Evaluate the Knowledge of Nurses at Qala Hospital in Kalar, Iraq, Regarding the Prevention and Management of Pneumonia in Patients with COVID-19

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ABSTRACT

Background: Pneumonia is a common acute respiratory infection that affects the alveoli and airways; it is a significant health problem and is associated with morbidity and mortality in all age groups worldwide.

Objective: The objective of this study is to evaluate the knowledge and practices of nurses at Qala Hospital in Kalar, Iraq, regarding the prevention and management of pneumonia in patients with COVID-19.

Methods: A quantitative design descriptive cross-sectional study was used to evaluate was used to recruit a sample of 46 nurses in Qala Hospital in Kalar City, from April 2022. The study sample was chosen by convenience sampling technique. and The data for this study were collected using a researcher-designed questionnaire. The collected data were then analyzed using the Statistical Package for the Social Sciences (SPSS) version 22.

Results: Most of the study nurses 60.9% fell within the age range of 23-27 years, female, single, diploma in nursing, and had Experience as a Nurse (1-2) years. The study findings revealed more than half sufficient knowledge regarding the Prevention of pneumonia. Nurses weren't particularly unaware of the management of pneumonia. Good knowledge about the prevention and management of pneumonia in a patient with COVID-19. Statistically, a significant association was found between nurses' marital status and level of education, while no significant relationships with age and gender.

Conclusion: In this study, the majority of participants were female, young in age, and held a Nursing diploma. Around two-thirds of the participants had one to two years of experience working in a hospital setting. The findings suggest that nurses possess sufficient knowledge about the management of pneumonia. The main observation was that participants demonstrated good knowledge regarding the prevention and management of pneumonia in patients with COVID-19.

Keywords: Assessment, COVID-19, Knowledge, management, prevention, Pneumonia.

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تقييم معرفة الممرضات في مستشفى قلعة في كلار، العراق، فيما يتعلق بالوقاية من الالتهاب الرئوي وإدارته لدى المرضى المصابين بـكوفيد-١٩

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الخلاصة

الخلفية : الالتهاب الرئوي هو عدوى تنفسية حادة شائعة تؤثر على الحويصلات الهوائية والممرات الهوائية. إنها مشكلة صحية كبيرة وترتبط بالمراضة والوفيات في جميع الفئات العمرية في جميع أنحاء العالم.

الهدف : الهدف من هذه الدراسة هو تقييم معرفة وممارسات الممرضات في مستشفى قلا في كلار/ العراق، فيما يتعلق بالوقاية من الالتهاب الرئوي وإدارته لدى المرضى الذين يعانون من كوفيد-١٩.

الطرق : تم استخدام دراسة مقطعية وصفية ذات تصميم كمي لتقييم توظيف عينة مكونة من ٤٦ ممرضة في مستشفى قلا في مدينة كلار، اعتبارًا من أبريل ٢٠٢٢. تم اختيار عينة الدراسة باستخدام تقنية أخذ العينات الملائمة. وتم جمع بيانات هذه الدراسة باستخدام استبيان صممه الباحث. ثم تم تحليل البيانات المجمعة باستخدام الحزمة الإحصائية للعلوم الاجتماعية (SPSS) الإصدار ٢٢.

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النتائج : معظم الممرضات الدراسة ٦٠.٩% يندرجن ضمن الفئة العمرية ٢٣-٢٧ سنة، إناث، عازبات، دبلوم في التمريض، ولديهن خبرة كممرضة (١-٢) سنة. وكشفت نتائج الدراسة عن أكثر من نصف المعرفة الكافية فيما يتعلق بالوقاية من الالتهاب الرئوي. لم تكن الممرضات على علم بشكل خاص بإدارة الالتهاب الرئوي. معرفة جيدة حول الوقاية من الالتهاب الرئوي وإدارته لدى مريض مصاب بكوفيد-١٩. إحصائيا، وجدت علاقة ذات دلالة إحصائية بين الحالة الاجتماعية للممرضات ومستوى التعليم، في حين لا توجد علاقة ذات دلالة إحصائية مع العمر والجنس.

الاستنتاج : في هذه الدراسة، كانت غالبية المشاركين من الإناث، صغار السن، وحاصلات على دبلوم التمريض. كان لدى حوالي ثلثي المشاركين خبرة تتراوح من سنة إلى سنتين في العمل في أحد المستشفيات. وتشير النتائج إلى أن الممرضات يمتلكن المعرفة الكافية حول إدارة الالتهاب الرئوي. وكانت الملاحظة الرئيسية هي أن المشاركين أظهروا معرفة جيدة فيما يتعلق بالوقاية من الالتهاب الرئوي وإدارته لدى المرضى المصابين بكوفيد-١٩.

الكلمات المفتاحية : التقييم ، كوفيد-١٩ ، المعرفة ، الإدارة ، الوقاية ، الالتهاب الرئوي .

INTRODUCTION

Pneumonia is a serious health issue that affects people of all ages worldwide and is linked to significant morbidity and both short- and long-term mortality[1]. Pneumonia can be broadly categorized into two main types: community-acquired pneumonia (CAP) and hospital-acquired pneumonia (HAP). Pneumonia may be brought on by a wide range of microbes, including bacteria, respiratory viruses, and fungi. The incidence of these microbes varies greatly geographically[1]. Globally, pneumonia continues to be one of the most prevalent causes of acute illness and mortality, accounting for more than 2.5 million mortality in 2019[2].

Also pneumonia, viruses that affect the upper respiratory system can cause it. Adult viral pneumonia is most frequently brought on by SARS-CoV-2, COVID-19-causing viruses, and influenza viruses. RSV, or respiratory syncytial virus, is the most typical virus that causes viral pneumonia in young infants. In comparison to bacterial pneumonia, viral pneumonia is typically less severe and passes faster[3].

When COVID-19 pneumonia is severe, it can result in low blood oxygen levels, Respiratory failure and acute respiratory distress syndrome (ARDS) are potential complications that can arise from pneumonia. In the case of pneumonia caused by the SARS-CoV-2 virus, it often manifests as viral pneumonia affecting both lungs. Breathing problems arise as the lungs fill with fluid and oxygen exchange becomes more difficult. Before symptoms subside after recovery, it can take months[4].

Viral pneumonia is a prevalent cause of illness and can lead to significant morbidity and mortality, especially among the elderly population. Common viral pathogens responsible for viral pneumonia include the influenza virus, rhinovirus, adenovirus, and coronavirus.[3]. In patients with severe acute respiratory syndrome caused by coronavirus infection, the development of acute respiratory distress syndrome (ARDS) is the primary cause of mortality. This complication is particularly associated with coronavirus disease (COVID-19) pneumonia and is known to have a high mortality rate.[5,6].

In response to inflammation, the alveoli can generate an exudate that obstructs the exchange of oxygen and carbon dioxide. Additionally, white blood cells, predominantly neutrophils, migrate into the alveoli and occupy the normally air-filled spaces.[7]. Because of secretions and mucosal edema that partially occlude the bronchi or alveoli, certain areas of the lung do not get enough ventilation, which lowers the alveolar oxygen tension[8].

A ventilation-perfusion mismatch might then occur due to hypoventilation. The left side of the heart receives deoxygenated venous blood when it enters the pulmonary circulation and goes through underventilated regions[9]. The most common symptoms are pharyngitis, myalgia, rash, low-grade fever, pleuritic discomfort, headache, and low-grade fever. Sputum that is mucoid or mucopurulent is expectorant after a few days[10]. The lips and nail beds show central cyanosis and the cheeks are reddened in acute pneumonia a late sign of poor oxygenation hypoxemia[11].

Pneumococcal vaccinations and influenza vaccines have been readily accessible for many years, protecting two of the main causes of pneumonia. A vaccine has already been developed for the infection known as coronavirus disease 2019 (COVID-19), which has also been added to the list of causes of pneumonia.[12,13]

The management and prevention of pneumonia is the primary objective of nursing expertise to improve health[14] Nurses play a critical role in

limiting the spread of illness in addition to identifying infection indicators and educating patients on how to manage their infection. The chain of infection is a cyclical mechanism that depicts how an illness spreads. The transmission of infection can be prevented by putting interventions in place to disrupt one or more links in the chain of infection [15].

Aim of the Study

The team is inspired by nurses' knowledge of best practices for managing and preventing pneumonia so that it may be successfully treated both within and outside of the hospital. Nurses play a vital role in the clinical management of patients, ensuring proper infection control measures are implemented, and providing valuable insights for developing targeted strategies to prevent and control outbreaks within the general population.

SUBJECTS AND METHODS

From April 2022 to June 2023, a quantitative (descriptive cross-sectional) study was conducted to assess nurses' knowledge and practice regarding the prevention and management of pneumonia. A non-probability (purposive) sampling technique was employed to collect data from a total of 46 nurses out of 53 nurses. The selection criteria included both genders, nurses who agreed to participate, and all nurses working at Qala Hospital's Coronavirus unit in Kalar City. Nurses who had participated in the pilot study or refused to participate were excluded from the study.

After conducting a comprehensive literature review on the study topic, the researcher develops the data collection tools. These tools consist of three distinct parts, namely:

Part one: consists of five items that encompass nurse sociodemographic characteristics. These include age, gender, marital status, level of education, years of experience, experience specifically in the coronavirus/pneumonia unit, and any training courses related to the prevention and management of pneumonia.

Part two of the assessment comprises 14 multiple-choice questions designed to evaluate nurses' understanding of pneumonia. Additionally, it includes several questions about the prevention and management of pneumonia.

Part three focuses on the role of nurses in preventing and managing pneumonia in patients with COVID-19.

Statistical Analysis

The data analysis involves the translation of information collected during a research project into an interpretable and managerial form. It involves the use of statistical procedures to give an organization and meaning to the data. Descriptive and inferential statistics are used for data analysis. The data obtained were analyzed using both descriptive and inferential statistics. After collecting the data on the labor and surveys, they were transferred to an Excel spreadsheet, and through the SPSS software 22, it was analyzed.

RESULTS

Table (1) shows the distribution of demographic characteristics of the nurses. Regarding of "Gender" variable, the results show that More than half of the participants were aged between (23 - 27) years old 60.9%, with a mean age of (27.06 ± 2.69), greater than half of the participants were females 60.9%, the majority were single 60.9%, "Educational level" shows that most of the studied respondents were " diploma in nursing 91.3%.

Table (2) shows The majority of the experiences of the nurses 69.6% were during 2-5 years, and most of the participants 82.6% have experience as a Nurse in the coronavirus (Pneumonia) Unit 1-2 years. According to the training course, 56.7% of them took training course the duration 1 week. In the subject training course, the majority 54.3% of them have first aid, the place of work 58.7% of them work in Shaheed Hazhar Hospital/Kalar.

Table (3) displays the items related to the impact of nurses' knowledge level on the prevention of pneumonia in patients with COVID-19. The results indicate that (2) items have mean scores of (1.86, and 2.23), suggesting a moderate level of knowledge. On the other hand, (6) items have mean scores of (2.45, 2.45, 2.36, 2.84, 2.58, 2.91), indicating a high level of knowledge. The overall mean and standard deviation for the knowledge level regarding pneumonia is (19.7 ± 3.29).

Table (4) presents the results indicating that the average mean value of knowledge ranged from 1.82 to 3.00. Out of the 15 knowledge items, 9 items with mean scores of (2.86, 2.86, 3.00, 3.00, 2.67, 2.86, 2.45, 2.89, 2.62) indicate a high level of knowledge. Additionally, 6 items with mean scores of (2.15, 1.84, 2.21, 2.08, 1.82, 1.89) indicate a moderate level of knowledge. The total mean and standard deviation for the level of knowledge about pneumonia is (37.3 ± 4.37).

Table (5) shows the overall knowledge. Most of the participants had good knowledge 73.9%, while a percentage 26.1% had average knowledge about

the prevention and management of pneumonia in a patient with COVID-19.

Table (6) The results demonstrate that statistically significant associations were found between nurses' knowledge regarding the prevention and management of nurse marital status, and level of education (p-value=0.015, 0.003). Also, no statistically significant relationship between nurses' knowledge regarding prevention and management with nurse age, and gender (p-value= 0.170, 0.288), respectively.

Table1. Distribution of nurses according to socio-demographic characteristics:

Socio-demographic characteristics		Frequency F	Percentage %
Age	23-27 years >27 years	28 18	60.9 39.1
Mean ±SD 27.06 ± 2.69			
Gender	Male Female	18 28	39.1 60.9
Marital status	Single Married	28 18	60.9 39.1
Education level	Diploma in Nursing Bachelor's in Nursing	42 4	91.3 8.7
Total		46	100

Table 2 Distribution of nurses according to experience

Socio-demographic characteristics		Frequency F	Percentage %
Experience as a Nurse	2-5 years >5 years	32 14	69.6 30.4
Mean ±SD 4.61± 1.76			
Experience as a Nurse in the coronavirus (Pneumonia) Unit	1-2 years >2 years	38 8	82.6 17.4
Mean ±SD 1.84 ± 0.69			
Participate in Training Courses, Seminar, Workshop, …etc . in Nursing Field	Yes No	27 19	58.7 41.3
If Yes; Details of each Training Course, Seminar, Workshop, etc. Types and Numbers Yes No Subject First aid First aid + pharm Duration 1 week 2 week Place Shaheed Hazhar Hospital/Kalar		25 2 25 2 23 4 27	54.3 4.4 54.3 4.4 50.0 8.7 58.7
Did you get a Certification?	Yes No	27 19	58.7 41.3
Do you have an interest in working as a nurse?	Yes No	44 2	95.7 4.3
Do you have an interest in working with COVID-19 patients?	Yes No	28 18	60.9 39.1
Total		**46**	**100**

Table 3 presents the distribution of nurses' knowledge levels regarding the prevention of pneumonia among patients with COVID-19.

Nurses' Knowledge	N=46				
	Groups	F	%.	MS	level
Pneumonia can be prevented by a vaccine	Yes	10	21.7	1.86	M
	Uncertain	20	43.5		
	No	16	34.8		
Cleaning and disinfecting surfaces that are touched a lot.	Yes	28	60.9	2.45	H
	Uncertain	11	23.9		
	No	7	15.2		
Social distance when possible	Yes	28	60.9	2.45	H
	Uncertain	11	23.9		
	No	7	15.2		
When caring for a patient with pneumonia, it is crucial to utilize a 95 mask for protection.	Yes	26	56.5	2.36	H
	Uncertain	11	23.9		
	No	9	19.6		
Cough or sneeze into a tissue or the elbow or sleeve	Yes	42	91.3	2.89	H
	Uncertain	3	6.5		
	No	1	2.2		
Limiting contact with cigarette smoke or quitting smoking	Yes	12	26.1	2.23	M
	Uncertain	33	71.7		
	No	1	2.2		
Public health agencies can manage and control pneumonia outbreaks.	Yes	28	60.8	2.58	H
	Uncertain	17	37.0		
	No	1	2.2		
It is recommended that all surfaces contaminated by patients with pneumonia be thoroughly cleaned using a diluted (10%) bleaching solution.	Yes	42	91.3	2.91	H
	Uncertain	4	8.7		
	No	0	0		
Total	**19.7±3.29**				

MS: Mean of score   H: High effect   M: Moderate effect   L: Low effect

Table 4 presents the distribution of nurses' knowledge levels regarding the nursing management of pneumonia among patients with COVID-19 in the study sample.

Nurses' knowledge	Groups						MS	Level
	Yes		Uncertain		No			
	F	%	F	%	F	%		
Removal of secretions	42	91.4	2	4.3	2	4.3	2.86	H
Maintain a patent airway	43	93.5	0	0	3	6.5	2.86	H
Use humidified oxygen or a humidifier at the bedside.	18	39.1	5	10.9	23	50.0	1.89	M
To promote thinning and loosening of pulmonary secretions, it is recommended to maintain adequate hydration by consuming 2 to 3 liters of fluids per day.	15	32.6	8	17.4	23	50.0	1.82	M
It is also important to strike a balance between rest and activity, gradually increasing activity levels.	32	69.6	12	26.1	2	43.	2.62	H
Monitoring serial chest X-rays, arterial blood gases (ABGs), and pulse oximetry readings is advised.	46	100	0	0	0	0	3.00	H
Assessing vital sign	46	100	0	0	0	0	3.00	H
To prevent aspiration, it is recommended to elevate the head of the bed at an angle of 30 to 45 degrees.	43	93.5	1	2.2	2	4.3	2.89	H
Ensuring good oral hygiene (cleaning teeth, tongue, dentures)	17	37.0	22	47.8	7	15.2	2.21	M
Increasing patient mobility with ambulation to three times a day as appropriate.	12	26.1	26	56.5	8	17.4	2.08	M
To ensure optimal care, it is recommended that patients be admitted to a respiratory isolation room, preferably equipped with negative pressure.	10	21.7	19	41.3	17	37.0	1.84	M
It is advisable to provide patients with a high-calorie, high-protein diet consisting of small, frequent meals.	25	54.3	17	37.0	4	8.7	2.45	H
Limit alcohol intake	8	17.4	37	80.4	1	2.2	2.15	M
Administer antibiotics as prescribed.	43	93.5	0	0	3	6.5	2.86	H
As per the prescribed instructions, it is recommended to administer antipyretics, bronchodilators, mucolytic agents, and expectorants to the patient.	36	78.2	5	10.9	5	10.9	2.67	H
Total	**37.3±4.37**							

MS: mean of score   H: High   M: Moderate
L: Low

Table 5 Overall knowledge regarding nursing prevention and management of pneumonia among patients with COVID-19 of the study sample.

Overall knowledge	N=46	
	F	%
Good knowledge	34	73.9
Average knowledge	12	26.1
Poor knowledge	0	0

Table 6 Association between sociodemographic characteristics and overall knowledge regarding nursing prevention and management of pneumonia among patients with COVID-19.

Variables	N=46				Total	
	Good knowledge		Average knowledge			
	F	%	F	%	F	%
Age groups 23-27 years >27 years	23 11	82.1 61.1	5 7	17.9 38.9	28 18	60.9 39.1
P. value 0.170 Not Significant x^2= 2.513						
Gender Male Female	12 22	66.7 78.6	6 6	33.3 21.4	18 28	39.1 60.9
P. value 0.288 Not Significant x^2= 805						
Marital status Single Married	16 15	67.9 83.3	9 3	32.1 16.7	28 18	60.9 39.1
P. value 0.015 Significant x^2= 1.361						
Education level Diploma in Nursing Bachelor's in Nursing	31 3	73.8 75.0	11 1	26.2 25.0	42 4	91.3 8.7
P. value 0.0003 Significant x^2=724						

X^2 =chi-square

DISCUSSION

Throughout data analysis, the present finding indicates that most of the nurses 60.9% were aged between (23-27) years. With mean age was (27.06 ± 2.69). These findings are supported by the results of the study carried out on Nurses' Knowledge Regarding Pneumonia in Children Under Five Years of Age at Paediatric Wards in Kirkuk Teaching Hospitals [16] Mentioned that most of The demographic characteristics of the study of total sample number (40)N, presents that 60.0 % at age (20 – 25) years old.also the studed doing by [17] They presented that the nurses' ages about one-third of them 20years.

Concerning gender, According to the study findings, a majority of the participants 60.9% were identified as female., This finding is corroborated by the results of the study done by [18] who found that the percentage of nurses is a woman.

The majority of the respondents were single which accounted for 60.9%. The result agrees with the study of [19] who reported that most of the participants were unmarried.

Regarding the educational background of the study participants was investigated, it has been noted that the majority were (a diploma in nursing) accounted for 91.3%., The findings of the present study are consistent with the results obtained from the previous study, providing support for the current findings. [18] which found that most of the participants had diplomas in nursing.

Regarding revealed the distribution of the experience of nurses. The majority of the experience of the nurse, most of the participants 82.6% have Experienced as a Nurse in the coronavirus (Pneumonia) Unit for 1-2 years. This finding agreement with the result of the study [20] which study "Knowledge of evidence-based guidelines in ventilator-associated pneumonia prevention" and found that the highest years of experience in a hospital was 1- 5 years mentioned that more than half of nurses had less than five years of service in the hospital.

According to a training course, 56.7% of them took the training course for 1 week. Subject to training courses the majority 54.3% of them have first aid [21] There was no significant difference observed between the nurses who had completed training courses for working in the intensive care unit and those who had not, as indicated by the findings of the study.

Regarding the impact of nurses' knowledge level on the prevention of pneumonia among patients with Covid-19. The findings revealed that two items indicated a moderate level of knowledge, and (7) items were considered a high level of knowledge, while the respondents didn't have a low level of knowledge about pneumonia. Therefore, it means

the majority of the participants have a high level of knowledge about the prevention of pneumonia. This outcome is in line with the study [22] which shows that the level of nurse knowledge of the study subjects on the prevention of pneumonia was initiated to be a high level of knowledge 82 (75.93%) and had an average, 24 (22.22%) had good. Likewise, The study revealed that a majority of the nurses possessed a high level of knowledge, which aligns with the findings of the previous study.[23]

However, the result showed that the average mean value of knowledge was between (1.82-3.00), among (15) items of knowledge, (9) items mean are (2.86, 2.86, 3.00, 3.00, 2.67, 2.86, 2.45, 2.89, 2.62) indicate a high level of knowledge. Although the other (6) items mean (2.15, 1.84, 2.21, 2.08, 1.82, 1.89) indicate a moderate level of knowledge. While the respondents didn't have a low level of knowledge about management pneumonia. Considering the absence of data for similar studies on nursing management, This finding closely resembles the results obtained from the study titled "Nurses' Knowledge Regarding Pneumonia in Children under Five Years of Age at Pediatric Wards in Kirkuk Teaching Hospitals." by[16]. 45.0 % of them have acceptable knowledge about nursing care management of pneumonia in children under five years of age.

Based on the overall knowledge regarding nursing prevention and management of pneumonia. Further, most of the participants had good knowledge, which accounted for 73.9%, while a percentage 26.1% had average knowledge about the prevention and management of pneumonia in a patient with COVID-19. "No previous study was finding as such a context." However, The findings closely align with the outcomes of the study. These results are in line with the research conducted by. [15] According to their findings, the majority of HCPs observed had a high degree of knowledge by a proportion of 85%.

Our findings demonstrate highly statistically significant associations were found between nurses' knowledge regarding the prevention and management of pneumonia in patients with COVID-19 and nurse marital status. The finding is supported by the study which was done by (Mohammad M. R. In 2022) under the title Knowledge, Attitude and Practices toward Coronavirus Disease (COVID-19) in Southeast and South Asia: A Mixed Study Design Approach. He found the same results [24].

This reveals that the level of education of participants was significant in associations' knowledge regarding the prevention and management of pneumonia. Similarly, the result goes in line with the finding of [25] who reported that

it was statistically significant that nurses with a bachelor's degree had a better level of knowledge about COVID-19 compared to other educational backgrounds. Additionally, supported by [26] under the Title: A Quick Online Cross-Sectional Survey on Knowledge, Attitudes, and Practices Towards COVID-19 Among Chinese Residents During the Rapid Rise Period of the COVID-19 Outbreak. The result showed a significant positive association between levels of education and COVID-19 knowledge scores supports this speculation.

Furthermore, the result shows that no statistically significant relations were found between nurses' knowledge regarding the prevention and management of pneumonia in patients with COVID-19 with nurse age and gender. Study outcomes go in line with the result of a study done by [27] pointed out that the age and gender of the study participants were not statistically associated with the knowledge of COVID-19. However, another study by [28] claimed that there was no evidence of a significant relationship between a person's gender and their level of knowledge.

Limitation of the Study:

The study was conducted in one city and one hospital, which limits the generalizability of the findings to a broader population. Additionally, the small sample size was another limitation of the present study, potentially impacting the representativeness of the results. It is important to consider these factors when interpreting the findings and to exercise caution in applying them to other settings or populations.

CONCLUSIONS

Based on the study's findings, the researcher concluded:

The study's findings indicate that a majority of the participants were female, young, and single. Additionally, most of them had completed a nursing diploma and had 1-2 years of experience working in a hospital unit dedicated to coronavirus (Pneumonia) cases.

Nurses have enough knowledge about the management of pneumonia. The main of the participants was good knowledge about the prevention and management of pneumonia in a patient with COVID-19.

The present study concludes that nurse knowledge regarding the prevention and management of pneumonia has significant associations with marital status and level of education. While the nurse's age and gender didn't affect the nurse's knowledge regarding the prevention and management of pneumonia. These findings have significant associations for

developing appropriate and continuous multi-educational training courses and programs that nurses require to increase their knowledge and skills in the prevention and management of Pneumonia among patients were included in the current study.

ETHICAL CONSIDERATIONS

The head of the clinical nursing department granted an administrative agreement, and the study received approval from the College of Nursing and the College of Medicine at the University of Sulaimani. Prior to participation, the nurses were provided with a thorough explanation of the study's purpose and objectives and their oral consent was obtained while ensuring the confidentiality of their information.

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AUTHOR CONTRIBUTIONS

The study was conceptualized, and the original draft was written. Data collection was conducted, followed by data analysis. The final edition of the study was reviewed by all authors.

DISCLOSURE STATEMENT

The authors declare no conflicts of interest.

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