

ASSESSMENT OF INTENSIVE CARE UNIT NURSES KNOWLEDGE REGARDING PRESSURE ULCERS IN A TERTIARY CARE OF HOSPITAL KARACHI

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ABSTRACT

OBJECTIVES

The objective of the study was to assess nurses Intensive Care Nurse's knowledge regarding pressure ulcers.

METHODOLOGY

A cross-sectional study design was used to collect data from a convenient nonprobability sample of 50 nurses at a tertiary care Hospital in Karachi. The data collection period was from September to December 2022. The pressure ulcer knowledge assessment tool was used to gather data, which was self-constructed. Approval was secured from respective department. SPSS version 26 was used to analyze the data.

RESULTS

Study findings show that 18% of the sample have a low level of knowledge, 44% have moderate, and 38% have a high level of knowledge regarding pressure ulcers.

CONCLUSION

Based on the study findings, most participants with a significant proportion (44%) fall under the moderate category. However, it is concerning to note that 18% of the nurses had a low level of knowledge about pressure ulcers, highlighting the need for targeted educational interventions to improve their knowledge.

KEYWORDS: *Intensive Care, Nurse's, Knowledge, Pressure Ulcers, Bedsores*

INTRODUCTION

Pressure ulcers occur when localized tissue loses blood flow due to soft tissue and blood vessels being crushed for an extended period between external surfaces and bony projections. Pressure ulcers have been described as one of the most physically debilitating problems in the modern period, ranking third in cost only after cancer and heart.¹ According to a study, 3-34% of hospitalized patients experience ulcer development. In Europe and North America, pressure ulcer affects an average of 7-23% of hospitalized patients. It is believed that 19% of hospitalized patients in Iran get pressure ulcers.² Similarly, another study from Pakistan shows that 25.6.7% had a high risk of developing pressure ulcers.³ Patients with pressure ulcers experience pain and irritability, which prolongs their hospital stays, makes them sicker for a longer period, delays their recovery, and increases their risk of dysfunction and even death.⁴ In this regard, nurse's lack of understanding regarding the severe consequences of pressure ulcer complications, like, decreased quality of life and burden on health care systems, pressure ulcer prevention was not previously prioritized in nursing practices. Fortunately, they have a good strategy, pressure information, and approved processes.⁵ Pressure ulcers is a serious health issue that lowers the quality of life and burdens the world's healthcare systems. The

burden of pressure ulcers can take several forms, including financial burden, staff nurses burden and quality of life burden. A pressure ulcer is viewed as the result of subpar nursing care; they are mostly preventable, and practitioners can get help from clinical standards.⁶ A study found that nurses lack knowledge regarding pressure ulcers and need educational sessions to enhance and prevent them.⁷ Similarly, another study from Malaysia found that nurses have a poor understanding of pressure ulcers.⁸ In this context, improper management of medical devices and a lack of information regarding the etiology, risk factors, and treatment of pressure ulcers can result in preventable pressure ulcers.⁹ Lack of knowledge and experience in pressure ulcer prevention significantly contributes to the development or progression of pressure ulcers and may result in more issues, nurses need effective training and education in this practice area.¹⁰ Pressure ulcers are a significant concern for patients admitted to intensive care units (ICUs) and can lead to significant morbidity and mortality.¹¹ Nurses play a vital role in preventing and managing pressure ulcers.^{11,12} However, it is unclear whether ICU nurses have adequate knowledge regarding pressure ulcer prevention and management.¹³ Therefore, there it is important to assess the knowledge of ICU nurses regarding pressure ulcers to identify potential gaps in their knowledge and to develop targeted interventions to improve patient

outcomes. Thus, this study aimed to evaluate the knowledge of ICU nurses regarding pressure ulcers in a tertiary care hospital in Karachi.

METHODOLOGY

A cross-sectional study was carried out at Memon Medical Institute Hospital Karachi, Pakistan, from September 2022 to December 2022. A total of 50 male and female ICU nurses were part of the study. Those nurses who have a minimum of 6 months of working experience and working in critical units were included in the study. Moreover, those unwilling to participate and with less than six months of experience are excluded. Furthermore, a non-probability convenient sampling technique was used in this study. The sample size was calculated with the help of open EPI with a confidence interval of 95% and a total population of 56, and the calculated sample size is $n=50$. The study tool was designed with the help of the literature and pretested on 10% of the sample size, and the calculated Cronbach alpha is 0.70. The questionnaire comprised of a total number of 16 questions, 07 sociodemographic and 09 questions of knowledge. Those participants who scored less than 50% were considered to have a low level of knowledge; those who scored 50 to 70% had a moderate level of knowledge, and more than 80% were high. SPSS software version 26 was used in this study for data entry, analysis, and interpretation. The frequency and percentage were calculated of the demographic data and levels of knowledge like low, moderate and high levels. Study approval was taken from the Horizon School of Nursing and Health Sciences, and data collection permission was taken from the Nursing manager of Memon Medical Institute Hospital Karachi. The researcher provided potential participants with a written consent form that outlined the purpose of the study, the procedures involved, any risks or benefits, the voluntary nature of participation, and the participant's rights to withdraw from the study at any time. Subjects were allowed to ask questions regarding the study; if a question arose, they could contact the researchers. Participants were also assured of secrecy and anonymity, and their participation remains entirely voluntary.

RESULTS

Table 1 shows the results of demographic variables for a sample size of 50 individuals. The table includes four demographic variables: gender, age, department, and working experience. For gender, 66% (33 individuals) are male, while 34% (17 individuals) are female. Regarding age, 92% (46 individuals) are between 21 and 30, while only 8% (4) are above 31. For the

department, 34% (17 individuals) work in the Medical ICU, 36% (18 individuals) work in the Chest ICU, and 30% (15 individuals) work in the CCU. Lastly, for working experience, 20% (10 individuals) have 1 to 3 years of experience, 28% (14 individuals) have 2 to 4 years of experience, 12% (6 individuals) have 3 to 4 years of experience, and 40% (20 individuals) have 4 years or more of experience.

Table 1: Results of Demographic variables n=50

Gender	F	%Age
Male	33	66.0%
Female	17	34.0%
Age		
21 to 30 years	46	92.0%
31 to 40 and above	04	8.0%
Department		
Medical ICU	17	34.0%
Chest ICU	18	36.0%
CCU	15	30.0%
Working Experience		
1 to 3 years	10	20.0%
2 to 4 years	14	28.0%
3 to 4 years	06	12.0%
4 above	20	40.0%

Table 2 shows the distribution of participants based on their level of knowledge. Out of the total participants, 9(18%) have a low level of knowledge 22(44%) participants have moderate knowledge as moderate. Finally, 19(38%) have high knowledge regarding pressure ulcers.

Table 2: Levels of Knowledge

Level of Knowledge	Number of Participants	%Age
Low	09	18%
Moderate	22	44%
High	19	38%

DISCUSSION

Findings of the current study have comparable demographic characteristics to the previously reported similar studies. Like in current study, 33 (66%) were male participants, and 17 (34%) were females. In contrast, another study found that 69% were women and 31% were male.¹⁴ This difference could be due to the sampling technique used in the two studies. It is possible that the present study recruited a different population of participants or used a different sampling technique compared to the study by McKeown et al. (2022), leading to differences in gender distribution. Present findings show that 92% (46 individuals) are between 21 and 30 years old, while only 8% (4 individuals) are between 31 and 40 years old and above 40. Similarly, a study from Turkey showed almost a similar result: the participants mean age was 29.¹⁵ In contrast study from Belgium found that more than half

of the participants have an age above 35 years.¹⁶ This might be because younger nurses may be more likely to participate in research studies than older nurses, who may have more time and energy to devote to professional development and research activities. Our study noted that the working experience of participants 1 to 2 years 10(20%), 2 to 3 years 14(28%), 3 to 4 years 6(12%), and above 4 years 20(40%). Similarly, in another study, the result of the working experience of participants was 1 to 5 years 150 (82.0%), 6 to 10 years 15(8.2%), and above 11 years 18(9.8%).¹⁷ The present study recruited 100% of participants from ICUs. Likewise studies from other contexts such as Iran, also recruited total participants from different ICUs.^{18,19} Our study noted that 18% of participants have low level of knowledge, 44% of participants have moderate level of knowledge as moderate and 19(38%) have a high level of knowledge regarding pressure ulcers. Likewise, a study analysis showed that 91.5% of participants lacked appropriate information about pressure ulcer prevention, and only 8.5% had adequate knowledge.²⁰ Similarly, another study showed that most nurses had insufficient knowledge regarding pressure ulcers.¹³ Similarly, a study reported from South Africa that 61.9% of the nurses have poor knowledge regarding pressure ulcers, and 39.9% have adequate knowledge.²¹ Nurses with a high level of knowledge regarding pressure ulcer prevention and management can provide better patient care, leading to improved patient outcomes.²² They can identify early warning signs of pressure ulcers and implement preventive measures, which can reduce the incidence and severity of pressure ulcers.²³ Additionally, preventing pressure ulcers can reduce the length of hospital stay, decrease the need for costly treatments and surgeries, and improve patients quality of life. This can result in significant cost savings for healthcare systems.²⁴ In contrast, a lack of nurses knowledge regarding pressure ulcers can lead to an increase in the patient's hospital stay and an increase in the infection rate.²⁵ Insufficient knowledge of pressure ulcers among nurses can lead to inadequate prevention and management strategies for these wounds, which may contribute to the occurrence or progression of pressure ulcers in patients. Inadequate prevention may result in patients being placed at a higher risk of developing pressure ulcers, while ineffective management may exacerbate the severity of existing pressure ulcers, leading to longer healing times and increased pain and discomfort for patients.²⁶ Additionally, it could result in increased healthcare costs and more extended hospital stays for patients. To address this issue, nurses can participate in continuing education programs and attend workshops or seminars on preventing and managing pressure ulcers. They can also consult with wound care specialists and collaborate

with other healthcare professionals to ensure patients receive the best care.

LIMITATIONS

The study might have a small sample size, which may limit the generalizability of the findings to the entire population of ICU nurses in the specific tertiary care hospital in Karachi. It is important to have a diverse and representative sample to ensure the results accurately reflect the population.

CONCLUSIONS

The study results revealed that 44% of the participants had moderate knowledge about pressure ulcers, while 18% had insufficient knowledge, indicating a need for educational interventions to enhance their knowledge and abilities. The findings suggest implementing routine training programs and educational sessions to increase critical care nurses understanding of pressure ulcers. Continuous evaluation can ensure the effectiveness of these interventions.

CONFLICT OF INTEREST: None

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CONTRIBUTORS

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