Nurses Duty in COVID 19 Units - A Great Challenge

Pinaki Bayan[1], Karishma Khaund[2], Oinam Bidyalaxmi[3], Maryline Flinsi[4]

[1]Nursing Superintendent/Apollo Hospital Guwahati, India

[2]Nursing Learning Officer/Apollo Hospital Guwahati, India

[3]Nursing Quality Officer/Apollo Hospital Guwahati, India

[4]Principal/Apollo School of Nursing, New Delhi, India

Abstract: _Background: COVID-19 pandemic has impacted nurses and in the field of nursing profoundly in direct patient care, nursing practice issues, and healthcare system operations at large. Proper coordinated global response is a need of hour to prepare the health care system including the healthcare professionals. The unique situation also had made wide range of challenges for healthcare providers which in long run had greater impact on their mental health. Therefore, identification of challenges and find pathways to overcome those issues become paramount to maintain the ecosystem in health care. Material & Methods: The study was conducted by using a mix methodology research design. Purposive sampling method was used for selecting samples from targeted population. Out of 100 samples, 80 staff nurses & 20 nurse managers had participated in the study. One data collection tool which consist of demographic profile and 21 items for assessing the challenges of staff nurses was created in Google form to capture the data and 10 open ended questionnaire were created to get deeper understanding of the challenges faced by nurse managers. Data analysis was carried out by descriptive and content analysis. Results: Majority (95%) of participants was female and mean age was 30.71 years. Study had shown that 41.25% participants did not stay with their family members. In staff nurse category, 33.75% had mild (0-25) challenges, 58.75% had moderate (26-50) and 7.5% had severe (51-84) challenges while working in covid unit. Manpower management, Support from institution and issues on PPE & other equipment were the themes emerged from the content analysis. Conclusion: Management of resources in COVID pandemic situation requires good institutional support and dynamic approach in every step of transition and adaptability by frontline workers. Since, nursing force were not convinced initially to work in covid units due to many fear factors, manning and motivating workforce was the greatest challenges for nurse managers to run the covid units smoothly. Providing some form of incentives along with appropriate training, guidance and emotional support helped nurses to continue the deadly needed nursing services for affected patients in COVID units._

Keywords: Nursing, Management, Nursing administration, Nurse's duty Mix-method research, COVID 19, Challenges of nurses

1. Introduction

COVID-19 pandemic situation has strongly affected nursing profession in terms of providing direct patient care, nurse's skill and competencies and support from healthcare facilities. The pandemic has strongly influenced the nursing professional identity and nursing education as well as it gives a way to focus on nursing research. Nurses need strong moral courage and resilience to work on the frontlines of a pandemic[1]. A Study conducted by Morle & Vellas (2020) also addressed the following three ethical issues that arises during pandemics: (a) the safety of nurses, patients, and families; (b) the allocation of scarce resources, and (c) the changing nature of nurses' relationships with patients and families[2].

Furthermore, a high number of frontline nurses were infected by SARS-CoV-2 during pandemic in the early 2020s and, as a result, nurses experienced extended separations from their loved ones and/or died in the line of COVID duty. These situations profoundly and negatively impacted the professional identity of nurses in general and nursing students in particular. In this pandemic situation nurses are working and adapting under virtual siege in several countries, nurses are working with limited resources i. e. personal protective equipments and work-force. Nurses faced the complex moral & ethical conflicts with underprepared health care facilities and prolong working hours wearing the jumpsuit. Key challenges faced by nursing professionals during the COVID-19 pandemic include staffing shortages and providing psychological and social support to nurses[3].

COVID-19 pandemic has placed a heavy burden on the health care system, particularly on nurses who are faced with the greatest challenges regarding the unprecedented outbreak of coronavirus worldwide[4]. It is very important to identify the key challenges faced by nurses during this pandemic.

2. Material & Methods

The present study aims to explore the challenges faced by frontlines working nurses of COVID units as well as nurse managers who are directly and indirectly involved for managing the units. Since both quantitative and qualitative data were captured to find the result, mix method research approach was used for the study.

Study Design: Mix methods research design was applied and three data collection tools were used to collect quantitative and qualitative data for the study.

Study Location: A tertiary care hospital having COVID units based at Apollo Hospitals Guwahati, Assam, India was selected for the study.

Study Duration: Three months (June to August 2021).

Sample Size: 100 Nurses (80 staff nurses and 20 nurse managers).

Sample Size Calculation: 1) Out of 320 staff nurses, 80 (25%) had participated in the study.2). Out of 24, 20 nurse managers who were involved in managing COVID units participated in the study.

Subjects & Selection Method: Purposive sampling method was used for selecting the subjects and consent for willing to participate in the study was obtained. The nurses (targeted sample) who were requested to fill the questionnaire in the electronic data collection form (Google form).

Inclusion Criteria: Nurses worked directly and indirectly in COVID units (assigned nurses & nurse managers).

Exclusion Criteria: 1). Staff nurses who are not willing to participate in the study.2). Nurses did not work in the COVID units.

Procedure Methodology
Before starting the data collection, detail information about the study was shared in the common nursing whatsApp group of the setting. Data collection tools (Google form) were developed starting with informed consent where participants need to give consent before proceeding to fill the questionnaire.

The first part of the tool consist of demographic profiles such as age, gender, religion, marital status, nursing educational qualification, designation, years of work experience, number of COVID patients assigned, etc. A 5-point Likert scale consisting of 21 items questionnaire was developed to gather the data. The questionnaire was divided into three categories as a) Personal attributes, b) Professional attributes and, c) Organizational attributes. Ten (10) open ended questions were also added for nurse managers to get deeper understanding of the challenges faced by them.

Statistical Analysis
The descriptive and content analysis method was used to analyze the data. Descriptive analysis was used to describe the demographic profiles and attributes selected in the study.

3. Result

Descriptive analysis
To assess the challenges faced by the frontline nurses posted in COVID unit; demographic profile and Challenges of Nurses (RN) Working in COVID Units were analyzed. Majorities (95%) of the participants were females and age group was between 26-35 and the mean age was 30.71 years. Study had shown that 41.25% participants did not stay with their family members.41.25% of the participants had experience between 6-10 years and 26.25% of them had less than 2 years.

Table 1: Shows the demographic profile nurses worked directly in COVID units.

Characteristic	n	%
Age		
a) 21-25	15	19%
b) 26-35	52	65%
c) 36 & above	13	16%
Gender		
a) Male	4	5%
b) Fem ale	76	95%
Religion		
a) Hindu	33	41%
b) Christian	44	55%
c) Muslim	1	1.25%
d) Others	2	2.5%
Do you live with your family members?		
a) Yes	30	37.5%
b) No	33	41.25%
c) Hostel	4	5%
d) Others	13	16.25%
Educational Qualification (only Nursing)		
a) GNM	56	70%
b) B. Sc. Nursing/Post-Basic B Sc. N	23	29%
c) M. Sc. Nursing	1	1.25%
d) PhD Nursing	0	0
Designation		
a) Staff Nurse/RN	71	89%
b) Junior Staff Nurse	1	1.25%
c) Team Leader/Shift In-Charge	8	10%
Years of Experience		
a) 0-2 years	21	26.25%
b) 3-5 years	19	24%
c) 6-10 years	33	41.25%
d) 11-20 years	6	75%
e) 20 years & above	1	1.25%
Marital status		
a) Married	23	29%
b) Unmarried	56	70%
c) Divorced/Separated	1	1.25%
How often you were assigned in COVID unit?		
a) 15 days	14	17.5
b) 30 days	28	35%
c) >30 days	38	47.5%
How many patients were assigned to you while working in COVID unit?		
a) One	0	0
b) Two	12	15%
c) Three	34	42.5%
d) Five	5	6.25%
e) >Five	29	36%

Challenges of Nurses (RN) Working in COVID Units
Among the staff nurses category, 33.75% had mild (0-25) challenges, 58.75% had moderate (26-50) and 7.5% had severe (51-84) challenges while working in COVID unit.38.75% respondents felt dehydrated while working with PPE for long time. Only 48.75% respondents expressed that their family members allowed them to work in COVID units.
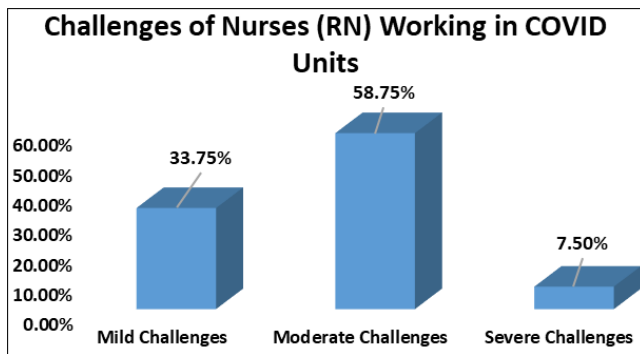
Figure 1: Represents the challenges of nurses working in COVID units

Content analysis:
To assess the challenges faced by the nurse managers/ administrators (in managing both COVID and non-COVID units) the data were further analyzed in-depth for finding challenges of nurse managers who were involved in managing COVID units. Three themes were emerged from analysis of open ended communications against questions as *manpower management, support from institution, and issues on PPE & other equipment.* The themes are described in details with expressive quotes from the participants.

Theme 1: Manpower Management
Planning the health-care workforce required meticulous effort to meet the health needs of COVID positive patients. Manning of appropriate numbers was crucial to provide optimum patient care. Majority of the participants mentioned that there was problem in manpower management due to sudden surge of COVID patients as one participant wrote as *"for COVID ward 1 staff has handled 14 patients together; yes it was quite challenging situation to manage".* Another nurse manager stated that *"While covid was managed well with adequate nurse-patient ratio in non-critical areas there was big challenge in non-covid to manage as same occupancy was there in non-covid area".* Since most of the patients required critical care support, critical care nurses requirement was significantly increased and one participant quoted as *"we were compelled to manage with non-ICU experienced staff who had very minimal knowledge on ICU skills".* Manpower resource was severely damaged as staff attrition was high due to unknown fear related to COVID pandemic situation and one participant stated as, *"Yes. During the first wave around 100 staff absconded because of fear".*

Theme 2: Support from Institution
Emotional support with proper guidance and training from working institute become paramount to motivate the nurses for continuity of the work in COVID pandemic situation. The study revealed that nurses were supported by the institution and in terms of offering services like transportation, COVID incentives, free vaccination, fooding & lodging as per request. However, one participant stated, *"When extra beds were added due to increase number of patients it was very difficult to manage the units".* Another participant wrote as *"Yes, special leave was granted to all staff who required isolation/quarantine due to covid infection".* One participant also gave similar statement, *"Yes, hospital supported very well to the nursing staff by giving special leave".* While questions were asked regarding transport facilities one participant stated that,

"Transportation facilities were provided but limited and had to wait for long hours for the dropping".

Theme 3: Issues in PPE & Other Equipment
As the world faced the scarcity of PPE during the pandemic the researcher wanted to identify any challenges on PPE or other equipment. From all the participants description in the open ended questions it was well understood that there was difficulty in managing PPE & other equipment. In words of participants, *"There was shortage of N95 mask in starting time however my organization never compromises the PPE for staff working inside COVID".* Another participant wrote, *"Yes managing equipments were challenging, to manage equipments like ventilator, Hamilton high flow in absence of technician and doctors.".* In another words of a participant, *"Yes, during second wave most of the covid patients were very very sick and required invasive mechanical ventilator or noninvasive ventilator. But due to shortage of mechanical ventilator some patients were managed with BIPAP or HFNC and same as requiring HFNC, were managed with high concentration flow oxygen mask. Such situations were very much challenging".*

4. Discussion

Nurses all over the world were suddenly thrust into the front lines of this war. During the height of the pandemic, nurses saw waves of patients walking into their hospitals only to decompensate before their eyes, requiring immediate intubation and weeks of assisted breathing, too often leading to death. This definitely caused tremendous stress on every health care personnel[7].

The study attempts to explore challenges of nurses in different aspects during the COVID pandemic situation. The findings of the study shown that there were challenges from both staff nurse and nurse manager categories however support from institution helped them tremendously to overcome the challenges and for continuity of the work in COVID pandemic. A study done by Isobe T et al on "Frontline nurse managers vision for their unit" revealed that the shortage of nurse who are experienced with ICU skills & competencies were more remarkable during this COVID pandemic [5, 9]. The same was revealed on the current study as nurse manager stated that they had to manage the crisis with non ICU experienced staff.

A study conducted on "The Psychosocial Impact of COVID-19 on Registered Nurses" stated that emerging international evidence suggests nurses are at higher risk for psychosocial outcomes related to the pandemic, such as anxiety, depression, and sleep problems, compared to other clinician groups [6]. However in this study it was found that maximum of participants 58.75% (47) were having moderate level of challenges while working in COVID units.

Key challenges faced by nursing professionals during the COVID-19 pandemic were staffing shortages and providing psychological and social support to nurses[3]. One study in this issue stated that nursing students perceive clinical nursing work as "too dangerous to engage in" during the COVID-19 pandemic, with 9.3% expressing intention to leave the nursing profession. In this study researcher found

the similar findings as one of the nurse managers stated that, *"many staff absconded due to fear for covid"*. The major challenges nurses faced in this pandemic situation are the crucial shortage of resources i. e. nursing workforce, hospital equipments including personal protective equipment[10]. There are different levels of mental challenges and fears of COVID infection among nursing staff because of this pandemic situation. The current study also revealed that there was lack of nursing staff to take care of COVID patient as many of them left the job due to personnel & family problem.

5. Conclusion

Covid19 pandemic had severe impact on mental health among nurses which require different approaches of stress management program in any health care settings. The importance of front line workers specially nurses were recognized globally because of the pandemic, all health care facilities should take some preventive measures to build a strong mental health of this group by which a strong preparedness can be done to face any pandemic situation. Management of resources in COVID pandemic situation requires institutional support and dynamic approach in every step of transition and adaptability by frontline workers. Since, nursing force were not convinced initially to work in COVID units due to many fear factors, manning and motivating workforce was the greatest challenges for nurse managers to run the COVID units smoothly. Appropriate training, guidance, some kind of incentives and emotional support helped nurses to continue the deadly needed nursing services for affected patients in COVID units.

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