

Nurses' Proficiency and Preventive Measures for Pressure Ulcers in Unconscious Patients

Preventive
Measures for
Pressure Ulcers
in Unconscious

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ABSTRACT

Objective: The study aims to find out the level of proficiency and practice of nurses about pressure ulcer prevention among unconscious patients.

Study Design: A descriptive study

Place and Duration of Study: This study was conducted at the Basrah Teaching Hospitals in Al-Basrah Governorate (Basra Teaching Hospital, Al-Fayhaa Teaching Hospital and Al-Sadr Teaching Hospital). The study started on the 1st of October, 2024, and lasted until the 15th of March, 2025.

Methods: The sample of the study consists of 40 nurses who work in the intensive care units. Data were collected throughout the utilization of the adopted questionnaire by self-administered information and observational checklists. The questionnaire is composed of Ten items related to nurses' knowledge and Ten items for practice toward pressure ulcer prevention. The reliability of the instrument was 0.80 by using Cronbach's alpha, and the data analysis was conducted using statistical methods, which include descriptive and inferential statistics.

Results: The findings of the present study revealed that most nurses (62.5%) know a moderate amount about preventing pressure injuries in unconscious patients, while (37.5%) know very little, and none of them know ($MS \pm SD = 1.77 \pm 0.781$).

Conclusion: The study concluded that there is no significant relationship between nurses' (age, sex, education level, and years of experience) and their proficiency and practice about Pressure Injury Prevention among Unconscious Patients.

Key Words: Nurses' Proficiency, Preventive Measures, Pressure Ulcers, Unconscious Patients.

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INTRODUCTION

Localized lesions to the skin and underlying soft tissue brought on by prolonged, continuous pressure include bedsores, pressure sores, pressure ulcers, decubitus ulcers, and pressure injuries. Tissue ischemia results from this, which lowers the availability of oxygen and other essential nutrients, ultimately leading to tissue necrosis and potentially fatal consequences¹. Since the 20th century, pressure ulcers have been identified as one of the most expensive and physically incapacitating consequences. In addition to causing mortality and disability, pain and agony from pressure ulcers prolong illness, hinder recovery, and postpone discharge.

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Because of the need for supplies and nursing hours, these lead to a significant rise in healthcare costs². Regardless of a nation's income level, the prevalence of hospital-acquired pressure ulcers is still a major concern worldwide. Recent studies indicate that the worldwide prevalence is (8.4%). The prevalence is much greater among patients in intensive care units (ICUs), with global rates between (6.60 and 36.80%)³. The prevalence of PU in Iraq varies by location, with hospital populations ranging from (4.7% to 32.1%). In ICU patients in Europe, the incidence of PU ranges from (8.10 to 31%). According to studies conducted in Middle Eastern countries, (8.90%) of ICU patients in Iran experienced PI during their stays, followed by (17%) in Turkey, (39.30%) in Saudi Arabia, and (33.70%) in Lebanon. ICU patients in China have the highest PI incidence (4.48%), which is significantly greater than the (0.63%) total PU incidence⁴. These days, pressure injuries are acknowledged globally as one of the most frequent reasons why patients suffer injury and as an avoidable patient safety issue. Furthermore, it is increasingly being referred to as a gauge of the standard of treatment rendered by healthcare institutions. Patients with pressure ulcers are frequently admitted to acute and long-term care hospitals, and they place a heavy strain on themselves,

their loved ones, and their caregivers⁵. Stated that pressure ulcers can be painful or even fatal, require time away from work, and be expensive to treat. Although this unconsciousness of patients' consequences is frequent, it can be avoided. People can reduce their chance of acquiring pressure sores and enhance their quality of life by doing routine skin examinations, cushioning bony regions of the skin, keeping a healthy weight, and attempting to reposition the body throughout the day^{6,7}. The increased incidence of pressure ulcers was influenced by nurses' poor or insufficient knowledge and practice. In addition to raising nurses' awareness of the issue of pressure ulcers, knowledge, and practice also gave them the framework to develop and sustain their competency in providing high-quality nursing care and the foundation for making well-informed decisions⁸. Therefore, the objective of the study is to ascertain the level of nursing practice and knowledge about preventing pressure injuries in patients who are unconscious as well as the correlation between these factors and the demographics of the nurses.

METHODS

In this study, a descriptive design was used. The intensive care units of Basrah Teaching Hospitals served as the study's location included that (Basra Teaching Hospital, Al-Fayhaa Teaching Hospital and Al-Sadr Teaching Hospital). The study comprised 40 nurses who worked in intensive care units as a convenience sample. Nurses having at least six months of intensive care unit experience were available at the time of the study, and all nurses working in the previously chosen environment who are willing to participate in the study meet the inclusion criteria. The questionnaire utilized in this study was on an international scale, and it was designed to achieve the study's goal. It is composed of three sections that provide information about the following: Part 1: Demographic Characteristics Self-Administered Questionnaire Sheet It is focused on the demographic information of the nurse, including years of experience, education level, sex, and age. The second section is a self-administered questionnaire sheet about nurses' proficiency of pressure ulcer prevention. It is composed of (10) items which are rated according to know (3), not sure (2) score, and I don't know (1) related to the nurses' proficiency. Data were collected by self-reported information. Third part: Observational Checklist Related to Nurse's Practice Concerning Pressure Ulcer Prevention Evaluate the nurse's practice regarding pressure ulcer prevention to observe and check for correct or incorrect practices. The observational checklist consisted of (10) responses and was rated according to Always (3), Sometimes (2), and Never (1). And the practice of doing during observational checklist through three (first, second,

third) observations at the same time. The questionnaire comprised two main sections. The first concerned nurses' proficiency of pressure ulcer prevention, using the following scale: (Know = 3, Unsure = 2, Don't Know = 1). The second section assessed nurses' practices regarding pressure ulcers to monitor and verify correct or incorrect practices, using the following scale: (Always = 3, Sometimes = 2, Never = 1). The researchers used the Nurse's Observational Checklist sheet to evaluate nurses' performance while caring for patients. The fact that nurses were being observed was not disclosed to them. A experts of seven adult nursing professionals was tasked with ensuring the authenticity of the questionnaire. Using the SPSS software, Version (31), Cronbach's Alpha was used to evaluate the research instrument's dependability for ten questions. Based on Cronbach's Alpha value of 0.80, the results showed that the instrument is appropriate and sufficient for evaluating the sample.

RESULTS

Table (1): shows socio-demographic information of the nurses involved in the present research.

Table No. 1: Demographic data of the nurses N=40

Variables	Classes	Frequency	Percent
Age MS±SD = 29.33±6.099	20-30	29	72.5
	31-40	9	22.5
	41-60	2	5.0
	Total	40	100.0
Sex	Male	23	57.5
	Female	17	42.5
	Total	40	100.0
Education level	Secondary School	8	20.0
	Diploma	16	40.0
	Bachelor's Degree	16	40.0
	Total	40	100.0
Working Experience	5-10	23	57.5
	10-20	6	15.0
	20-30	11	27.5
	Total	40	100.0

In terms of educational attainment, the largest percentage of them (40%) had bachelor's and certificate degrees, and 72.5% of them were in the 20–30 age range. Over half of them (57.5%) were male. Those with 5–10 years have the highest percentage of years of experience (57.5%). According to these results, the Table (2) demonstrated that the most nurses (62.5%) proficiency a moderate amount about preventing pressure injuries in unconscious patients, while 37.5% proficiency very little and none of them proficiency (MS±SD = 1.77±0.781). The table (3) findings show that there is no significant relationship between nurses' years of experience, age, sex, and education level and their understanding of how to prevent pressure injuries

in unconscious patients (P -value > 0.05). While the results of the table (4) appearance that only 2.5% of nurses have satisfactory practice of the mean score and standard level deviation = $(1.55+0.647)$, whereas the majority of nurses (97.5%) have inadequate practice regarding pressure injury prevention among

unconscious patients. Finally, the findings in the table (5) indicate that there is no significant correlation (P -value > 0.05) between the practice of nurses preventing pressure injuries among unconscious patients and their years of experience, age, sex, or educational attainment.

Table 2: Nursing staff's proficiency of pressure injury prevention among unconscious patients

Levels	Frequency	Percent	Scale	Total		
				MS	Sd	Assessment
Poor	15	37.5	1 – 1.66	1.77	0.781	Moderate
Moderate	25	62.5	1.67 – 2.32			
Good	0	0	2.33 – 3			
Total	40	100.0				

MS = Mean Score, Sd=Standard Deviation.

Table No. 3: Relationships of demographic data and their nurses' proficiency

Variables	Classes	Proficiency			Significant
		Poor	Moderate	Total	
Age	20-30	10	19	29	Fisher's Exact Test = 3.006 Df= 2 P-Value= 0.400 NS
	31-40	3	6	9	
	41-60	2	0	2	
	Total	15	25	40	
Sex	Male	8	15	23	Chi-Square = 0.171 Df= 1 P-Value= 0.680 NS
	Female	7	10	17	
	Total	15	25	40	
Education Level	Nursing Secondary School	2	6	8	Fisher's Exact Test = 0.795 Df= 2 P-Value= 0.875 NS
	Diploma Degree	7	9	16	
	Bachelor's Degree	6	10	16	
	Total	15	25	40	
Years of Experience	5-10	8	15	23	Fisher's Exact Test = 0.532 Df= 2 P-Value= 0.925 NS
	10-20	2	4	6	
	20-30	5	6	11	
	Total	15	25	40	

Df: Degree of freedom, P: Probability value, NS: Not Significant

Table No. 4: Nursing staff's practice of pressure injury prevention among unconscious patients

Assessment levels	Frequency	Percent	Scale	Total		
				MS	Sd	Assessment
Unsatisfactory	39	97.5	1 – 2	1.55	0.647	Unsatisfactory
Satisfactory	1	2.5	2.1 – 3			
Total	40	100.0				

MS = Mean Score, Sd=Standard Deviation.

Table No. 5: Relationships of demographic data with their nurses' practice

Variables	Classes	Practice			Significant
		Unsatisfactory	Satisfactory	Total	
Age	20-30	28	1	29	Fisher's Exact Test = 1.827 Df= 2 P-Value= 1.000 NS
	31-40	9	0	9	
	41-60	2	0	2	
	Total	39	1	40	
Sex	Male	22	1	23	Fisher's Exact Test = 0.758 Df= 1 P-Value= 1.000
	Female	17	0	17	
	Total	39	1	40	

					NS
Education Level	Secondary School	8	0	8	Fisher's Exact Test = 1.649 Df= 2 P-Value= 1.000 NS
	Diploma Degree	15	1	16	
	Bachelor's Degree	16	0	16	
	Total	39	1	40	
Years of Experience	5-10	22	1	23	Fisher's Exact Test = 1.223 Df= 2 P-Value= 1.000 NS
	10-20	6	0	6	
	20-30	11	0	11	
	Total	39	1	40	

Df: Degree of freedom, P: Probability value, NS: Not Significant

DISCUSSION

One measure of the quality of care is the prevention of pressure ulcers. The development and prevention of pressure ulcers are significantly impacted by nursing care. Therefore, pressure ulcers are a significant result that nurses should be aware⁹. So this study was aimed to describe the level of proficiency and practice of nurses about pressure ulcer prevention among unconscious patients. The study finding out the showed that the age group was (20-30) years with a percentage of (72.5%), This finding aligns with research conducted by¹⁰, which elucidate that the largest proportion of respondents (55.8%) were between the ages of 25 and 34. According to the sex, the results found that more than half are male (57.5%). These results agreed with study¹¹. This study disagrees with another research made by ¹²that showed the majority were female (89.1%, n = 90). And showed the highest percentage is seen with a Bachelor's and diploma degrees (40%) for each of them regarding educational levels. This finding is in line with research by ¹³which found that the majority of professionals (n = 364, 71.4%) held a bachelor's degree. The majority of participants (57.5%) had 5–10 years of experience, which supports a study by ¹⁴ that found the majority of participants had between one and five years (38.8%) of work experience. According to the study's findings in table(2), most nurses (62.5%) Proficiency a considerable amount about how to prevent pressure injuries in patients who are asleep, while 37.5% have poor knowledge and none of the nurses have good Proficiency of the mean score and standard level deviation = (1.77+0.781). Similar findings were made by ¹⁵ who discovered that most nurses had a mean Proficiency score of 42.16% (SD 12.09) in pressure injury prevention. These differences in Proficiency between studies may be due to a course of training programs to the nurse that have moderate and good level of Proficiency. This study found in table (3) no significant correlation between nurses' years of experience, age, sex, or educational attainment and their understanding of preventing pressure injuries in unconscious patients (P-value > 0.05). This is in line with a study conducted by ^{16,17}.

The outcome shows what nurses in intensive care units know about preventing pressure ulcers. Furthermore, there were no statistically significant differences between the mean scores of nurses' years of experience education, age, and duration of work in the intensive

care unit (p>0.05) and their understanding of pressure ulcer prevention strategies. Higher education offers a solid theoretical foundation, while job experience improves practical skills and decision-making abilities. This explains the substantial correlation between nurses' education level, work experience, and training courses with knowledge. Furthermore, continuous training guarantees that nurses remain current with the most recent medical procedures, improving their overall competence. Conversely, the lack of a significant relationship between gender, age, and department suggests that knowledge is more influenced by professional development than by personal or workplace characteristics. The study indicates in table(4) the most of the nurses (97.5%) have unsatisfactory practice about Pressure Injury Prevention among Unconscious Patients, and only (2.5%) have a satisfactory practice of the mean score and standard level deviation= (1.55+0.647) ¹⁸Study, We sought to ascertain nurses' practices and knowledge regarding pressure injuries and to find correlations between these factors and characteristics of professional nurses, is similar to this one. According to the study, this sample of nurses' behaviors addressing pressure injuries was less than anticipated.

Finally, the study found in table (5) no significant relationship between nurses' years of experience, education level, age, or sex and their practice in preventing pressure injuries among unconscious patients (P-value > 0.05). This result runs counter to another study by^{19,20}, which found a significant relationship between educational attainment and work experience. Therefore, we always encourage and focus on the needs of unconscious patients in intensive care units, as their hospital stays require longer periods. This involves implementing programs, practices, and protocols designed to prevent complications in these patients.

CONCLUSION

The present study has come with the following concluded that the most of the participants have poor and moderate and poor level of proficiency bout pressure ulcer prevention among unconscious patients and most of the nurses have unsatisfactory practice in pressure injury prevention among unconscious patients.

Recommendations

The study recommends that the developing educational programs and posters related to the knowledge and practices for caring for unconscious patients with chronic ulcers that have persisted for extended periods.

Author's Contribution:

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Final Approval of version:	All the above authors
Agreement to accountable for all aspects of work:	All the above authors

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