear of loss of loved one	17	85
<i>4 Physical Stress</i>		
4.1 Long hours of duty	20	100
4.2 Negative effects of personal protective equipment	20	100
4.3 Body fatigue, muscle aches, leg aches to breathing problems	19	95
4.4 Extra workload	20	100
<i>5 Infrastructure</i>		
5.1 Shortage of standard medical facilities	20	100
5.2 Shortage of man power	20	100
5.3 Limited rest room facilities	18	90
<i>6 Lack of Proper Nutritious Food</i>		
6.1 Shortage of nutritious food	17	85
6.2 Missed diet routinely	20	100
<i>7 Lack of Facilities for Accommodate</i>		
7.1 No separate accommodation facilities for infected healthcare worker	19	95
<i>8 Lack of Social Support</i>		
8.1 Feel lonely and stay distance from family	20	100
8.2 Lack of social support	20	100
8.3 Discrimination from neighbouring society	20	100

Source: Field survey

COVID-19, it means difficulty to get well soon, but later their mind set changed with positive thoughts and started believing that people can cure this disease. Nurses shared their common experience of depression and negative atmosphere surrounding within and outside of the hospital. Ninety percent of health workers have experienced negative thoughts and depression (see Table 2). One of the nurse respondents stated, *“I experience the surrounding environment too negatively and other people treat us as a carrier of the deadly disease”* (P2). The above narrative shows that health workers deal with negative thoughts. Again, they face physical strain like long hours of duty wearing a PPE. Health workers face rude behaviour from patients and from the patients’ family members because due to shortage of health workers, the existing staff could not meet patients’ expectations. Again, health workers have missed opportunities to meet their own family members for a long time. One of the ward attendants stated, *“I have left hope about my life safety and security totally on God. I could not be able to meet my family last ten days. I felt too lonely while working such a terrible situation”* (P5).

Threat of Social Stigma

The cause of anxiety of health workers for nurses’ and ward attendants was isolation from their society, and many nurses experienced misbehaviour from their colony members and at open markets. It is one hundred percent percent of health worker respondents that were faced with unfamiliarity to meet with their society members. Their family members are also faced with social alienation from neighbouring societies. It is seventy-five percent of respondents who shared that they have faced a false rumour of infection with COVID-19 from society members (see Table 2). One nurse respondent stated, *“People have a narrow mentality towards COVID-19 patients and health workers engaged in this fight. I think it is happening due to the rapid spread nature of this disease”* (P8). It is ninety percent of health worker respondents who faced discrimination from common people and they have been seen as agents or carriers of the disease for other people. Again, ninety-five percent of respondents were faced with prejudices

and dishonest behaviour from other people (see Table 2). Health workers used to stay outside of their own house at hotels, which is provided by authorities because they worry about transmitting this disease to their close ones like family members. One ward attendant stated, *“I usually go to duty from my hotel room directly. I couldn’t go to my family house for last several weeks, and for that, I used to talk with them over the phone. It is really a difficult time for me”* (P3).

Desperateness

A common experience that respondents have faced is helplessness about their future of life because they have seen higher numbers of positive cases and death among health workers despite using protective equipment. They felt tired due to long hours of duty to save patients life and for that, they have put their life at high risk. About eighty percent of respondents shared that they become hopeless about the future of life and become too negative (see Table 2). One of nurses stated, *“What could I do for others who could not save their own life. Many times, I have lost hope about the future and safety of my family members and me too. There is no certainty whether I will stay alive or die”* (P10). Some other infected nurses explained how they have gone through horrifying night duty while providing service to infected COVID-19 patients. One of the ward attendants stated, *“My life safety is my priority over other patients as I have little children at my home. I become hopeless due to higher numbers of death cases among health workers”* (P17). Some other nurses stated about their hopelessness due to the strange nature of the disease and lack of well-developed medical treatment facilities. Other respondents were faced with hopelessness due to a lack of support and cooperation among medical staffs. The entire respondent shares about their hopelessness due to a negative work environment.

Physical Stress

The common difficulties for health workers are that they become physically tired due to long hours of duty wearing a PPE at the isolated ward. Health workers blame the government for sup-

plying low quality healthcare facilities, which led to high physical stress for health service providers. It is one hundred percent of respondents who said that they have faced side effects from the Personal Protective Equipment. Again, one hundred percent of respondents were faced with several physical strains of body fatigue, muscle aches, leg aches to breathing problems and it is happening because of higher work pressure. Some other health workers stated that they become physically weak because of extra workload and routine besides a poor diet. It is one hundred percent of the respondents that state about the long hours of duty beyond their physical capacities. They faced a shortage of manpower against higher numbers of COVID-19 positive patients (see Table 2). One of the ward attendants stated, *“It is bad day after full day or night duty at hospital isolation wards and for that I could not have a deep sleep at night after duty”* (P9).

Infrastructure

Both nurses and ward attendants faced a shortage of standard medical facilities like medicine, oxygen supply, etc. It is one hundred percent of respondents who stated about the shortage of standard medical facilities. Again, one hundred percent of respondents said that they have faced a shortage of manpower (see Table 2). Health workers with illness like diabetes, heart patients, and kidney problems have gone through extra risk because there is no special equipment for their better treatments. One of the nurse respondents stated, *“As I am a diabetes patient, I have gone through extra pressure during my infected periods. But I have given thanks to god who helped to recover from infection”* (P10). Other nurse stated, *“I couldn’t protect myself to get infected from the disease. It has become difficult to protect other patients without having available infrastructure”* (P1). Other nurse stated, *“We need to wear protective suits for long hours, but there are limited restroom facilities for us. Other problem is that we are faced with problems of shortage of manpower. The limited existing staffs bear an extra duty to manage shortage of health workers”* (P13). It is ninety percent of respondents who

stated that they have faced limited restroom facilities (see Table 2).

Lack of Proper Nutritious Food

Health workers are faced with a shortage of nutritious food because they hardly get time for rest and one hundred percent of respondents stated that they have missed their diet routine frequently. During the survey, eighty-five percent of the respondents stated that they faced a shortage of nutritious food (see Table 2). Some of the nurses have complained about the low quality of nutritious foods supplied by administrations. One ward attendant stated, *“I was faced with problems of proper nutritious food. Again, I could not go home regularly to take my food cause of more physical stress on me”* (P7).

Lack of Facilities to Accommodate

As the surrounding environments in a hospital are too negative due to the increasing rate of deaths, it has negatively impacted health workers mentality. Usually, infected health workers were also accommodated with other general COVID-19 patients in isolated wards. There are no specific separate facilities for healthcare workers for their isolation. Ninety-five percent of the respondents stated that there are no separate accommodation facilities for infected healthcare workers (see Table 2). They faced a shortage of basic facilities inside their isolation wards. A nurse stated, *“...as I am a high blood pressure patient, the death of other patients always disturbed me mentally in the isolation ward and increased my blood pressure too”* (P15). Due to larger numbers of infection and shortage of hospital facilities to do accommodations of patients, hospital authorities could not be able to manage separate accommodation facilities for healthcare workers’ treatment. One of the ward attendants stated, *“I complained to the management about safety within isolation wards, but I did not get positive responses”* (P18).

Lack of Social Support

Health workers faced a lack of emotional support from society, which they deserved during

such a pandemic period. Field survey found that one hundred percent of respondents feel lonely and used to stay distanced from family (Table 2). Again, their family members were faced with problems of separations from their neighbouring society. One of the nurse respondents stated, *“Once I used to talk with my parent over a video call, they used to tell me how our neighbouring people see them as a carrier of the COVID-19 disease”* (P14). It is one hundred percent of respondents who stated that they have faced a lack of social support and discrimination from neighbouring society members.

DISCUSSION

This study is conducted to explain the life experience of nurses and ward attendants during their fight against COVID-19 in India. They have gone through the uncertainty of their life every day due to extra risk in the hospital while they are providing treatment and care to patients. They faced certain inherent risks that are associated with the health profession. This study found that ninety percent respondents stated feeling diminished self-worth of life due to extreme risk work environments (see Table 2). In this present pandemic situation, health workers including nurses and ward attendants faced occupational hazards like infection of the disease, lack of PPE kits, physical and verbal abuse, etc. A study in the USA about the nurses in this pandemic situation found that health workers faced lack of facilities, including inadequate PPE supply, and it is happening due to failure of institutional preparedness, which pushed health workers more into physical and emotional stress (Ulrich et al. 2020). This study found that one hundred percent of respondents stated about a shortage of good medical facilities and faced shortage of manpower in the hospital. Health workers who have diabetes, heart patients, and kidney problems faced double risk (see Table 2). In a study about the nurses of China, it was found that eighty-eight percent of nurses did worry about this pandemic during their contribution against this distress. Same study also found that about ninety-two percent of nurses were concerned about transmission of disease to family members, about seventy-seven percent of nurses fear isolation from their near ones

like family and society, while about thirty-one percent of nurses used to do fear about their future career planning (Liu et al. 2020).

In India, the numbers of health workers infected with COVID-19 are large in different states and that infected numbers are higher in Maharashtra, Gujarat and West Bengal. As per Trained Nurses Association of India's (TNAI) report, about 509 nursing staff were infected with COVID-19 disease and 20 died among them. Again, about 111 nurses of West Bengal were infected with this disease and 75 nurses in Maharashtra, in Gujarat about 96 infected, and four died among them (Perappadan 2020). A discussion on Lok Sabha stated that it is about 174 doctors and 116 nurses and 199 other health workers that died in the fight against COVID-19 (NDTV 2021). The national registry of the Indian Medical Association (IMA) stated that 747 doctors died due to infection with COVID-19. Again, the health workers faced physical assault by common people as revenge for a relative's death. The Indian Medical Association (IMA) stated that 74 doctors died in Maharashtra, 70 died in Andhra Pradesh, 66 died in Uttar Pradesh and 68 doctors died in Karnataka, 40 doctors died in Bihar, 22 doctors died in Madhya Pradesh and Delhi, 20 doctors died each in Punjab and Assam (Mascarenhas 2021).

This study also found a similar finding like former studies stated that health workers, including nurses faced additional problems like injuries, infection, and depression to deal with their COVID-19 infected patients. Again, health workers have gone through depression and stay on fear of transmission to family members (Martin 2011). As the numbers of COVID-19 positive patient admission is high as compared to the strength of health workers, it caused more pressure on them (Aiken et al. 2002). Health workers are faced with inconvenient and uncomfortable situations to wear PPE for long hours. They are faced with skin problems due to insufficient knowledge at the initial stage to take care of their skin (Hu et al. 2020). Other studies also found that nurses also faced an extreme level of occupational stress in outbreaks situations, and they faced more distress as compared to health workers (Cheong and Lee 2004).

This study found that both nurses and ward attendant boys were faced with social taboos

like social isolation, which doubled their negative thoughts and impact on physical and mental health. They experienced loneliness during their service periods at the isolation ward. It is reported that health workers are faced with misbehaviours in public places like an open market. They are seen as COVID-19 disease carriers by the general people. Out of 1200 attacks on health workers in 2020, about one-third of the attacks globally are related to COVID-19. These numbers are higher in India, and about 128 coronavirus-related attacks happen on health workers out of the 412 incidents (Murray 2021).

In other studies, it is also stated that health workers especially nurses feel high concern about the safety of their personal life and as well as their family members (Jiang et al. 2020). Other studies found that health workers faced shortages of health equipment and other basic facilities like personal protective equipment (PPE), and they faced an unfamiliar setting of healthcare, along with other deficiency of organisational support (Kim 2018). This study also found that health workers faced lower quality of nutritious food supply from management. They missed their daily diet routine due to extreme work pressure, which is a cause of low immunity level. This study also found that they are faced with limited numbers of health workers, which caused extra work pressure on them. This study found that they have lost their faith in the management to secure their safety at the workplace. It is reported during field surveys that several hundreds of health workers have decided to leave their jobs by citing their lack of safety at a hospital in India. About 185 nurses, who hailed from Manipur and worked in a different private hospital of Kolkata, decided to quit their job due to unsafe and extreme work pressure. Nurses from different hospitals in Kolkata did resign like Charnock Hospital (27), Peerless Hospital (25), Fortis Healthcare (16), IRIS Multispeciality Hospital (11), etc. Management of hospitals faced a shortage of nurses because they relied on northeastern states of India and Kerala for nurses (News18 India 2020).

The Ministry of Health and Family Welfare (MoHFW) of India's report stated that one medical doctor is available against 1,404 people and 1.7 nurses against per 1,000 people in India.

These numbers of health workers are lower than the numbers fixed by the World Health Organisation. As per the guideline of the World Health Organisation (WHO) one doctor and three nurses should be available for every 1,000 people. This study also found that health workers were deprived of additional remuneration. Vanraj Chauhan, general secretary of the All Gujarat Nursing Union, stated that Ahmedabad Civil Hospital attempted to recruit nurses for a three-month contract at a salary of INR 13,400 per month, which is not commensurate against their service. Such contractual additional health workers were recruited during the COVID-19 peak period, and such strategies are followed across India like the Telangana government hired 509 healthcare workers and staff nurses and paid only INR 23,000 per month (Jacob et al. 2020). This study also found that some health workers are appointed in a contract for a year, and they are deprived of several government benefits.

LIMITATIONS

There are some limitations to this study. This study only included the perspective of limited numbers of nurses and ward attendants that worked in the different states of India. There is scope to do further research by including a large number of health workers. Another limitation is that the interview is conducted over the telephone, and that is why there are scopes of further observation about the health workers through face to face interview. Another limitation is that COVID-19 infected patients left out about their view on health workers struggle which they have observed. Health workers' struggle can be more understood by patients who experience and observe the actual condition at isolation wards.

CONCLUSION

This study is concluded by saying that both nurse and ward attendants faced physical, social and psychological pressure in the war against the pandemic. Many of them have lost their colleagues. They have gone through fear of death, higher workloads, social isolation, and inadequate medical infrastructure. They were faced with uncertainty of their life due to increasing

numbers of COVID-19 patients. Again, they are faced with the certain inherent risk associated with their health profession. They are faced with certain occupational hazards like infection of the disease, side effects of PPE, physical and verbal abuse, muscular strains and back pain, etc. Health workers are faced with the supply of low quality food, and they frequently miss their daily diet routine because they have extreme work pressure due to a shortage of health workers. They put pressure on their body beyond their physical capabilities to deal with a shortage of health workers. This study found that health workers have lost their faith in the government and also the hospital management to provide them safety at their workplace, and it is a cause for why several hundreds of health workers decided to leave their jobs.

RECOMMENDATIONS

The findings of this study will be helpful to the government and other agencies to formulate welfare policies for human resources development. This study helps to understand the importance of early preparedness to deal with any emergency situation. This study also helps to understand the importance of affordable and avail supplies of facilities to health workers in an emergency. Such government effective policies will help to reduce the vulnerabilities of health workers. This study also helps to understand the significance of other issues like depression, isolation of health workers while health workers are working in a tough environment. This study also helps to understand the importance of strengthening health workers in hospitals, which will help to relax the extra pressure on existing workers in hospitals. This study helps to understand the gravity of importance of other issues related to health workers like job dissatisfaction, lack of safety at the workplace, higher workload, harsh working environment, work-family conflict, etc. and will help respective agencies to bring strong policies over those issues to give relaxation to the health workers.

REFERENCES

- Adams J, Walls R 2020. Supporting the health care workforce during the COVID-19 global epidemic. *JAMA*, 323: 1439-1440.
- Aiken LH, Clarke SP, Sloane DM, Sochalski J, Silber JH 2002. Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction. *JAMA*, 288(16): 1987-1993.
- Bengtsson M 2016. How to plan and perform a qualitative study using content analysis. *Nursing Plus Open*, 2: 8-14.
- Chang D, Xu H, Rebaza A, Sharma L, Cruz Csd 2020. Protecting health-care workers from subclinical coronavirus infection. *Lancet Respir Med*, 8(3): E13.
- Chen Q, Liang M, Li Y, Guo J, Fei D, Wang L, He LI, Sheng C, Cai Y, Li X, Wang J 2020. Mental health care for medical staff in China during the COVID-19 outbreak. *Lancet Psychiatry*, 7(4): e15-e16.
- Chen X, Tian J, Li G, Li G 2020. Initiation of a new infection control system for the COVID-19 outbreak. *Lancet Infectious Diseases*, 20(4): 397-398.
- Cheong D, Lee C 2004. Impact of severe acute respiratory syndrome on anxiety levels of front-line health care workers. *Hong Kong Medical Journal*, 10(5): 325-330.
- Huang JZ, Han MF, Luo TD, Ren AK, Zhou XP 2020. Mental health survey of 230 medical staff in a tertiary infectious disease hospital for COVID-19. *Chinese Journal of Industrial Hygiene and Occupational Diseases*, 38(3): 192-195.
- Hu D, Kong Y, Li W, Han Q, Zhang X, Zhu LX, Zhu J 2020. Frontline nurses' burnout, anxiety, depression, and fear statuses and their associated factors during the COVID-19 outbreak in Wuhan, China: A large-scale cross-sectional study. *Eclinical Medicine*, 24: 100424.
- Jackson D, Bradbury Jones C, Baptiste D, Gelling L, Morin K, Neville S, Smith G 2020. Life in the pandemic: Some reflections on nursing in the context of COVID 19. *Journal of Clinical Nursing*, 29: 2041-2043.
- Jacob N, Inamdar V, Saha A, Bharadwaj S 2020. Low Salaries, Poor Facilities Deter Health Workers From COVID-19 Care. From <<https://www.indiaspend.com/low-salaries-poor-facilities-deter-health-workers-from-covid-19-care/>> (Retrieved on 31 July 2020).
- Jiang Fang, Deng Liehua, Zhang Liangqing, Cai Yin, Wai Cheung Chi, Xia Zhengyuan 2020: Review of the Clinical Characteristics of Coronavirus Disease 2019 (COVID-19). *Journal of General Internal Medicine*, 35(5): 1545-1549.
- Kang L, Li Y, Hu S, Chen M, Yang C, Yang BX, Wang Y, Hu J, Lai J, Ma X, Chen J 2020. The mental health of medical workers in Wuhan, China dealing with the 2019 novel coronavirus. *Lancet Psychiatry*, 7(3): e14.
- Kim Y 2018. Nurses' experiences of care for patients with Middle East respiratory syndrome-coronavirus in South Korea. *American Journal of Infection Control*, 46(7): 781-787.
- Liu Q, Luo D, Haase JE, Guo Q, Wang XQ, Liu S et al. 2020. The experiences of healthcare providers during the COVID-19 crisis in China: A qualitative study. *The Lancet Global Health*, 8(6): e790-e798.
- Mahase E 2020. Covid-19: Hoarding and misuse of protective gear is jeopardising the response, WHO warns. *BMJ (Clinical Research Ed)*, 368: m869.

- Martin SD 2011. Nurses' ability and willingness to work during pandemic flu. *Journal of Nursing Management*, 19(1): 98-108.
- Mascarenhas Anuradha 2021. 747 Doctors Died of Covid-19 in India. *Indian Express*, 17 April, 2021.
- McMahon SA, Ho LS, Brown H, Miller L, Ansumana R, Kennedy CE 2016. Healthcare providers on the frontlines: a qualitative investigation of the social and emotional impact of delivering health services during Sierra Leone's Ebola epidemic. *Health Policy Plan*, 31(9): 1232-1239.
- Murray Christine 2021. COVID-19: Globally, India's Health Workers Were the Most Attacked. From <<https://thewire.in/health/covid-19-globally-indias-health-workers-were-the-most-attacked>> (Retrieved on 3 March 2021).
- News18 India 2020. 185 Manipuri Nurses Quit Private Hospital Jobs, Leave Covid-hit Kolkata for Home. From <<https://www.news18.com/news/india/185-manipuri-nurses-quitprivate-hospital-jobs-leave-covid-hit-kolkata-for-home-2622449.html>> (Retrieved on 16 May 2020).
- NDTV 2021. 174 Doctors, 116 Nurses, 199 Health Workers Died Due To Covid: Centre. From <<https://www.ndtv.com/india-news/174-doctors-116-nurses-199-healthworkers-died-due-to-covid-centre-2364200>> (Retrieved on 5 February 2021).
- Perappadan, Bindu Shajan 2020. 20 Trained Nurses Dead, 509 Infected, Say TNAI. *The Hindu*. From <<https://www.thehindu.com/news/national/coronavirus-20-trained-nurses-dead-509-infected-says-tnai/article32346557.ece>> (Retrieved on 13 August 2020).
- Ulrich CM, Rushton CH, Grady C 2020. Nurses confronting the coronavirus: Challenges met and lessons learned to date. *Nursing Outlook*, 68(6): 838-844.
- World Health Organisation 2020. *Novel Coronavirus (COVID-19)*. Geneva, Switzerland: WHO.

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