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## Role of Head Nurses and Services of Nurses as Front Line against Covid-19 Epidemic

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**1<sup>st</sup> Author Name: Naeem Shahzad**

**Affiliation:** School Education Department Govt. of the Punjab, Pakistan

**M Phil Scholar**

**Corresponding Author**

**Email:** naeembukhari26@gmail.com/bukharinaeem590@gmail.com

**Tel.:** +923044187940

**2<sup>nd</sup> Author Name: Muhammad Asif Amjad**

**PhD. Scholar**

**Affiliation:** Department of Economics, University of management and technology

Lahore

**Email:** m.asifamjad22@gmail.com

**3<sup>rd</sup> Author Name: Tabssum Naz**

**M. Phil**

**Affiliation:** Department of Management Sciences University of Okara

**Email:** maliktabssumnaz986@gmail.com

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### Abstract

The role of nurses in the health system is like a backbone. The COVID-19 appeared in China in the end of December, 2019 and the epidemic spread around the world. Nurses are risking their lives to work on the front line against the COVID-19. Nurses have always taken risk in performing their duties, but the new epidemic has made their work even more difficult. Nurses are playing a leading role in the fight against Covid-19. The World Health Organization announced the incidence of the coronavirus as an epidemic in March, 2020. The Purpose of the research role of nurses during the Covid-19 pandemic and is to get the front line nurses to know these thought and health issues while talking care of these ablutions.

**Keywords—**Coronavirus, Nurses Managers, Pandemic Management, Nursing

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### Introduction

The new coronavirus, which appeared in China in late December 2019, became an epidemic. Nursing COVID-19 front-line fighters are performing their duties at the risk of their lives. Nurses always carry risks in the performance of their duties. The new corona virus has spread

rapidly around the world. The new corona virus has affected the health sector as much as any other sector in the world. Nursing management became even more important.

World Health Day is being celebrated all over the world. This year, the theme of this day is to create a world in which all people have a fair and healthy environment. When the World Health Organization was established on April 7, 1948, the organization held its first health assembly. It was proposed in this assembly to celebrate World Health Day on April 7 every year, the day of establishment of the World Health Organization. The purpose of celebrating this day is to commemorate the day of establishment of the World Health Organization. On the other hand, it is important to make people aware that development of the world is possible only when everyone in the world is healthy and has access to the best medical facilities.

This year, the World Health Organization (WHO) said in a message that the importance of equitable medical care around the world is greater than ever before. Last year's Corona virus epidemic has gripped the world so far, and even on this occasion, a grim face of social and class segregation has emerged. That the distribution of the coronavirus vaccine could be very unfair, depriving poor countries of it. According to a World Health Organization survey, 77% of the worlds developed and developing countries are currently facing a shortage of nurses. While this global shortage of nurses affects the health system and patients, it also has a negative impact on nurses.

Patients and work pressure on nurses have increased during the coronavirus epidemic. They have to perform long-term duties. As a result, she suffers from depression and a sense of dissatisfaction with her work. Prolonged working hours can lead to stress in nurses' personal relationships, length of illness, conflict, dissatisfaction with employment and incompetence. In this critical situation, the Manager Nurse despite the shortage of nurses, played an important role in reducing the psychological and mental stress among the nurses.

More than half of the world's health workers are nurses, and there is a shortage of 6 million nurses worldwide due to the Corona virus epidemic.

The World Health Organization, Nursing Now and the International Council of Nurses say the importance of nurses has increased in countries plagued by the corona virus.

According to the World Health Organization, 28 million nurses are currently serving in the health sector

According to the report, the number of nurses has increased by 4,070,000 during the five-year period from 2013 to 2018, but there is still a shortage of 5.9 million nurses globally.

According to the World Health Organization, there is a shortage of 9 million nurses worldwide and if we talk about Pakistan, there is a need for about 1.3 million nurses. There is one nurse with three doctors in the country.

## **Literature Review**

Anne Aquilia et al., (2020) described In Covid-19 current situation, the role of nurse leaders has become so important and diverse that it was unimaginable until a year ago. Because the role of

these leaders is key as well as the doctor. During this epidemic, nurse leaders have learned how to make decisions in uncertainty, how to handle inpatients and their families. The situation should be controlled. They also know how to provide maximum comfort and treatment to patients in limited facilities. The responsibilities of the nurse leader have increased to deal with such a situation, so there is a need to focus on providing a better environment and facilities for the nurse leader and his subordinates.

As the largest group of health professionals, nurses have played a key role in responding to such crises according to public health. Nurses are involved at every level of patient management, including these include prevention and diagnosis and monitoring of coronavirus patients. Nurses are doing their duty risking their lives during epidemics. Because nurses are frontline coronavirus fighters, having the proper knowledge and skills to effectively manage coronavirus is very important ( Tarkikasharma and SaritaAhwal 2020 ).

There is a great need for traditional investors in the health sector for a better health system. The coronavirus has affected a wide range of areas of life, including the health sector. There is a great need to pay attention to the health sector ( ShipraGarg, 2020 )

Mohammad S. Alshmemriet al., (2020) described because nurses are at the forefront of the fight against the coronavirus, they need to be assisted with specific infection prevention procedures and the appropriate provision of protective clothing in their practice setting

SeriehPoortaghi et al., (2021). Nurse Managers take full responsibility for planning, organizing and directing their team to achieve positive results in the fight against the new Corona virus epidemic.

### **Effect of Covid-19 and Changes in the Nurses' Work Routine**

Ana Luiza (2020) the head of the nursing team is planning to do all the work properly, but also to provide the proper care to the patients. The head of the nursing team is the manager who to ensure that all tasks are carried out properly. The Nursing Team Manager is tasked with guaranteeing quality nursing care to all patients, and fully implementing changes in the healthcare sector.

Abdullelah Al Thobaityet. Al., (2020) Good governance is essential for the success of any project. Head Nursing plans all the time and how and when nursing work will be done. The nursing team is playing a key role in controlling Coronavirus disease.

### **Methodology**

The main purpose of this study is to describe the role of nurse managers during corona virus epidemics and the role of nurses in the fight against corona virus. The first section consists of an introduction, the second section discusses the relevant work, the third section explains the procedure, the fourth section presents the findings and conclusions of the study, and the last section contains the five results and Offers scope for the future. This data was collected by June 2021, obtained through study, experimentation and interpretation of the articles published on the WHO, Corona Virus website, NCOC website. To access scientific articles, a search was conducted on Google Scholars using descriptive words. Leadership, Nurses Management, The

Role of Nurses Against Covid-19 .The search for articles published in 2020 and 2021 whose full and detailed writings are available on the Internet in English has been taken.

This study was based on convenient sampling, convenient sampling means the selection of that part of population, which is assessable. The data collected from 15 Head Nurses using the convenient sampling techniques. The Likert scale was hired where ever applicable.

### Results and Discussion

**Table 1: the demographic characteristics of nursing managers who participated in the study**

| characteristics                                   |                     | Frequency     | Mean   | SD    | Test statistic | <i>p</i> value |
|---|---------------------|---------------|--------|-------|----------------|----------------|
| Gender  | Male                | 1 ( 6.7 % )   | 1.93   | 0.258 | -0.486         | .635           |
|   | Female              | 14 ( 93.3 % ) |        |       |                |                |
| Marital status                                    | Single              | 2 ( 13.3 % )  | 1.87   | 0.352 | 4.561          | .001           |
|   | Married             | 13 ( 86.7 % ) |        |       |                |                |
| Education   | Bachelor degree     | 12 ( 80 % )   | 1.20   | 0.414 | 0.047          | 0.546          |
|   | Master's degree     | 3 ( 20 % )    |        |       |                |                |
| Management level                                  | Head Nurse          | 8 ( 53.3 % )  | 1.60   | 0.737 | -1.056         | .310           |
|   | Nursing manager     | 5 ( 33.3 % )  |        |       |                |                |
|   | Clinical Supervisor | 2 ( 13.3 % )  |        |       |                |                |
| What is the biggest challenge during the epidemic | Lack of Awareness   | 3 ( 20% )     | 1.95   | 0.587 | -2.998         | .001           |
|   | Lack of Nurses      | 10 ( 66.7% )  |        |       |                |                |
|   | Lack of Facilities  | 2 ( 13.3 % )  |        |       |                |                |
| Vaccination Status                                | Yes                 | 14 (93.3 %)   | 1.07   | 0.258 | 0.010          | .040           |
|   | No                  | 1 ( 6.7 % )   |        |       |                |                |
| Attendance in COVID-19 related trainings          | Yes                 | 14 ( 93.3 % ) | 1.0667 | 0.258 | 0.486          | .635           |
|   | No                  | 1 ( 6.7 % )   |        |       |                |                |
| Age   |                     |               | 43.46  | 5.828 |                |                |
| General experience                                |                     |               | 10.65  | 4.86  | -.486          | .635           |
| Management experience                             |                     |               | 11.43  | 3.961 | -1.056         | .310           |

93.3% of the participants were female (Male = 1 and Female = 14). The average age of the respondent nurses was 43.46. The majority of the respondents 13 (86.7 %) Were married .When asked about their education, most of them were bachelor's degree. When asked about management level, most of them were 8 (53.3 %) head nurses. whereas 10 (66.7%) of the respondents, Department suffered the most shortage of nurses during the Coronavirus epidemic. When asked about vaccination status, 14 out of about 15 nurses were vaccinated. Most of manger nurses have an average of 10.65 years of general experience in the field. As an average of 11.43 years of experience in management. Moreover, independent t- tests show high mean scores to those the biggest challenge during the epidemic nurses who face lack of nurses ( $t = -2.998, p = 0.001$ ).

**Table: 2: The Number of Nurses available in the country by Population and Doctors**

|  | <b>Pakistan<br/>(2016)</b> | <b>Punjab<br/>(2015)</b> | <b>Sindh<br/>(2015)</b> | <b>KPK<br/>(2015)</b> | <b>Balochistan<br/>(2014-15)</b> |
|--|----------------------------|--------------------------|-------------------------|-----------------------|----------------------------------|
| <b>Population</b>  | 195390000                  | 1038337000               | 45988000                | 23836000              | 9942000                          |
| <b>No. of<br/>registered<br/>Doctors</b>                   | 195896                     | 80210                    | 7990                    | 3644                  | 2231                             |
| <b>No. of<br/>registered<br/>Nurses</b>                    | 99228                      | 60553                    | 1630                    | 3673                  | 790                              |
| Average No. of<br>Nurses<br>available per<br>Doctor        | 0.51                       | 0.75                     | 0.20                    | 1.01                  | 0.35                             |
| Average No. of<br>Nurses<br>available for<br>10,000 people | 5.08                       | 5.83                     | 0.35                    | 1.42                  | 0.79                             |

**Sources: Pakistan Household and Census 2017, Economic Survey of Pakistan 2016-17, Punjab Development Statistics 2016, Development Statistics of Sindh 2016, Development Statistics of Khyber Pakhtunkhwa 2017, Development Statistics of Baluchistan 2014-15**

Pakistan Household and Census 2017, Economic Survey of Pakistan 2016-17, Punjab Development Statistics 2016, Development Statistics of Sindh 2016, Development Statistics of Khyber Pakhtunkhwa 2017, Development Statistics of Balochistan 2014-15 and Pakistan Medical and Dental Council. According to the analysis, the country currently needs a total of 1,038,873 nurses for every 10,000 population, while the latest available number of nurses (as of

2016) is only 99,228. In other words, the country is currently facing a shortage of 939,645 nurses. And if we look at this reduction in percentage, then contrary to the country's need, the country is currently facing a shortage of 90.4% nurses. Similarly, if we consider the scale of 4 nurses for a doctor, then by February 28, 2018, the number of registered MBBS, specialists and doctors coming from abroad with PMDC is 423,000. Hundred is 60. For which a total of 1,692,640 nurses are required. And on this scale, the country is currently facing a shortage of 1,593,412 nurses and the percentage reduction is 94.1%.

If we compare the availability of nurses with these two criteria, there were on average only 5 nurses for every 10,000 population in the country till 2016. By 2016, the average number of nurses for each doctor was less than one point, or 0.51. Sindh province currently faces the biggest shortage of nurses in the country with a population of 10,000 and one doctor. Where 99.3% less than the total number of nurses required for a population of ten thousand.

With regard to doctors, the reduction is 99.7%. Similarly, Sindh has the highest number of nurses available for a population of 10,000 and one doctor. According to statistics, by 2015, the average number of nurses available for a doctor in the province was only 0.20 and the average number of nurses for a population of 10,000 was only 0.35.

**Table 3: International standards for the required number of Nurses and the Situation in the Country**

|   | World Health Organization   | Total No. of Nurses available required | No. of Nurses available and year | Shortage of Nurses (Number) | Shortage of Nurses (percentage ) |
|---|-----------------------------|--|----------------------------------|-----------------------------|----------------------------------|
| <b>Pakistan</b>                             |                             |  |                                  |                             |                                  |
| No. of Nurses required for people 207774520 | 50 Nurses for 10,000 people | 1038873                                | 99228 (2016)                     | 939645                      | 90.4                             |
| Nurses needed for 423160                    | 4 Nurses for 1 Doctor       | 1692640                                | 99228 (2016)                     | 1593412                     | 94.1                             |
| <b>Punjab</b>                               |                             |  |                                  |                             |                                  |
| No. of Nurses required for people 10012442  | 50 Nurses for 10,000 people | 550062                                 | 60533(2015)                      | 489529                      | 89.0                             |
| Nurses needed for 188358                    | 4 Nurses for 1 Doctor       | 753432                                 | 60533(2015)                      | 692899                      | 92.0                             |
| <b>Sindh</b>                                |                             |  |                                  |                             |                                  |

|   |                             |        |               |        |      |
|---|-----------------------------|--------|---------------|--------|------|
| No. of Nurses required for people<br>47886051 | 50 Nurses for 10,000 people | 239430 | 1630 (2015)   | 237800 | 99.3 |
| Nurses needed for 150288                      | 4 Nurses for 1 Doctor       | 601152 | 1630 (2015)   | 599522 | 99.7 |
| <b>KPK</b>                                    |                             |        |               |        |      |
| No. of Nurses required for people<br>30523371 | 50 Nurses for 10,000 people | 152617 | 3673 (2016)   | 148944 | 97.6 |
| Nurses needed for 54430                       | 4 Nurses for 1 Doctor       | 217720 | 3673 (2016)   | 214047 | 98.3 |
| <b>Balochistan</b>                            |                             |        |               |        |      |
| No. of Nurses required for people<br>12344408 | 50 Nurses for 10,000 people | 61772  | 790 (2014-15) | 60932  | 98.7 |
| Nurses needed for 12562                       | 4 Nurses for 1 Doctor       | 50248  | 790 (2014-15) | 49458  | 98.4 |

Source: Population Census 2017      No. of Doctors 28 Feb 2018

**Punjab Development Statistics 2016, Development Statistics of Sindh 2016, Development Statistics of Khyber Pakhtunkhwa 2017, Development Statistics of Baluchistan 2014-15**

The World Health Organization has set two standards according to which there should be at least 50 nurses for every 10,000 population or a team of 4 nurses with each doctor. With these two criteria in mind, when we look at the situation of the required number of nurses in Pakistan, a serious crisis arises.

According to a World Health Organization survey, 77% of the world's developed countries are currently facing a shortage of nurses. While this global shortage of nurses affects the health system and patients, it also has a negative impact on nurses.

Nurses' migration is driven by a number of factors, including internal stress and external stress. External tensions are due to globalization and the free market. Vocational training, good pay, benefits and better living conditions are the factors of tension and the thirst for these factors leads to pushing. It is difficult to provide accurate statistics on Pakistani nurses working abroad. One source that is currently available is the Bureau of Immigration and Overseas Employment Pakistan's statistics, which show that 8374 nurses from Pakistan from 1971 to February 2018

traveled from Pakistan to the rest of the world. Other countries have migrated on employment visas.

Almost all countries in the world, whether developed or developing, need nurses. This can be estimated from the US Bureau of Labor Statistics estimate that by 2022, 500,000 registered nurses in the United States will retire, and the United States will need 1.1 million nurses to replace them and avoid a shortage of nurses. Even now, the nursing sector in the United States creates 100,000 jobs each year, the highest number of jobs created compared to other sectors. And a significant portion of this need is met by international nurses. Thus, 15% of registered nurses working in the United States are from abroad.

### **The main reasons for the low number of nurses in the country**

One of the main reasons for the low number of nurses in the country is the limited number of nursing educational institutions. At present, there are 128 diploma level general nursing institutes in the country approved by the Pakistan Nursing Council with a total of 9468 seats. Similarly, there are 39 institutions offering one-year Post Basic Specialist Diploma.

### **In such a situation, how can the number of nursing in the country be increased**

There are two possible ways to do this. Either increase the number of nursing education institutions in the country and the number of seats available in them. And incentives should be provided to attract students to this department. And increase the prestige of the profession.

The coronavirus has greatly increased the workload of nurses. Nurses are also on duty at the Corona Campus, which is a very difficult routine. The nurses deal with Corona's patients on the front line and compete with Corona. The outbreak of the coronavirus has caused the most difficulties for people in the medical field as their routine life will change drastically.

With the advent of corona virus, professional life as a whole has become a bit more difficult and the duration of shifts has increased. Because patients have to be transferred to other wards after screening and it is a very dangerous disease which is very difficult to avoid.

With the advent of corona virus, professional life as a whole has become a bit more difficult and the duration of shifts has increased. Because patients have to be transferred to other wards after screening and it is a very dangerous disease which is very difficult to avoid.

The life of nurses has become very tough and challenging since the advent of Corona virus. The duration of shifts depends on the number of patients. As more patients come in, nurses are assigned duties accordingly. If nurses used to shift eight hours, now it takes twelve to fourteen hours. Patients have to be traced.

### **Roles of Nurse Managers during the New Coronavirus Pandemic**

Nursing Manager Organizing nursing staff and providing professional guidance. Participate in research activities to make nursing services more effective. Improving relationships with other agencies working in the community.

The performance of nurse manager during the COVID-19 epidemic has been highlighted with many positive aspects. But along with this, shortcomings in nursing management were also observed. These shortcomings need to be rectified in order to further improve the sector. The



nurses could be brought in and good relations could be established between the patients and them.

### Conclusion and Future Scope

The nursing task force and nurse management need to be further empowered to provide quality care to patients and deal with this epidemic so that it can be helpful in dealing with this epidemic.

Nurses face many challenges, so management must take steps to increase their motivation and reduce their risk of infection and stress. Nurses should be better physically and psychologically so that they can perform their duties well. Manager should always be well aware of the problems of its staff.

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