



## The Role of Nurse Managers to Overcome Challenges Facing them During COVID-19 Pandemic

Dr.Eman Salman Taie<sup>(1)</sup>, Dr.Marwa Mohamed Abd El-Aleem<sup>(2)</sup>, Soad Alaa Ali Ibrahim<sup>(3)</sup>

- <sup>1.</sup> Professor of Nursing Administration -Faculty of Nursing Helwan University<sup>(1)</sup>,
- <sup>2.</sup> Assistant professor of Nursing Administration- Faculty of Nursing Port-Said University<sup>(2)</sup>,
- <sup>3.</sup> Bcs. Nursing sciences Faculty of Nursing Zagazig University<sup>(3)</sup>

### Abstract

**Background:** As the coronavirus disease, 2019 pandemic is considered the largest community health event in more than a century, the significance of nursing is being perceived by legislators and communities. **Aim:** The study aimed to assess nurse managers' role to overcome challenges facing them during COVID-19 pandemic. **Methods:** Descriptive design was used. **Tools:** Two tools were used to collect data, nurse managers' knowledge about COVID-19 pandemic, and role of nurse managers during COVID-19 questionnaire. **Result:** there were less than three quarters of nurse managers had high total level of challenges during COVID-19 pandemic. As well, more than half of studied nurse managers performed their role facing COVID-19 challenges with a high level. **Conclusion:** the study finding concluded that the highest level of challenges during COVID-19 pandemic facing the nurse managers were stigma and discrimination challenges. Furthermore, the study illustrated that nurse managers' role to overcome the challenges which facing them during COVID-19 pandemic were to improve coworkers' relations, increase community awareness and knowledge about COVID-19 pandemic, and the necessity of healthcare providers' role.

**Recommendations:** Develop training program conferences and seminars for nurse managers about crisis management.

**Further studies:** Assess the long-term impact of the pandemic on the nursing profession.

**Keywords:** Challenges, COVID-19, Nurse Managers, Role.

## Introduction

COVID-19 had been distributed since December 2019 in China, and in less than four months, it has spread throughout the world at an enormous speed. Under this circumstance, the World Health Organization (WHO) declared it a pandemic on March 11, 2020 (Lai C-C, et al, 2020).

The novel coronavirus is a strange virus with unknown causes, a wide range of symptoms, and a wide range of complications. Some people who are affected have no or very slight symptoms, while others develop major problems such pneumonia, respiratory distress, hypoxia, and even death (Ji et al., 2020; Cascella et al., 2023).

The World Health Organization procedures must be implemented by health care personnel, especially nurses, who are on the front lines of health-related disasters such as the COVID-19 epidemic. Nurses are faced to workplace risks induced by the occurrence of COVID-19 and its implications when working with people in outpatient care and intensive care units due to the specific nature of the nursing profession (Tsay, S. F., et al, 2020; Jónsdóttir et al., 2022)

The current coronavirus disease pandemic has prompted significant transformations in the framework of our hospitals. With the development of the COVID-19 intensive care units, critical care nurses, who are directly specialized in providing care for the most critically affected patients, are facing new obstacles in providing this care (Sorbelli M, et al, 2019; Vázquez-Calatayud et al., 2022).

The sudden organizational changes imposed by hospital managers in order to give an immediate reaction to this extraordinary resource crisis in health care have resulted from the increase in critically ill patients. Because of these conditions, new nurse management challenges and obstacles have arisen, which demand our attention (Bambi S, et al, 2020; Jabbari et al, 2022).

In addition to psychological issues, nurses may face moral distress, lengthy work hours, and tiredness. However, there are organizational issues that are outside the nurses' control but have an impact on them. There is a nursing shortage, as well as severe workloads and a lack of personal protective equipment (Radfar, M., et al. 2021; Guttormson et al. 2022)

Also, bad working conditions for nurses can contribute to burnout, job frustration, and a higher turnover rate. These issues increase the worldwide staffing shortage, degrade the quality of care by putting higher expenditures on health-care organizations, and ultimately lower patient satisfaction (Zamanzadeh, et al., 2020; Ye, Y., et al., 2023).

All nurse managers working today have never had to deal with a situation as difficult as the COVID19 pandemic. Such a disaster will have a lasting impact on all nursing professionals, both now and in the future none of them has ever been in such a state of ambiguity, struggle, or uncertainty. Nurse managers are all seeking to manage this situation with as little losses as possible (Moore J. 2020; Ozmen & Arslan, 2022).

They must also be able to properly deal with challenges that arise in order to get the best possible conclusion. Effective management is critical for healthcare staff well-being during times of high stress, like as the COVID19 pandemic (Woodford H, et al. 2020; Skogsberg et al. 2022).

Nurse managers had also faced the challenge and threat of managing the crisis with fragile health supplies and resources, a changing workforce, and stressed staff dealing with fear, uncertainty and the helpless of not being able to provide humane care for COVID-19 patients and their families (Hofmeyer & Taylor, 2020; Irandoost et al. 2022 ).

Vol. 3, Issue 5, Month: March 2024, Available at: <https://hijnrp.journals.ekb.eg/>

As a result, it appears that efforts to address these challenges are required in order to provide insight into these issues and thus facilitate changes in the current situation in order to improve nurses' working conditions, provide safe and quality care for patients, and ultimately ensure patient safety. In that critical circumstances, a thorough awareness of these challenges can assist nurse managers in implementing suitable steps to overcome challenges, meet the obstacles faced by nurses, and deliver high-quality, safe patient care (Moradi, Y., et al, 2021; Dobrowolska et al, 2023).

### Significance of the study:

Globally speaking, the COVID-19 epidemic has affected nursing everywhere. The requirement to hospitalize critically ill patients during the epidemic has had a substantial impact on the media's and the professional literature's attention to nurses and the care they give. There has not been any research done on the experiences of nurse supervisors, who oversee front-line nurses and oversee COVID-19 patient units. It is possible to hypothesize that nurse managers have also experienced some of the health effects that front-line nurses have been well documented in the literature. Specifically, all nurses encountered human pain and death (Sun et al., 2020; Cui et al., 2021; Zanini et al.,2022).

The global COVID-19 outbreak poses a serious threat to public health. The problems posed by this complex pandemic are remarkable. Nurses worldwide battle not only the effects of COVID-19 on their lives and the lives of their families, but also the long hours they work in an environment where workplace safety is constantly in danger. One of those challenges is the obvious stress that nurses experience. As a result, nurse supervisors ought to assist nurses more in their fight against the COVID-19 pandemic. To maintain the mental health and morale of their employees, they ought to make alternative solution suggestions (Buheji et al., 2020; Yuanyuan et al.,2020; Filip et al.,2022).

### Aim of the study

The aim of the study is to assess nurse managers' role to overcome challenges facing them during COVID-19 pandemic, through:

1. Assess nurse managers' knowledge about COVID-19.
2. Identify challenges facing nurse managers during COVID-19.
3. Determine role of nurse managers to overcome those challenges.

### Research questions

- 1- What is the nurse managers' knowledge about COVID-19?
- 2- What are challenges nurse managers' face during COVID-19?
- 3- What is the nurse managers' role to overcome those challenges?

### Subjects and Methods

#### Research design:

Descriptive research design employed in conducting the study

#### Setting

This study conducted at Al-Ahrar Zagazig Teaching Hospital, Al-Ahrar Teaching Hospital.

**Sample size:**

The study will included all nurse managers who will be available at the time of data collection and accept to participate in the study. The total number of nurse managers were (n=120).

**Tools of data collection**

Two tools were used for collecting data included:

**First tool: Nurse Managers' knowledge about COVID-19 pandemic questionnaire:** This tool was developed by the researcher after reviewing the relevant literature (Burger, et al, 2020; Gab Allah, et al, 2020; El-Monshed, et al, 2021).

**It consisted of two parts:**

**Part I: personal data of nurse managers:** this part included age, gender, educational level in nursing, current position, and years of experience.

**Part II: Nurse Managers' knowledge about COVID-19:** This part consisted of (16 items) about COVID-19 which classified into four dimensions, first dimension was mode of transmission contain (5 items), the second dimension was signs and symptoms contain (5 items), the third was risk factors contain (1 item), and finally the fourth dimension was prevention which contain (5 items).

**Scoring system:**

Responses of participants were measured on a 3 points likert scale ranged from agree, neutral, and disagree. Agree was scored as "3", Neutral was scored as "2", while disagree was scored as "1". The cut-off point for the sum of all 16 items (score range 16-48) is between 29 and 36. The total score was statistically calculated by summing scores of all categories where:

- **High level** > 75%. (>36 points)
- **Moderate level** 60 – 75%. (>29-36 points)
- **Low level** < 60%. ( $\leq$  29 points)

**Second tool: Role of nurse managers during COVID-19 questionnaire:** this tool was developed by the researcher after reviewing the relevant literature (Limbu DK, et al, 2020; Mo, et al, 2020; GabAllah, 2021; Poortaghi, et al, 2021; Ménard, et al, 2022; Vázquez, et al, 2022).

**It was consisted of two parts:**

**Part I: Challenges facing nurse managers during COVID-19.** It consisted of (35 items) which classified into seven domains. The first domain was personal challenges which contain (6 items), the second domain was organizational challenges which contain (10 items), the third domain was Challenges related to management contain (5 items), the fourth domain was Stigma and discrimination challenges contain (2 items), the fifth domain was Challenges related to work load contain (4 items), the sixth domain was Human resources challenges contain (6 items), the seventh domain was Material and financial resources challenges which contain (5 items).

**Scoring system:**

The items in the "Part one of the role of nurse managers during COVID-19 questionnaire" were scored on a 3 points likert scale ranged from agree, neutral, and disagree. Agree was scored as "3", Neutral was scored as "2", while disagree was

Vol. 3, Issue 5, Month: March 2024, Available at: <https://hijnrp.journals.ekb.eg/>

scored as “1”. The cut-off point for the sum of all 35 items (score range 35-105) is between 63 and 79. The total score was statistically calculated by summing scores of all categories where:

- **High level** > 75%. (>79 points)
- **Moderate level** 60 – 75%. (63-79 points)
- **Low level** < 60%. (<63 points)

**Part II: Role of nurse managers to overcome challenges facing them during COVID-19.** It consisted of (55) items which classified into seven domains. The first domain was managing personal challenges which contain (15 items), second domain was managing organizational challenges which contain (10 items), third domain was managing challenges related to management contain (5 items), the fourth domain was managing stigma and discrimination challenges contain (3 items), fifth domain was managing challenges related to work load contain (5 items), the sixth domain was managing human resources challenges contain (7 items), the seventh domain was managing material and financial resources challenges which contain (10 items).

#### Scoring system:

The items in the "Part two of the role of nurse managers during COVID-19 questionnaire" were scored on a 3 points likert scale ranged from agree, neutral, and disagree. Agree was scored as “3”, Neutral was scored as “2”, while disagree was scored as “1”. The cut-off point for the sum of all 55 items (score range 55-165) is between 99 and 124. The total score was statistically calculated by summing scores of all categories where:

- **High level** > 75%. (>124 points)
- **Moderate level** 60 – 75%. (99-124 points)
- **Low level** < 60%. (<99 points)

#### Validity of the tools

Face and content validity for the study tools were done. Tools were translated into Arabic and were tested by a jury group of three experts specialized in nursing administration.

#### Reliability of the tools

Tools were tested by Cronbach's alpha:

First tools: Nurse managers' knowledge about COVID-19 pandemic questionnaire cronbach's alpha showed ( $\alpha = 0.972$ ). And second tools: Role of nurse managers during COVID-19 questionnaire showed ( $\alpha = 0.962$ ).

#### Ethical consideration

An official permission to conduct the proposed study was obtained from the Scientific Research Ethical Committee at faculty of nursing, Helwan University. In addition, an approval was obtained from hospital manager for data collection. The researchers obtained informed consent from study subjects. Also, were informed about the aim of the study, anonymity and confidentiality were guaranteed and subjects were informed that they were allowed to participate or not in the study, they had the right to withdraw from the study at any time. Ethics, values, culture and beliefs were respected during data collection.

### Field work

The actual fieldwork started at the beginning of August and was completed by the end of September 2022. The researcher met the nursing managers asking for cooperation and permission to conduct the study and to explain the aim of the study to gain approval for data collection. The researcher went to the selected hospital (6 days / week) for (6 hours / day) from (8 AM to 2 PM) during day shift and collected data by herself through meeting nurse managers, explaining the aim of the study and method of fulfilling the questionnaire. The researcher was present all the time during fulfilling the study tools to answer any questions. The time needed to complete the first tool was ranged between (10-20) minutes the second tool was ranged between (15-25) minutes. The researcher checked the completeness of each filled sheet to ensure that no absence of any data.

### Administrative Design

To carry out the study, an official letter was issued from the Faculty of Nursing, Helwan University to the hospital manager and the nursing director of Al-Ahrar Zagazig Teaching Hospital. The letter explained the aim of the study to facilitate data collection phase. The researcher explained the importance of the study and the implication of expected results for the study subjects to obtain their permission for data collection in their hospital.

### Statistical Design:

Data collected from the studied sample was revised, coded, and entered using the computer software PC. Data entry and statistical analysis were fulfilled using the statistical package for social sciences (IBM SPSS 24.0). Data were presented using descriptive statistics in the form of frequencies, percentages for non-numerical data and mean, standard deviation (+SD) for parametric numerical data. Also, using analytical statistics in the form of chi square test to examine the relationship between two qualitative variables. Correlation between variables was done using Pearson correlation for parametric data. For all above-mentioned statistical tests done, the threshold of significance is fixed at 5% level (p value). P value of  $\leq 0.05$  indicates a significant result. While p value of  $\leq 0.01$  indicates a high significant result.

### Results:

**Table (1)** illustrates that more than one third (34.2%) of nurse managers aged between 35 to less than 45 years, More than two thirds of studied nurse managers (66.7%) were females, while only one third (33.3%) of them were males. In relation to their educational level in nursing, more than half (56.7%) of studied nurse managers bachelor's degree in nursing, regarding their current position more than two thirds (66.7%) of the studied nurse managers were head nurses, less than one fifth (15.9%) of them were nursing supervisors.

**Figure (1)** shows that less than two thirds of the studied nurse managers (65%) had high level of knowledge about COVID-19. While, more than quarter (24.2%) had moderate knowledge level, and only (10.8%) had low knowledge level.

**Table (2)** illustrated that less than three quarters (72.5%) of nurse managers had high total level of challenges during COVID-19 pandemic, and only 18.3% and 9.2% of them had faced moderate and low levels of challenges during COVID-19 pandemic respectively.

The highest level of challenges during COVID-19 pandemic facing them is Stigma and discrimination challenges (85.8%); followed by Human resources challenges (80%); Challenges related to management (79.2%); Personal challenges (76.7%);

Vol. 3, Issue 5, Month: March 2024, Available at: <https://hijnrp.journals.ekb.eg/>

Challenges related to workload (71.7%); Material and financial resources challenges (59.2%); and Organizational challenges (57.5%).

**Table (3)** Reveals that more than half (52.5%) of studied nurse managers performed their role facing COVID-19 challenges with a high level, The highest role of nurse managers to overcome those challenges in COVID-19 was “Managing human resources challenges” item (72.5%); followed by “Managing management challenges” item (59.2%); “Managing organizational challenges” item (52.5%); “Managing personal challenges” item (51.7%); “Managing stigma and discrimination challenges” item (49.2%); “Managing work load challenges” item (43.3%) and “Managing material and financial resources challenges” item (40.8%).

**Figure (2)** illustrated that less than three quarters (72.5%) of nurse managers had high total level of challenges during COVID-19 pandemic, and only (18.3% & 9.2 %) of them had faced moderate and low levels of challenges during COVID-19 pandemic respectively. While, more than half (52.5%) of studied nurse managers performed their role facing COVID-19 challenges with a high level, while more than quarter of them (27.5%) had moderate level and only one fifth (20%) of studied nurse managers performed their role facing COVID-19 challenges with a low level. In addition, less than two-thirds (62.5%) of nurse managers had a high level of performing their role during COVID-19. While, more than one fifth (22.5%) of them had moderate level and only (15%) had low level of performing their role during COVID-19.

**Figure (3)** shows that there was a highly statistically significant positive correlation between nurse managers' knowledge about COVID-19 and their role facing challenges during COVID-19 pandemic.

Table (1) Personal data of nurse managers during COVID-19 pandemic. (n=120)

Personal data	Head nurses (n=120)	
	N	%
<b>Age (years)</b>		
25- <35	39	32.5
35 - <45	41	34.2
≥45	40	33.3
<b>Mean±SD</b>	<b>24.93±3.01</b>	
<b>Gender</b>		
Male	40	33.3
Female	80	66.7
<b>Educational level in nursing</b>		
Bachelor's degree	68	56.7
Postgraduate diploma degree	40	33.3
Master's degree	10	8.3
Doctoral degree	2	1.7
<b>Years of experience</b>		
1 - <5 years	35	29.2
5- <10 years	45	37.5
≥ 10 years	40	33.3
<b>Mean±SD</b>	<b>28.69±3.66</b>	
<b>Current position</b>		
Head nurse	80	66.7
Nursing supervisor	19	15.9
Nursing director	1	0.8
Quality manager	10	8.3
Infection control manager	10	8.3

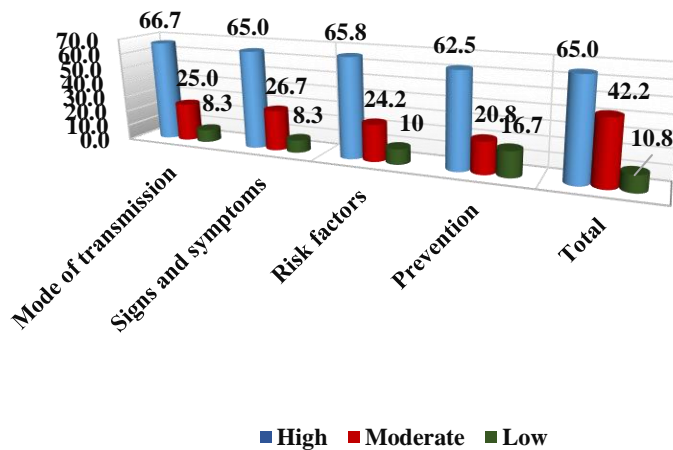


Figure (1) Total score of knowledge for nurse managers about COVID-19 pandemic (n=120).



**Table (2): Total challenges facing nurse managers during COVID-19 pandemic (n=120).**

Challenges dimension	Level of Challenges facing nurse managers' dimension						Mean	SD
	High >75		Moderate 60-75%		Low < 60%			
	N	%	N	%	N	%		
1. Personal challenges	92	76.7	16	13.4	12	9.9	34.5	4.9
2. Organizational challenges	69	57.5	29	24.2	22	18.3	19.57	6.29
3. Challenges related to management	95	79.2	18	15	7	5.8	22.37	4.03
4. Stigma and discrimination challenges.	103	85.8	7	5.9	10	8.3	31.17	5.67
5. Challenges related to workload	86	71.7	24	20	10	8.3	36.28	7.98
6. Human resources challenges	96	80	17	14.2	7	5.8	22.35	4.07
7. Material and financial resources challenges	71	59.2	41	34.2	8	6.6	20.16	5.71
<b>Total</b>	<b>87</b>	<b>72.5</b>	<b>22</b>	<b>18.3</b>	<b>11</b>	<b>9.2</b>	<b>26.65</b>	<b>5.52</b>

**Table (3) Total role of nurse managers to overcome those challenges in COVID-19 (n=120)**

nurse managers' role dimensions	level of nurse managers' role dimensions						Mean	SD
	High >75		Moderate 60-75%		Low < 60%			
	N	%	N	%	N	%		
1. Managing personal challenges	62	51.7	33	27.5	25	20.8	37.6	5.4
2. Managing organizational challenges	63	52.5	28	23.3	29	24.2	30.4	4.5
3. Managing management challenges	71	59.2	41	34.2	8	6.6	20.2	5.7
4. Managing stigma and discrimination challenges	59	49.2	38	31.7	23	19.1	27.9	4.3
5. Managing work load challenges	52	43.3	33	27.5	35	29.2	25.7	4.4
6. Managing human resources challenges	87	72.5	22	18.3	11	9.2	26.6	5.5
7. Managing material and financial resources challenges	49	40.8	34	28.3	37	30.8	24.9	4.4
<b>Total</b>	<b>63</b>	<b>52.5</b>	<b>33</b>	<b>27.5</b>	<b>24</b>	<b>20</b>	<b>27.6</b>	<b>4.3</b>

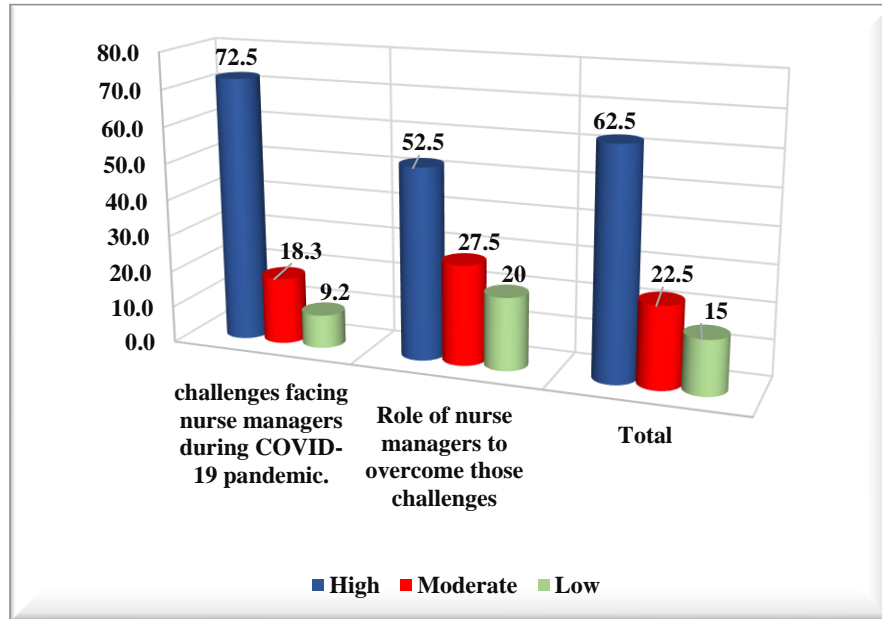


Figure (2) Level of nurse managers' role during COVID-19 (n=120)

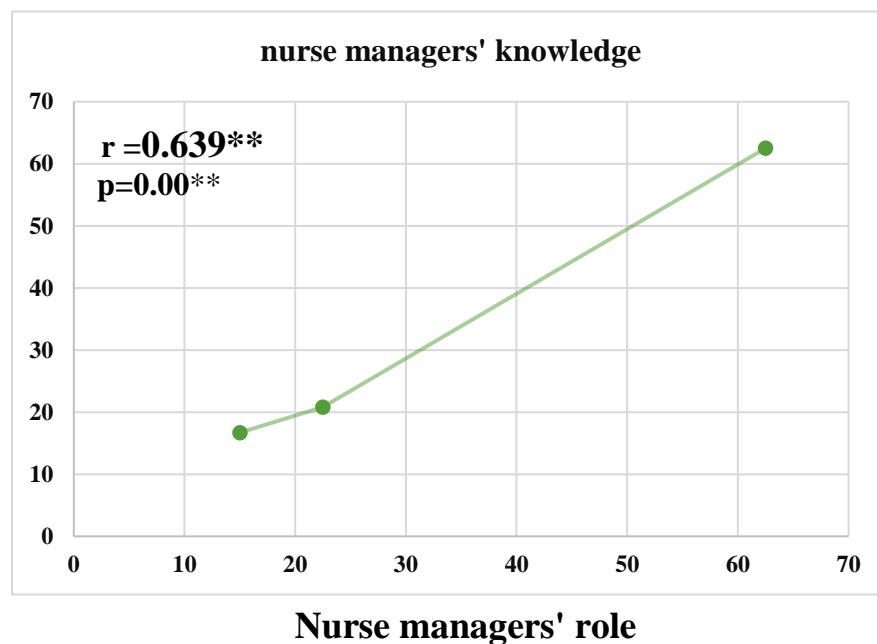


Figure (3) Scatter plot correlation between total nurse managers' knowledge about COVID-19 and their role facing challenges during COVID-19 pandemic (n=120).

## Discussion

In this study, the results demonstrated that less than two thirds of the studied nurse managers totally had high level of knowledge about COVID-19. And only about one tenth had low knowledge level. It also illustrates that, the highest mean score among nurse managers' knowledge dimensions was the mode of transmission of COVID-19 with mean  $\pm$  SD (69.14 $\pm$ 9.97); While the lowest mean  $\pm$  SD was the prevention dimension (63.64 $\pm$ 7.40).

These results are in congruent with a study by **Aryan and Ahmad, (2022)** who found more than two thirds of the nurses correctly identified the social distance that should be maintained from other persons to avoid infection. In addition, more than two thirds of the infected patients responded to the less common symptoms of COVID-19 infection.

Also, these findings are consistent with **Zhang et al., (2020)** who founded nurses compromised less than half of the study population. Results showed that most of health care workers had adequate knowledge about COVID-19.

Other studies supported the current study results, Such as **Huynh et al., (2020)**, **Saqlain et al., (2020)** and **Shi et al., (2020)**, Who showed that the majority of health care workers had adequate levels of knowledge about COVID-19.

In the study by **Huynh et al., (2020)**, reported that the majority of healthcare workers had good knowledge and positive attitude toward COVID-19. However, the level of some knowledge and attitude lower than that expected for their position level towards the virus. In the study by **Saqlain et al., (2020)**, showed that healthcare workers have good knowledge, a positive attitude and good practice regarding COVID-19.

In this study we found that more than two thirds of nurse managers had high total level of challenges during COVID-19 pandemic, and only less than one fifth and less than one tenth of them had faced moderate and low levels of challenges during COVID-19 pandemic.

Also, a study by **Gab Allah (2021)**, who revealed that there was high percentage of nurse managers reported being faced with nearly all challenges presented while staff safety and risk for infection, stress, fear and anxiety and work-overload were the three highly reported challenges by the majority of managers.

These results were in agreement of a study by **Nyashanu et al., (2020)** [40] who identified nine key themes in their qualitative study. The top challenges among managers were lack of pandemic preparedness, shortage of personal protective equipment, evolving guidance, shortage of staff and delayed testing while other identified challenges were anxiety and fear amongst professionals, challenges in fulfilling social shielding responsibility, challenges in enforcing social distancing, and anxiety and fear amongst residents and service users.

Moreover, a research by **Nyashanu et al., (2020)** who indicated that nurse managers in a crisis should ensure both the physical and mental protection of staff members, such as facilitating an adequate work environment, attending to psychological needs and/or providing emotional support.

In addition, the study by **Ozmen & Arslan Yurumezoglu, (2022)** who found that the nurse managers were especially responsible for managing the crisis as well as their staff's emotions, ensuring employee and patient safety, continuously sharing information and providing continuous education

The study results demonstrated that more than half of studied nurse managers performed their role facing COVID-19 challenges with a high level, and only one fifth of studied nurse managers performed their role facing COVID-19 challenges with a low level.

The study results on the same line with **Freitas et al.,(2021)** who found that despite numerous challenges, nursing leaders showed great capacity for adaptability, creativity and innovation to design and implement solutions, and improve the experience of the staff, patients and their families. Even though they were often overworked and stressed, nursing leaders felt empowered by recognizing their capabilities, which were put to the test during the times of crisis and noticed the development of new skills. Moreover, personal issues were also involved, and as humans under extreme pressure, nursing leaders recognized the importance of care and self-care and the transformative experience they will take with them for life.

The study results illustrated that there was a highly statistically significant positive correlation between all dimensions of nurse managers' knowledge about COVID-19 and all dimensions of their role facing challenges during COVID-19 pandemic. Similarly, a research by **El-Monshed et al., (2021)**, who found that there was a statistically significant positive linear correlation between knowledge and dimensions of their role facing challenges during COVID-19 pandemic as follows ( $r = 0.478, P \leq 0.001$ ).

Also, a study by **Abd ElAziz et al., (2021)** who found that there was a significant positive correlation between the score of knowledge and the score of practice with statically significant differences ( $p < 0.05$ ), revealing that the Application of educational program had statistically significant effect on knowledge and practices of nurses regarding caring of COVID-19 patients.

## Conclusions

The study finding concluded that less than two thirds of the studied nurse managers had high level of knowledge about COVID-19. Regarding challenges facing the nurse managers of during COVID-19

Also, the study show that the highest level pandemic were stigma and discrimination challenges; followed by human resources challenges; challenges related to management; personal challenges; challenges related to workload; material and financial resources challenges; and organizational challenges.

Furthermore, the study illustrated that nurse managers' role to overcome the challenges which facing them during COVID-19 pandemic were to improve coworkers' relations, increase community awareness and knowledge about COVID-19 pandemic, and the necessity of healthcare providers' role.

In addition, there was a significant positive correlation between all dimensions of nurse managers' knowledge about COVID-19 and all dimensions of their role for facing challenges during COVID-19 pandemic.

## Recommendations

In the light of results of this study, the following recommendations were suggested:

### 1. Healthcare organization:

- Develop training program conferences and seminars for nurse managers about crisis management including COVID-19 pandemic.
- Follow infection control management measures to prevent the spread of infection.
- Prepare a good and suitable work environment for the whole organizations' staff.

### 2. Nurse managers and nurses:

- Apply the education as an in-service training program for nurses are needed to keep their knowledge and practices up to date on the management of COVID-19 patients.

Vol. 3, Issue 5, Month: March 2024, Available at: <https://hijnrp.journals.ekb.eg/>

- Open communication between staff nurses and managers, quick thinking, decision-making skills, flexibility, and caring relationships are important for providing a positive work environment in health institutions.
- Train the staff how to use equipment and supplies, setting up the nursing team, coordinating the flow of patients and recognizing the team's emotional needs.

### 3. Further studies:

- Assess the long-term impact of the pandemic on the nursing profession and the role of nurse managers.
- Explore the implications of the pandemic for future workforce planning, education, and leadership development in nursing.

## References:

1. **Abd ElAziz, M. A., Abd Elhafez, N., & Sayed, S. Y. (2021):** Effect of Nursing Educational Program on Nurses' Knowledge and Practices regarding Pandemic COVID-19 in Isolation Unit. *Egypt J Health Care*, 12(4), 248-263. <https://doi.org/10.18502/npt.v9i1.7328>
2. **Aryan, F., & Ahmad, M. (2022):** Nursing knowledge and perceptions of COVID-19 pandemic in Jordanian intensive care units. *Appl Nurs Res*, 67, 151628. <https://doi.org/10.1016/j.apnr.2022.151628>
3. **Bambi, S., Iozzo, P., & Lucchini, A. (2020).** New issues in nursing management during the COVID-19 pandemic in Italy. *American Journal of Critical Care*, 29(4), e92-e93.
4. **Buheji M, Buheid N.** Nursing human factor during COVID-19 pandemic. *Int J Nurs Sci*. 2020; 10(1): 12-24. <https://doi.org/10.5923/j.nursing.20201001.02>
5. **Burger C, Mehta N, Ortiz D, et al. (2020):** Assessing COVID-19-Related Knowledge, Attitudes, and Practices Among Hispanic Primary Care Patients: Protocol for a Cross-sectional Survey Study. *JMIR Res Protoc* 2021;10(1):e2526URL: <https://www.researchprotocols.org/2021/1/e25265>
6. **Cascella, M., Rajnik, M., Aleem, et al. (2023).** Features, evaluation, and treatment of coronavirus (COVID-19).
7. **Cui, S., Jiang, Y., Shi, Q., Zhang, et al. (2021).** Impact of COVID-19 on Anxiety, Stress, and Coping Styles in Nurses in Emergency Departments and Fever Clinics: A Cross-Sectional Survey. *Risk management and healthcare policy*, 14, 585-594. <https://doi.org/10.2147/RMHP.S289782>
8. **Dobrowolska, B., Gutysz-Wojnicka, A., Dziurka, et al. (2023).** Intensive care nurse managers' experiences during the first wave of the COVID-19 pandemic: Implications for future epidemiological crises. *PLOS ONE*, 18(8), e0290722. <https://doi.org/10.1371/journal.pone.0290722> DOI: 10.2196/25265
9. **El-Monshed, A. H., Amr, M., Ali, A. S., et al. (2021):** Nurses' knowledge, concerns, perceived impact and preparedness toward COVID-19 pandemic: A cross-sectional survey. *Int J Nurs Pract*, 27(6), e13017. <https://doi.org/10.1111/ijn.13017>
10. **Filip, R., Gheorghita Puscaselu, R., Anchidin-Norocel, L., Dimian, M., & Savage, W. K. (2022).** Global Challenges to Public Health Care Systems during the COVID-19 Pandemic: A Review of Pandemic Measures and Problems. *Journal of personalized medicine*, 12(8), 1295. <https://doi.org/10.3390/jpm12081295>
11. **Freitas, J. S., Queiroz, A. L., Bortotti, I. M., et al. (2021):** Nurse leaders' challenges fighting the COVID-19 pandemic: A qualitative study. *Open J Nurs*, 11(05), 267-280. <https://doi.org/0.4236/ojn.2021.115024>
12. **Gab Allah, A. R. (2021):** Challenges facing nurse managers during and beyond COVID-19 pandemic in relation to perceived organizational support. *Nurs Forum*, 56(3), 539-549. <https://doi.org/10.1111/nuf.12578>
13. **Guttormson, J. L., Calkins, K., McAndrew, et al (2022).** Critical Care Nurse Burnout, Moral Distress, and Mental Health During the COVID-19 Pandemic: A United States Survey. *Heart & lung: the journal of critical care*, 55, 127-133. <https://doi.org/10.1016/j.hrtlng.2022.04.015>
14. **Hofmeyer, A., & Taylor, R. (2021):** Strategies and resources for nurse leaders to use to lead with empathy and prudence so they understand and address sources of anxiety among nurses practising in the era of COVID-19. *Journal of clinical nursing*, 30(1-2), 298-305. <https://doi.org/10.1111/jocn.15520>.
15. **Huynh, G., Nguyen, T., Tran, V., et al. (2020):** Knowledge and attitude toward COVID-19 among healthcare workers at District 2 Hospital, Ho Chi Minh City [Original Article]. *Asian Pac J Trop Med*, 13(6), 260-265. <https://doi.org/10.4103/1995-7645.280396>
16. **Irandoost, S.F., Yoosefi Lebni, J., Safari, H. et al. (2022).** Explaining the challenges and adaptation strategies of nurses in caring for patients with COVID-19: a qualitative study in Iran. *BMC Nurs* 21, 170 (2022). <https://doi.org/10.1186/s12912-022-00937-8>

Vol. 3, Issue 5, Month: March 2024, Available at: <https://hijnrp.journals.ekb.eg/>

17. Jabbari, A., Salahi, S., Hadian, M., Khakdel, Z., Hosseini, E., & Sheikhbardsiri, H. (2022). Exploring the challenges of Iranian government hospitals related to COVID-19 pandemic management: a qualitative content analysis research from the nurses perspective. *BMC nursing*, 21(1), 226. <https://doi.org/10.1186/s12912-022-01008-8>
18. Ji, D., Zhang, D., Chen, Z., Xu, Z., Zhao, P., Zhang, M., Zhang, L., Cheng, G., Wang, Y., Yang, G., Liu, H., Li, B., Ji, J., Lau, G., & Qin, E. (2020). Clinical characteristics predicting progression of COVID-19. Retrieved from SSRN 3539674.
19. Jónsdóttir, H., Sverrisdóttir, S. H., Hafberg, A., Ómarsdóttir, G., Ragnarsdóttir, E. D., Ingvarsdóttir, S., Ingadóttir, B., Hafsteinsdóttir, E. J. G., Zoëga, S., & Blöndal, K. (2022). "There was no panic"-Nurse managers' organising work for COVID-19 patients in an outpatient clinic: A qualitative study. *Journal of advanced nursing*, 78(6), 1731–1742. <https://doi.org/10.1111/jan.15131>
20. Lai C-C, Shih T-P, Ko W-C, Tang H-J, Hsueh P-R. (2020): Severe acute respiratory syndrome coronavirus 2 (SARSCoV-2) and corona virus disease-2019 (COVID-19): the epidemic and the challenges. *International journal of antimicrobial agent*. 105924.
21. Limbu, D. K., Piryani, R. M., & Sunny, A. K. (2020). Healthcare workers' knowledge, attitude and practices during the COVID-19 pandemic response in a tertiary care hospital of Nepal. *PLOS ONE*, 15(11), e0242126. <https://doi.org/10.1371/journal.pone.0242126>.
22. Ménard, A. D., Soucie, K., Freeman, L. A., & Ralph, J. L. (2022). "My problems aren't severe enough to seek help": Stress levels and use of mental health supports by Canadian hospital employees during the COVID-19 pandemic. *Health Policy*, 126(2), 106-111. <https://doi.org/10.1016/j.healthpol.2022.01.002>
23. Mo, Y., Deng, L., Zhang, L., Lang, Q., Liao, C., Wang, N., Qin, M., & Huang, H. (2020). Work stress among Chinese nurses to support Wuhan in fighting against COVID-19 epidemic. *Journal of Nursing Management*, 28(5), 1002-1009. <https://doi.org/10.1111/jonm.13014>
24. Moore J. (2020). COVID-19: how nurse managers are dealing with the psychological toll of the pandemic. *Nursing Management*. Available at: <https://rcni.com/nursing-management/newsroom/analysis/COVID-19-how-nurse-managers-are-dealing-psychological-toll-of-pandemic-163396>.
25. Moradi, Y., Baghaei, R., Hosseingholipour, K., & Mollazadeh, F. (2021). Challenges experienced by ICU nurses throughout the provision of care for COVID-19 patients: A qualitative study. *Journal of nursing management*, 29(5), 1159-1168.
26. Nyashanu, M., Pfende, F., & Ekpenyong, M. (2020): Exploring the challenges faced by frontline workers in health and social care amid the COVID-19 pandemic: experiences of frontline workers in the English Midlands region, UK. *J Interprof Care*, 34(5), 655-661. <https://doi.org/10.1080/13561820.2020.1792425>
27. Ozmen, S., & Arslan Yurumezoglu, H. (2022): Nurse managers' challenges and opportunities in the COVID-19 pandemic crisis: A qualitative descriptive study. *Journal of nursing management*, 30(7), 2609–2619. <https://doi.org/10.1111/jonm.13817>
28. Poortaghi, S., Shahmari, M. & Ghobadi, A. (2021) Exploring nursing managers' perceptions of nursing workforce management during the outbreak of COVID-19: a content analysis study. *BMC Nurs* 20, 27. <https://doi.org/10.1186/s12912-021-00546-x>
29. Radfar, M., Hemmati Maslak Pak, M., & Mohammadi, F. (2021). The organisational and managerial challenges experienced by nurses recovered from COVID-19: A phenomenological study. *Journal of Nursing Management*, 29(8), 2353-2363.
30. Saqlain, M., Munir, M. M., Rehman, S. U., et al. (2020): Knowledge, attitude, practice and perceived barriers among healthcare workers regarding COVID-19: a cross-sectional survey from Pakistan. *J Hosp Infect*, 105(3), 419-423. <https://doi.org/10.1016/j.jhin.2020.05.007>
31. Shi, Y., Wang, J., Yang, Y., et al. (2020): Knowledge and attitudes of medical staff in Chinese psychiatric hospitals regarding COVID-19. *Brain Behav Immun Health*, 4, 100064. <https://doi.org/10.1016/j.bbih.2020.100064>
32. Skogsberg, M., Jarl, G., & Matérne, M. (2022). Health care workers' need for support from managers during the initial phase of the COVID-19 pandemic. *BMC health services research*, 22(1), 1563. <https://doi.org/10.1186/s12913-022-08937-9>
33. Sorbello M, El-Boghdady K, Di Giacinto I, et al. The Italian coronavirus disease 2019 outbreak: recommendations from clinical practice. *Anaesthesia*. 2020;75:724–732. doi:<https://doi.org/10.1111/anae.15049>.
34. Sun, N., Wei, L., Shi, S., Jiao, D., Song, R., Ma, L., Wang, H., Wang, C., Wang, Z., You, Y., Liu, S., & Wang, H. (2020): A qualitative study on the psychological experience of caregivers of COVID-19 patients. *American journal of infection control*, 48(6), 592–598. <https://doi.org/10.1016/j.ajic.2020.03.018>
35. Tsay, S. F., Kao, C. C., Wang, H. H., & Lin, C. C. (2020): "Nursing's response to COVID-19" Lessons learned from SARS in Taiwan. *International Journal of Nursing Studies*, 108, 103587.
36. Vázquez-Calatayud, M., Regaira-Martínez, E., Rumeu-Casares, C., et al. (2022): Experiences of frontline nurse managers during the COVID-19: A qualitative study. *J Nurs Manag*, 30(1), 79-89. <https://doi.org/10.1111/jonm.13488>
37. Woodford H, et al. Aiding staff wellbeing and resilience during the coronavirus pandemic. *Nursing Times [online] 2020*: 116(9):20-23.
38. Ye, Y., & Chandrasekaran, A. (2023): The impact of nurse staffing on turnover and quality: An empirical examination of nursing care within hospital units. *Journal of Operations Management*, 69(7), 1124-1152. <https://doi.org/10.1002/joom.1245>



Vol. 3, Issue 5, Month: March 2024, Available at: <https://hijnrp.journals.ekb.eg/>

39. **Yuanyuan M, Lan Deng M, Zhang B, et al.** Work stress among Chinese nurses to support Wuhan in fighting against COVID-19 Epidemic. *J Nurs Manag.* 2020; 28: 1002-1009. <https://doi.org/10.1111/jonm.13014>
40. **Zamanzadeh, V., Valizadeh, L., & Neshat, H. (2020):** Challenges of human resources management in nursing in Iran: A qualitative content analysis. *Nursing Open*, 7(1), 319– 325. <https://doi.org/10.1002/nop2.393>.
41. **Zanini, M., Catania, G., Hayter, M., Dasso, N., Ottonello, G., Aleo, G., Sasso, L., & Bagnasco, A. (2022):** Italian nurses' COVID-19 experiences from mass media interviews: a qualitative study. *Journal of preventive medicine and hygiene*, 62 (4), E795–E801. [https://doi.org/10.15167/2421-4248/jpmh2021\\_62.4.2024](https://doi.org/10.15167/2421-4248/jpmh2021_62.4.2024)
42. **Zhang, W., Zhao, Y., Zhang, F., et al. (2020):** The use of anti-inflammatory drugs in the treatment of people with severe coronavirus disease 2019 (COVID-19): The Perspectives of clinical immunologists from China. *Clin Immunol*, 214, 108393. <https://doi.org/10.1016/j.clim.2020.108393>