



## ASSESSMENT OF CHALLENGES AND ISSUES FACED WHILE WORKING IN COVID-19 UNIT AMONG STAFF NURSES WORKING IN SELECTED HOSPITALS: A DESCRIPTIVE STUDY

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### Abstract-

The corona virus disease 2019 (COVID-19) caused by the novel severe acute respiratory syndrome corona virus 2 (SARS-CoV-2) has developed since December 2019. It has caused a global pandemic with more than three hundred thousand case fatalities.

**Objectives-** 1. To assess the Challenges and Issues faced while working in Covid-19 Unit among Staff Nurses working in selected Hospitals. 2. To assess the Challenges and Issues faced while working in Covid-19 Unit among Staff Nurses. 3. To associate the Challenges and Issues faced by Staff Nurses with selected demographic variable.

**Methodology-** In specific hospitals of the city, a Non-experimental descriptive design with a methodology of Quantitative approach is used among the Challenges and Issues faced while working in Covid-19 Unit among Staff Nurses using Non probability Purposive sampling technique consisting of 100 samples.

**Result-** Analysis showed that majority 56% of staff nurses had faced severe level of challenges and issues while 43% of staff nurses had faced moderate and only 1% have faced less challenges and issues. Minimum score was 9 and maximum score was 27 and Mean score was 20.76±2.77 and mean percentage of score was 69.20±9.24. In association of level of challenges and issues faced while working in covid-19 unit among staff nurses with their selected demographic variables reveals that there is association of level of challenges and issues faced while working in covid-19 unit among staff nurses with age, education, area of working, duration of working in Covid-19 unit and do had

COVID-19 at  $p < 0.05$  level of significance while none of other demographic variables were associated with challenges and issues.

**Conclusion-** The study conclude association of level of challenges and issues faced while working in covid-19 unit among staff nurses with age, education, area of working, duration of working in Covid-19 unit and do had COVID-19 at  $p < 0.05$  level of significance while none of other demographic variables were associated with challenges and issues.

**Keywords-** Covid-19, Staff Nurses, Unit, Hospital, Issues, Challenges, Assess.

## INTRODUCTION

The corona virus disease 2019 (COVID-19) caused by the novel severe acute respiratory syndrome corona virus 2 (SARS-CoV-2) has developed since December 2019. It has caused a global pandemic with more than three hundred thousand case fatalities<sup>1</sup>. The corona virus disease 2019 (COVID-19) pandemic is a global disaster which has posed a major challenge to the healthcare systems across the world. We are at war with an invisible enemy that has endangered the health and life of people beyond imagination and has brought a lot of fear, stress, and uncertainty. These unforeseen circumstances have made us think, introspect, and make prompt decisions as healthcare professionals. As nurses, we are committed to serve the society, and the biggest challenge we face today is to cure and care for the people affected with COVID-19<sup>2</sup>

With over 37.8 million cases and over 1 million deaths worldwide, the COVID-19 pandemic has created a societal and economic upheaval of unparalleled magnitude. A positive transformation has been brought about by innovative solutions in the health care sector that aim to mitigate the impact of COVID-19 on human health.<sup>3</sup>

## BACKGROUND OF THE STUDY

Arthur Schalk and M.C. Hawn in 1931 made the first detailed report which described a new respiratory infection of chickens in North Dakota the infection of newborn chicks was characterized by gasping and listlessness with high mortality rates of 40–90%. Leland David Bushnell and Carl Alfred Brandly isolated the virus that caused the infection in 1933. The virus was then known as infectious bronchitis virus (IBV). Charles D. Hudson and Fred Robert Beaudette cultivated the virus for the first time in 1937. The specimen came to be known as the Beaudette strain. In the late 1940. Human corona viruses were discovered in the 1960s using two different methods in the United Kingdom and the United States. E.C. Kendall, Malcolm Bynoe, and David Tyrrell working at the Common Cold Unit of the British Medical Research Council collected a unique common cold virus designated B814 in 1961. The virus could not be cultivated using standard techniques which had successfully cultivated rhinoviruses, adenoviruses and other known common cold viruses. In 1965. In 1967 Using electron microscopy the three viruses were shown to be morphologically related by their general shape and distinctive club-like spikes.<sup>4</sup>

Coronaviruses mostly cause gastrointestinal and respiratory tract infections and are inherently categorized into four major types: Gammacoronavirus, Deltacoronavirus, Betacoronavirus and Alpha Corona Virus. The first two types mainly infect birds, while the last two mostly infect mammals. Six types of human CoVs have been formally recognized. For about 18,738,58 laboratory-confirmed cases recorded as of 2nd week of April 2020, the maximum number of cases (77.8%) was between 30 and 69 years of age. Among the recorded cases, 21.6% are farmers or employees by profession, 51.1% are male and 77.0% are Hubei. Coronavirus is already an ongoing epidemic, so it is necessary to take precautions to minimize both the risk of being sick and the transmission of the disease. WHO Advice: 1) Wash hands regularly with alcohol-based hand wash or soap and water. 2) Preserve contact space (at least 1 m/3 feet between you and someone who sneezes or coughs). 3) Don't touch your nose, head and ears. 4) Cover your nose and mouth as you sneeze or cough, preferably with your bent

elbow or tissue. 5) Try to find early medical attention if you have fatigue, cough and trouble breathing. 6) Take preventive precautions if you are in or have recently go to places where coronavirus spreads.<sup>5</sup> The first confirmed case of COVID-19 in Brazil was reported on February 26 of 2020. Until May 11 of 2020, a total of 168,331 Brazilians had confirmed diagnosis of COVID-19, of whom 89,429 (53.1%) were still infected, 67,384 (40%) had been cured, and 11,519 (6.8%) had died. The number of new cases on May 11th was 5,632, and the reported incidence was 80.1/100.000 population. Counting mild-to-severe and asymptomatic cases of COVID-19 is essential to describe and interpret local epidemic responses. In this scenario, repeated estimates of prevalence and incidence inform trajectory trends of the disease and guide the decision-making process related to control measures and resource allocation.<sup>6</sup>

### **NEED OF THE STUDY**

A total of 72 314 patient records-44 672 (61.8%) confirmed cases, 16 186 (22.4%) suspected cases, 10567 (14.6%) clinical diagnosed cases (Hubei only), and 889 asymptomatic cases (1.2%) contributed data for the analysis. Among confirmed cases, most were aged 30-79 years (86.6%), diagnosed in Hubei (74.7%), and considered mild/mild pneumonia (80.9%). A total of 1 023 deaths occurred among confirmed cases for an overall case-fatality rate of 2.3%. The COVID-19 spread outward from Hubei sometime after December 2019 and by February 11, 2020, 1 386 counties across all 31 provinces were affected. The epidemic curve of onset of symptoms peaked in January 23-26, then began to decline leading up to February 11. A total of 1 716 health workers have become infected and 5 have died (0.3%).The COVID-19 epidemic has spread very quickly. It only took 30 days to expand from Hubei to the rest of Mainland China. With many people returning from a long holiday, China needs to prepare for the possible rebound of the epidemic.<sup>7</sup>

Above review shown that staff nurses have faced many challenges and Issues during Covid-19 Pandemic, like availability of beds, ventilator, drugs, oxygen etc. they also have faced many emotional and social issues during the Pandemic period. So the investigator further like to explore Challenges and Issues faced by staff nurses in a selected setting.

### **PROBLEM STATEMENT**

“Assessment of Challenges and Issues faced while working in Covid-19 Unit among Staff Nurses working in selected Hospitals. A Descriptive Study.”

### **OBJECTIVES**

#### **Primary Objectives:**

1. To assess the Challenges and Issues faced while working in Covid-19 Unit among Staff Nurses working in selected Hospitals.

#### **Secondary Objectives:**

1. To assess the Challenges and Issues faced while working in Covid-19 Unit among Staff Nurses. 2. To associate the Challenges and Issues faced by Staff Nurses with selected demographic variable.

### **ASSUMPTION**

Staff Nurses may have faced Challenges and Issues while working in Covid-19 Unit.

### **DELIMITATION**

This study is delimited to Nurses who have worked in Covid-19 Unit of the selected hospital.

### **ETHICAL ASPECTS**

The study proposal was accepted by the ethical committee of the institution. Permission was obtained from concerned authorities present in selected Hospitals. Consent was obtained from the nurses

samples after explaining the research process in their own language. Confidentiality regarding the sample's information was maintained by using code numbers by the investigator.

## REVIEW OF LITERATURE

The literature reviewed will be classified into the following sections.

- 1) Literature related to Covid-19.
- 2) Literature related to Challenges and Issues faced during Covid-19.
- 3) Literature related to Challenges and Issues faced while working in Covid-19 Unit by Staff Nurses.

## CONCEPTUAL FRAMEWORK

The conceptual framework for the present study is developed from the health belief model. Rosenstock's Health Belief Model (HBM) is a theoretical model concerned with health decisionmaking.

## METHODOLOGY

**Research Approach:** In this study Quantitative approach is used.

**Research Design:** In this study the design was Non-experimental descriptive design.

**Research Setting:** The present study will be conducted in selected hospitals.

## VARIABLES

**Demographic Variables:** In this present study demographic variables include Age, Gender, Marital Status, Educational Qualification, Year of Experience, Area of working during Covid-19 pandemic, Duration of posting in Covid-19 Unit, Do you had Covid-19.

**Population:** In this study the population are all Staff Nurses.

**Target Population:** In this study, the target population includes the all Staff Nurses working in selected Hospitals.

**Accessible Population:** In this study, the accessible population selected for the study comprises. The Staff Nurses working in the selected Hospitals and are available at the time of data collection.

## SAMPLING

**Sample Size:** Sample consisted of 100 Challenges and Issues faced while working in Covid-19 Unit among Staff Nurses working in selected Hospitals.

**Sample Technique:** Non probability Purposive sampling technique was used.

## SELECTION CRITERIA

### Inclusion criteria:

Inclusion criteria was, Staff Nurses who are,

1. Registered Nurses having GNM, B.Sc. Nursing/B.B.Sc Nursing/P.C.B.Sc Nursing/P.B.B.Sc Nursing qualification.
2. Worked in Covid-19 Units.
3. Willing to participate in study.
4. Available at the time of data collection.

### Exclusion criteria:

In this study the exclusion criteria was Staff Nurses who are having M.SC nursing qualification.

## DESCRIPTION OF TOOL

**Section A-** Demographic variables

**Section B-** Structured Dichotomous questionnaire

## CONTENT VALIDITY

Content and construct validity of tool was determined by 16 experts including Medical surgical nursing subject's experts, physician and statistician etc. The expert includes: Medical surgical nursing subject experts – 13, Statisticians – 2 English Literature – 1

## RELIABILITY

The reliability of tool was determined by administering questionnaire 10 samples. The Guttman split half method of reliability is done. The correlation coefficient 'r' of the Questionnaire was 0.946. Reliability was 0.9722 which is more than 0.8. Hence the questionnaire was found to be reliable.

## PILOT STUDY

Permission was taken from concerned authority. A sample of 10 Staff Nurses who faced challenges and issues while working in Covid-19 Unit in selected hospital of the city.

## RESULT

**Segment A-** Description of staff nurses according to their demographic variables.

**Table 1:** Table showing Frequency and Percentage wise distribution of Staff Nurses according to their demographic variable.

n=100

Demographic Variables	Frequency (f)	Percentage(%)
<b>Age(yrs)</b>		
21-30 yrs	59	59
31-40 yrs	30	30
41-50 yrs	10	10
≥51 yrs	1	1
<b>Gender</b>		
Male	15	15
Female	85	85
<b>Marital Status</b>		
Married	62	62
Unmarried	23	23
Divorced	4	4
Separated	7	7
Widow/Widower	4	4
<b>Educational Qualification</b>		
GNM/RGNM	50	50
BSc/BBS Nursing	23	23
PCBSc/PBBS Nursing	27	27
<b>Years of experience</b>		
Less than 1 yrs	3	3
1-5 yrs	55	55
6-10 yrs	25	25
>10 yrs	17	17
<b>Area of working during COVID-19 pandemic</b>		
General Ward	51	51
Intensive Care Unit	29	29

Emergency Unit	14	14
Other	6	6
<b>Duration of COVID-19 unit</b>		
1-3 mths	3	3
3-6 mths	9	9
6-9 mths	23	23
9-12 mths	29	29
>1 yr	36	36
<b>Do you had COVID-19</b>		
Yes	70	70
No	28	28
Not Tested	2	2

**Segment B-** Assessment of level of challenges and issues faced while working in covid-19 unit among staff nurses working in selected hospitals.

**Table 2-** Assessment of level of challenges and issues faced while working in COVID-19 Unit. n = 100

Level of challenges and issues faced	Score Range	Level of challenges and issues faced	
		Frequency (f)	Percentage (%)
Less challenges and issues	0-10	1	1
Moderate challenges and issues	11-20	43	43
Severe challenges and issues	21-30	56	56
Minimum score		9	
Maximum score		27	
Mean score		20.76 ± 2.77	
Mean % Score		69.20 ± 9.24	

**Segment C-** Question wise assessment of challenges and issues faced by staff nurses while working in covid-19 unit in selected hospitals.

**Table 3 -** Table showing question wise assessment of challenges and issues faced by staff nurses while working in COVID-19 unit in selected hospitals. n =100

SR. NO.	ITEM	YES %	NO %
1.	Are you frequently infected by Covid-19?	68	32
2.	Do you face physical exhaustion?	83	17
3.	You were worried to exposure of nosocomial infection while working in Covid-19 Unit?	43	57
4.	Did you do hand washing regularly?	98	2
5.	Are you suffered with insomnia?	91	9
6.	Did you experience fatigue?	93	7
7.	Did you follow personal hygiene measures?	99	1
8.	Have you suffer with skin problem because of wearing a PPE kit?	90	10
9.	Do you suffered any workplace stress?	92	8
10.	Do you feel isolated from family while working in Covid-19 unit?	46	54
11.	Did you experienced fear of social stigma?	47	53
12.	Have you quarantined yourself while working in Covid-19 unit ?	90	10
13.	You were nervous and anxious due to death among nursing staff?	90	10
14.	Did you experienced poor communication with supervisors?	89	11
15.	Are you satisfied with job hours during pandemic?	19	81
16.	Are you worried because lack of effective treatment for unwell patient?	68	32
17.	There was conflict between staff nurses regarding job duties?	72	28

18.	You were worried about progressively depleted workforce due to illness and isolation of staff?	53	47
19.	Did for get extra pay while working in Covid-19 Unit?	23	77
20.	Have you able to proper coordinate and manage with staff?	57	43
21.	Do you have any designated break time between job hours?	31	69
22.	Did you carry your own facial mask?	92	8
23.	Did you get adequate medical supplies?	83	17
24.	Oxygen supply was adequate in your unit ?	81	19
25.	Did you get protocol to care Covid-19 infected patients?	80	20
26.	Have you get proper demographic data when patient admitted in Covid-19 unit?	80	20
27.	Do you frequently handle difficult patient without PPE?	57	43
28.	Do you suffered burnout due to insufficient PPE kit?	57	43
29.	Adequate bed was available in your unit?	76	24
30.	Did you know the use of ventilators in Covid-19 patients?	73	27

**Segment D-** Association of level of challenges and issues faced while working in covid-19 unit among staff nurses with their selected demographic variables.

**Table 4-** Table showing association of level of challenges and issues faced while working in covid-19 unit among staff nurses in with their selected demographic variables.

n = 100

Demographic Variables	Calculated Value			Df	Table Value	Level of significance P<0.05	Significance
	t-value	f – value	p - value				
Age	-	3.25	0.025	3,96	2.68	<0.05	S
Gender	1.05	-	0.29	98	1.98	>0.05	NS
Marital status	-	1.22	0.30	4,95	2.46	>0.05	NS
Education	-	11.01	0.0001	2,97	3.07	<0.05	S
Year of Experience	-	0.08	0.96	3,96	2.68	>0.05	NS
Area of Working	-	6.64	0.0001	3,96	2.68	<0.05	S
Duration of working in COVID unit	-	4.38	0.0002	4,95	2.45	<0.05	S
Do you have Covid-19	-	6.83	0.002	2,97	3.07	<0.05	S

## DISCUSSION

A study conducted on Difficulties Encountered While Using PPE Kits and How to Overcome Them: An Indian Perspective. After a slow start due to an effective lockdown, the coronavirus disease 2019 (COVID-19) pandemic in India has been raging at a rapid pace, posing a formidable challenge to the healthcare system in the country. The personal protective equipment (PPE) undoubtedly provides a shield of protection for the healthcare workers (HCWs) fighting the disease as a valuable asset to the nation. However, there have been various problems associated with the PPE, ranging from its shortage to problems arising from heat, dehydration, etc while wearing them. There is a need to assess these problems faced by HCWs both qualitatively and quantitatively for their timely and effective redressal. In this study an electronic questionnaire survey was conducted among a cohort of HCWs who had performed COVID-19 duties and used PPE kits. The cohort consisted of different categories of doctors, nursing personnel, and other paramedical staff. The result shows the most common problems associated with using PPE kits was excessive sweating (100%), fogging of goggles, spectacles, or face shields (88%), suffocation (83%), breathlessness (61%), fatigue (75%), headache due to prolonged use (28%), and pressure marks on the skin at one or more areas on repeated use (19%). Occasional problems reported were skin allergy/dermatitis caused by the synthetic material of the PPE kit, face shield impinging onto the neck during intubation, and nasal pain, pain at the root of the pinna, and slipperiness of shoe covers. Various ways and means have been employed by the HCWs to actively address and solve these problems. These plausible solutions will definitely help the HCWs to deal with and solve the problems arising out of the PPE use.<sup>8</sup>

In above study occasional problem were skin allergy, dermatitis by the synthetic material of the PPE kit was reported. Present study also revealed that 90% of staff nurses have suffered with skin problems.

A study conducted on Workplace challenges and nurses recovered from COVID-19. The present research was conducted to determine the workplace challenges faced by nurses who had recovered from COVID-19. In this study qualitative study was conducted using the interpretive phenomenological approach proposed by van Manen. The data collected through 17 in-depth semistructured interviews with 14 eligible nurses at different occupational levels were analyzed using the six steps proposed by van Manen. These nurses had also recovered from COVID-19. The finding shows Four themes and 20 subthemes extracted from analyzing the data explained the challenges faced by the nurses after their return to work. The themes included declined ethical values (four subthemes), infected nurses, forgotten patients (three subthemes), gradually leaving the job (six subthemes), and corona phobia (seven subthemes). The present findings can be used to lay the foundations for adopting humanitarian policies in health organizations in terms of ethical care provision during future pandemics.<sup>9</sup>

Above study found that declined ethical values, infected nurses, forgotten patients, gradually leaving the job, and corona phobia was the major workplace challenges among nurses. Present study also found that 92% of staff nurses suffered with workplace stress.

## **CONCLUSION**

After the detailed analysis, this study leads to the following conclusion, 56% of staff nurses had faced severe level of challenges and issues while 43% of staff nurses had faced moderate and only 1% have faced less challenges and issues. Minimum score was 9 and maximum score was 27 and Mean score was  $20.76 \pm 2.77$  and mean percentage of score was  $69.20 \pm 9.24$ . There is association of level of challenges and issues faced while working in covid- 19 unit among staff nurses with age, education, area of working, duration of working in Covid- 19 unit and do had COVID-19 at  $p < 0.05$  level of significance while none of other demographic variables were associated with challenges and issues.

## **IMPLICATION OF THE STUDY**

The findings of the study have implication for nursing practice. Nursing administration, and nursing research.

## **NURSING PRACTICE**

- It will help the nurses to handle the situation during COVID-19 pandemic.
- When professional liability is recognized, it defines the parameters of the profession and the standards of professional conduct. Nurses should therefore enhance their professional knowledge.

## **NURSING EDUCATION**

- Nurses who are up to date with the knowledge regarding COVID-19 are the better person to impart their knowledge through the work which will ultimately update knowledge regarding COVID-19.
- Now a days, much emphasis is given on comprehensive care in the nursing curriculum. So this study can be used by nurses as an informative illustration for the nurse.
- Question wise assessment done to identify challenges and issues faced by staff nurses while working in covid-19 unit will shed light on major areas of issues.
- Nurses must be given opportunity to assess patient who are at risk of COVID-19 and use preventive aspects to deal challenges and issues in Hospitals.

## **NURSING ADMINISTRATION**

- Findings of the study can be used by the Nursing Administration in creating policies and plan for providing education to the staff nurses and health professionals.



- It would help the nursing administrator to plan and organize continuing education program to the nurses and to others for applying and the knowledge challenges and issues faced by staff nurses while working in covid-19 unit.
- In-service education must be conducted for the nurse to create awareness regarding COVID-19.
- E-learning education must be conducted for the nurses to create awareness regarding current concept of Challenges and issues faced by nurses while working in COVID-19 Unit.

### **NURSING RESEARCH**

- The finding of the study have added to various challenges that nurses may encounter while dealing with Covid-19 patients. It will provide further areas for researches.
- Other researchers may utilize the suggestion and recommendation for conducting further studies.
- The tool and technique used has added to the questionnaire can be used for further reference.

### **LIMITATION**

- The study was conducted only on staff nurses.
- The study was limited to only to assess the Challenges and Issues faced while working in Covid- 19 Unit among Staff Nurses working in selected Hospitals. □ The tool for data collection was prepared by investigator himself.

### **RECOMMENDATIONS**

- Similar studies can be replicated on a larger population for generalization of findings.
- A qualitative study can be carried out to assess the challenges faced by staff nurses while caring for COVID-19 patients.
- Similar study can be conducted to evaluate Challenges and issues faced by other health professionals while working in Covid-19 Unit.
- Similar study can be conducted to assess knowledge and attitude of staff regarding Covid- 19.

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