

Impact of COVID-19 on the Healthcare Workers: Perspective from the Nursing Fraternity

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ABSTRACT

The novel coronavirus or SARS-COVID-19 has been declared a Pandemic by the WHO due to its high transmission rate and mortality rate. This has put a huge strain on healthcare workers such as doctors, nurses, and other paramedical workers. We surveyed twenty-six nurses from varying nursing professions in West Bengal to identify their level of stress and emotional status associated with the outbreak of the disease. The survey questionnaire was designed using the Health Belief Model from Rosenstock et. al. Results showed significant changes in health belief constructs of perceived susceptibility, perceived beliefs, and perceived severity to the COVID-19 crisis among nurses across different demographics. Thus, there is a need to adapt screening strategies to address the psychological aspects of healthcare workers to avert any future crisis.

Keywords: COVID-19, nursing, health, Health Belief Model

1. INTRODUCTION

The novel Coronavirus SARS-CoV-2 or COVID-19 has affected 31.4 million people worldwide and has resulted in over 965 thousand deaths. In India alone, there are 5.56 million cases and a total of 88935 deaths as of September 22, 2020. A total of 213 countries and union territories have confirmed the cases of COVID-19 that had originated from Wuhan, China (1). Despite the low mortality rate of 2 %, the COVID-19 virus has a high transmission rate, and

the mortality is higher than that caused by severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS) combined (2)

In India, although strict measures such as lockdown and infection control practises such as ‘social distancing’, ‘self-isolation guidelines’, and ‘hand hygiene’ has been practised (3), India could not curb the virus. In a country of 135 crore population, the infection spread on a community level due to which it reached the peak number of cases surpassing all other countries in six months. This resulted in increased uptake of COVID-19-infected patients getting admitted daily in hospitals and increased fatalities among healthcare workers due to COVID-19.

There has always been a huge scarcity of nurses in the Indian healthcare system, possibly due to various factors, such as low professional and socio-economic status, gender issues, lack of political will on part of the government and unregulated private sector (4). As a result, the nurses in India were already overworked and underpaid. With the pandemic, the pressure on the nursing fraternity increased even more. Hence a survey was conducted among nurses in West Bengal to identify their psychological status concerning their job description in a pandemic scenario.

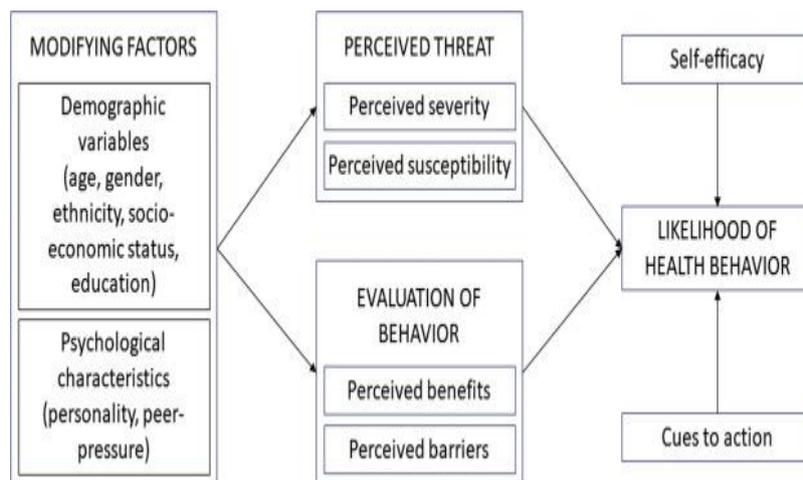
2. MATERIALS & METHODS

2.1. Participants-

A total of 25 nurses and nursing students working in various departments of hospitals of West Bengal were asked to participate in the survey. The survey was sent from April 2020 to May 2020, with three reminders.

Questionnaire was designed in the Google form and was designed keeping in mind the Health Belief model (1) highlighting the three constructs of health: perceived susceptibility and severity, perceived barriers and benefits.

Fig. 1. Health belief model adapted from Rosenstock et. Al. Rosenstock, Irwin M. "The Health Belief Model and Preventive Health Behavior." *Health Education Monographs*, vol. 2, no. 4, 1974, pp. 354–86. JSTOR, <http://www.jstor.org/stable/45240623>. Accessed 22 Feb. 2024.



2.2. Questionnaires:

The questionnaire consisted of basic demographic data, workplace related problems, social problems, and emotional problems associated with COVID-19 outbreak.

2.2.1. Demographic data:

The demographic questionnaires dealt with basic information such as name, age, years of experience, highest degree obtained (ANM, GNM, B.Sc, M.Sc, others) and job description(nursing intern, ward nurse, nursing superintendent, nursing in-charge, research nurse, clinical nurse specialist, others). It also consisted of questions such as type of hospital, family status (single/married/separated/divorced), type of housing, means of transportation availed and whether any pre-existing health condition present or not.

2.2.2. Perceived susceptibility:

To address perceived susceptibility, various workplace-related questions that were asked to the nurses were: Lack of proper hospital

infrastructure, any problems of transportation faced from and to the hospital, confusion over COVID-19 protocol followed in the hospital due to frequent changing of the guidelines, any experience of demanding and manipulative patients faced in the hospital, violence and abuse from the patient relatives, whether huge gap in the nurse to patient ratio has been felt, less availability of the PPE kits, masks gloves and other equipments, problem of less testing with more risk of unidentified patients, fear due to healthcare staffs testing positive, whether there were less staff with more hours of work, and less job compensation and pay cuts. The questions were to be answered in yes or no.

2.2.3. Perceived barriers

To address the perceived barriers, various social problems asked to the nurses were: Whether the job was interfering family life, fear of contracting the virus, fear of spreading the virus to family and community, whether there was fear of eviction by landlords from rented

accommodation, isolation faced from neighbours due to fear of contracting the infection. All the questions had to be answered in yes or no.

2.2.4. Perceived severity:

To address perceived severity, questions on emotional problems asked to the patients were: whether they felt they were not able to provide the level of care, whether they faced emotional breakdown as a result of unable to see the family, whether they felt guilty or proud to join the profession. All the questions were to be answered in yes or no. At the end of the questionnaire, a comment section was added for the nurses to express any suggestions to improve the questionnaire.

3. RESULT

3.1. Demographic characteristics:

Among 25 nurses, 2 nurses could not participate due to health-related issues. Amongst the 23 participants, all of them (100%) were female. The participants are aged between 20- 45 years, with mean age being 25 years. Amongst them, 8.6% have a certificate nursing qualification, 60.8% belong to graduate nursing level, 8.6% belong to postgraduate level and 21.7% are on internship who haven't received their degree yet. 21.73% participants were married, 13.04% lived in rented apartments, and 34.78% were provided institutional travel benefit. None of the nurses had any pre-existing health issues.

3.2. Perceived susceptibility: Workplace related problems:

Among the 23 nurses, 19 of them (82.6%) said they have faced the problem of unavailability of PPE kits for healthcare workers. Another 19 nurses (82.6%) stated they have faced the problem of their co-workers testing positive. Although the violence of patient relatives faced by healthcare workers is comparatively less (13.04%), the decreased nurse to patient ratio was felt by 52.17%. 50.4% felt that there is not adequate number of patient

testing done as opposed to the number of patients getting admitted to the hospital. A total of 43.4% felt they have faced problems due to frequent changing of COVID-19 protocols. 39.13% expressed they have been overworked for COVID-19 duties and 21.73% felt they are underpaid as well. 34.67% have expressed they faced problems of transportation to the hospital, of which all of them expressed it was due to the unavailability of public services during lockdown.

3.3. Perceived barriers: Social problems:

Among 23 nurses, 21 of them (91.30%) have expressed they are afraid to spread the virus to the family members and community, 56.52% have expressed they are afraid to contract the virus and 34.78% have expressed that their job in COVID-19 has interfered their family life. 39.13% have expressed that they have been isolated by their neighbours due to their job and 17.39% have said they have faced the fear of eviction from their landlords. One of the nurses has expressed that she lives in an apartment with her family and although she works in the Academic section of the hospital and not in any wards, yet she has been isolated and threatened by her neighbours to leave the apartment. Two other nurses working together in a government hospital as staff nurses have been asked to leave their rented apartments by their landlord repeatedly until police intervened. They later shifted in a hostel provided by their hospital; the cost of their stay being borne by the hospital authorities.

3.4. Perceived severity: Emotional problems:

A total of 52.17% have answered that they felt an emotional stress as they felt they had not been able to provide proper level of care, 17.39% have expressed that they are emotionally disturbed as they are unable to see their families. Although the majority (78.26%) said they are proud to join the profession, 5 of them (17.39%) have stated that they feel guilty to join the profession. 1

nurse has expressed that with the growing number of cases and increased deaths of healthcare staff, her family has advised her

to take a break from her job during the crisis.

TABLES AND FIGURES

Fig. 1. Demography questionnaire

DEMOGRAPHIC DATA

Name of the participant:	
Age:	
Years of experience:	0-1years/1-2years/2-4years/>4years
Highest degree obtained:	ANM/GNM/B.Sc./M.Sc. and above
Job description:	Student/Tutor/Ward Nurse/ NS*/ In charge/CNS**/R. N***/ Professor
Type of hospital/institute you are working in:	Government/Private/Others
Family status :	Single/married/separated/divorced
Type of housing:	Flat/ Rented/ Hostel/Others
Mode of transportation:	Public/Private/Institutional
Any pre-existing health issues:	Yes/No

*NS: Nursing Superintendent

**CNS: Clinical Nurse Specialist

***RN: Research Nurse

Fig. 2. Questionnaire on Impact of COVID-19 on nurses.

QUESTIONNAIRE TO ASSESS THE IMPACT OF CORONAVIRUS ON THE NURSES

All questionnaires need to be answered in Yes or No. Please return the filled up form within 5 days after receiving the questionnaire.

1. Workplace related problems

- Lack of proper hospital infrastructure:
- Problem of transportation to the hospital
- Confusion over COVID-19 protocol followed in hospital
- Demanding and manipulative patients
- Violence and abuse from patients and/or relatives
- Huge nurse : patient ratio
- Less availability of PPE kits, masks, gloves, necessary equipments etc.
- Less testing with more risk of unidentified positive patients
- Healthcare staff testing positive
- Less staffs with more hours to work
- Less job compensation and pay cuts
- Less resources available for patients

2. Social problems

- Job interfering my family life
- Fear of contracting the virus
- Fear of spreading the virus to my family
- Fear of spreading the virus to the community
- Fear of eviction by landlords from rented accommodations
- Isolation by neighbours due to fear of contracting the infection

3. Emotional problems

- Not being able to provide the level of care
- Emotional breakdown as unable to see the family
- Feeling guilty to join the profession
- Feeling proud to join the profession

Any specific comments:

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Needs any change in any questionnaire:

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Table 1: Demographic data

PARAMETERS	NO. OF NURSES
Mean Age	25
Years of experience	
0-1 years	12
2-4 years	6
>4years	5
Highest degree obtained	
Intern	5
ANM	2
GNM	0
B.Sc.	14
M.Sc. and above	2
Job description	
Student	5
Tutor	3
Ward Nurse	4
NS	5
Incharge	2
CNS	1
RN	2
Professor	1
Type of Institute	
Government	13
Private	10
Others	0
Family Status	
Single	18
Married	5
Separated	0
Divorced	0
Type of housing	
Flats	14
Rent	3
Hostel	6
Others	0
Mode of transport	
Public	10
Private	5
Institutional	8
Any pre-existing health issues	
Yes	0
No	100%

Table 2: Results

PARAMETERS	PERCENTAGE	NO. OF NURSES
Workplace related problems:		
Lack of proper hospital infrastructure	34.67%	8
Problem of transportation to the hospital	34.67%	8
Confusion over COVID-19 protocol followed in hospital	43.40%	10
Demanding and manipulative patients	34.67%	8
Violence and abuse from patients and/or relatives	13.04%	3
Huge nurse: patient ratio	52.17%	12
Less availability of PPE kits, masks, gloves, necessary equipments etc.	82.60%	19
Less testing with more risk of unidentified positive patients	50.40%	16
Healthcare staff testing positive	82.60%	19
Less staffs with more hours to work	39.13%	9
Less job compensation and pay cuts	21.73%	6
Social problems		
Job interfering my family life	34.78%	8
Fear of contracting the virus	56.52%	13
Fear of spreading the virus to my family and community	91.30%	21
Fear of eviction by landlords from rented accomodations	17.39%	4
Isolation by neighbours due to fear of contracting the infection	39.13%	9
Emotional problems		
Not being able to provide the level of care	52.17%	12
Emotional breakdown as unable to see the family	21.73%	5
Feeling guilty to join the profession	21.73%	5
Feeling proud to join the profession	78.26%	18

4. DISCUSSION

This study using the Health Behaviour Model has brought to light many issues that the nurses in the Indian healthcare sector faces. Although the sample size is small, it provides a brief idea about the ways various nursing fraternity has been affected due to the Coronavirus outbreak.

In the initial scenario there was an absolute lack of PPE, but gradually there has been an increased supply of protective gears and equipment through various governmental and non-governmental schemes and more initiatives are now being undertaken for their increased supply.

More than half of the nursing group has expressed their concern about their fear to contract the virus and become a patient themselves. The sudden reversal of role from healthcare worker (HCW) to a patient might lead to frustration, helplessness, adjustment issues, stigma, and fear of discrimination in the medical staff (5). Various studies on mental health and disease outbreaks in the past has reported that HCW especially those working in emergency units, intensive care units, and infectious disease wards are at higher risk of developing adverse psychiatric impact (6). The psychiatric illnesses that people develop include depression, anxiety, panic attacks, somatic symptoms, and posttraumatic stress disorder symptoms, to delirium, psychosis and even suicidality (7,8). Hence it is the need of the hour to develop multidisciplinary mental health teams to assess and evaluate the mental health status of the healthcare workers, through psychotherapeutic means such as using the stress adaptation model.

Various problems specific to the Indian scenario such as problems in transportation due to massive lockdown could have been managed by arranging methods of transportation by the hospital authorities. Although some hospitals had arranged vehicles to and from the staff localities, however, they charged a good amount of fare for the transport which could have been otherwise provided free of cost.

In a cohort study of French nursing homes by Belmin et.al (9), mortality rates related to COVID-19 were found lower among nursing homes that implemented staff confinement with residents compared with those in a national survey. These findings suggest that self-confinement of staff members with residents may help protect nursing home residents from mortality related to COVID-19 and residents and staff from COVID-19 infection. Thus, it is necessary that staffs exposed to COVID-19 wards need to be confined to prevent infection transmission, hence the hospital authorities should take measures to locate areas of confinement of staffs near the hospital vicinity for at least 14 days, following which they should be tested through RT-PCR analysis.

Ho et. al described various features that are specific to COVID-19 and responsible for the mental health problems, such as speculations about its mode of transmission, rapidity of spread and lack of definitive treatment protocols or vaccine. (10) The current protocol practised in the COVID care units are frequently changing and will change even more with more available research data. Hence these problems cannot be addressed unless definite data and treatment/vaccine is discovered.

In our study there has been various nurses describing their job dissatisfaction due to factors such as overworking, lower wages, abuse from patient relatives and so on. Wang et. Al described an increase in the levels of Post-Traumatic Stress Disorder (PTSD) associated with nurses working in COVID wards, which can be reduced by ways of improving job satisfaction, positive response, and strengthening the psychological counselling of female nurses in order to reduce the risk of psychological impairment.(11) Along with psychological counselling, increased wages in accordance to their role profile, increase in uptake of nurses and proper job division equally to everyone reduces the hassle of an individual nurse and improves nurse: patient ratio.

Proper regulations need to be set up for monitoring any events of malpractice or abuse on behalf of the patients or relatives. Currently there are no regulations that provide adequate security to a practising healthcare professional, hence there has been repeated cases of misconduct. Moreover, there has been instances of misconduct towards the healthcare workers by their neighbours/relatives/landlords all over the country, and although various social platforms and police intervened, the problems still exist. Healthcare professionals are necessary for the society during this pandemic and it is the duty of the Government to provide security to them. Therefore, new rules and regulations needs to be enforced to prevent such harassments of the healthcare workers in the future.

CONCLUSION

This paper showed the impact of COVID 19 on nursing fraternity during the peak crisis of COVID in 2020 using health behaviour model. Although the COVID 19 outbreak has been over three years, it is an important lesson for all healthcare workers to be prepared for any such pandemic, and also address their own health behaviour aspects. Specific screening strategies should be adapted to address the psychological aspects for healthcare workers to avert any future crisis.

Declaration by Authors

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