

Attitudes, Knowledge, Practice, and Perceived Barrios of Nursing Staff towards Pressure Ulcer Prevention: A Correlational Cross-Sectional Study

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Abstract

Background: Pressure ulcers often occur for patients with physical disabilities, who are unconscious or have reduced mobility. Nurses are the most important link in preventing the development of pressure ulcer, and they also play an important role in his recovery. This study was designed to identify the nurse's knowledge, attitudes, practice, and perceived barriers toward prevention of pressure ulcer.

Results: The study concluded that 40 % of nurse who aged of 25-34 years, 41% of them was higher professional education as an education level, 55% of them were female, and 35% of them had 5-10 years of experience. Finally, 40% of them was work in surgical wards. Most of them had low knowledge for majority of items.

Conclusion: All of nurse had negative attitudes regarding the prevention of pressure ulcer. A 70% of the nurses participating in the study do not work properly and their practices are wrong in preventing pressure ulcers and nearly two-thirds of the nurses participating in the study admitted that there are barriers in their work.

Key words: pressure ulcer, nursing staff, prevention

Introduction

A pressure ulcer is damage to the skin or soft tissue tissues, this damage usually occurs in the area where there is a bony protrusion, and is caused by excessive pressure on that area. There are many factors that contribute to increasing the chances of pressure sores, including: Lack of movement or lack of movement due to loss Awareness and incontinence of the intestine or urine, so they causes excess moisture of the skin, which causes skin tissue to rupture (Rafiei, et al., 2019).

Bedsore is one of the common and serious problems that occur in everyone .It is also described as localized tissue damage of the skin or soft tissue covering the bony prominence Every year, 2.5 million people in The United States prone to pressure ulcers, among them 60,000 people will die from complications such as sepsis and myelitis. Pressure sores can also have negative effects on families and caregivers from health organizations; they charge treatment costs for families and medical centers, which cause a poor quality of life (Khojastehfar, et al., 2020).

Pressure ulcers are common in patients who are unconscious or have limited mobility due to physical disabilities. More than 1.3 million adults worldwide are affected by this issue. The incidence of bed sores varies by country, with an estimated 14%-17% in the United States, 18.1% in European countries, and 19% in Iran each year (Lotfi, et al., 2019).

According to the “European Pressure Ulcer Advisory Panel (EPUAP), the National Pressure Injury Advisory Panel (NPIAP), and the Pan Pacific Pressure Injury Alliance (PPPIA)”, a pressure ulcer is a localized

injury to the skin and/or underlying tissue that typically occurs over a bony prominence as a result of pressure or pressure combined with shear. Stages 1 through 3 of the pressure ulcer progression include non-blanchable erythema, partial thickness skin loss, full thickness skin loss, and (Sengul, & Karadag, 2020).

Nurses are the most important link in preventing the development of any patient's condition, and they also play an important role in his recovery. Nurses must have good information about the causes of ulcers, their signs and degrees, and how to prevent and treat them, as well as nurses must have positive attitudes to promote best practices and directions for the prevention of pressure sores. Pressure ulcer care is an essential component of daily nursing care, as all patients are at risk of developing pressure ulcers. You must pay attention to this to prevent it from happening (Muhammed, et al, 2020).

Methodology:

correlational cross-sectional study was conducted in the emergency room, intensive care unit, medical wards, and surgical “wards at Imam Al Hussein Medical City in Holy Karbala, Iraq”. The research was started on October 17, 2022, and will last until January 4, 2023. A convenience selection method was employed to select 200 clinical nurses for this study. The researchers designed a questionnaire form with five main sections to gather all the pertinent data related to the study sample: the first section includes participant sociodemographic data; the second section assesses nurses' knowledge of pressure ulcer prevention; the third section contains a scale to assess nurses' attitudes toward PU prevention; the fourth section contains a scale to assess practice level; and the fifth section includes participant demographic data.

The researchers used the interviewing technique to collect data directly from patients. “Finally, the data was analyzed with (SPSS) Version 26. which used both descriptive statistical analysis procedures (frequency, percentage) and inferential statistical analysis (correlation r: Pearson coefficient) to analyze and assess the study's results. A p-value of 0.05 was considered statistically significant. Participants' rights were protected using ethical considerations”.

Results and discussion:

Knowledge and attitudes play a vital role in preventing bed sores. Barriers are also considered one of the most important reasons that impede the implementation of correct procedures or practices to prevent the development of pressure ulcers. Therefore, this study was conducted to assess nurses' knowledge, attitudes and practices, and to identify the barriers they face.

Table 1: Socio demographic characteristics of nursing staff:

Socio Demographic Characteristics		F	%
Age	< 24 years	50	25
	25-34 years	80	40
	35- 44 years	20	10

	45-54 years	28	14
	55 years and above	22	11
Education level	Secondary school	46	23
	Higher professional education	82	41
	Bachelor degree	68	34
	Master degree and PH.D	4	2
Gender	Male	90	45
	Female	110	55
Years of experience	< 5 years	50	25
	5-10 years	70	35
	11-15 years	40	20
	16-20 years	28	14
	> 20 years	12	6
Site of work	ICU	22	11
	Emergency unit	46	23
	Medical wards	52	26
	Surgical wards	80	40

Table 2: Nurse's knowledge about prevention of pressure ulcer:

Item	True		False		Assess	
	Freq.	%	Freq.	%	mean of score	level
Pressure ulcers are brought on by the moisture	96	48	104	52	1.26	low
Patients who are extremely skinny have a higher chance of getting a PU than those who are obese	90	45	110	55	1.24	low
There's NO relation between age and pressure ulcer risk	40	20	160	80	1.20	low
A grade 3 pressure ulcer is one that extends through the underlying fascia	64	32	136	68	1.20	low
Whenever there is a blisters on a patient's heel, there is a pressure ulcer	88	44	112	56	1.25	low
PU are most prone to form on the knee, ankle, and hip while seated	52	26	148	74	1.20	low
Every two or three hours, the skin of people who are seated in a seat and unable to move oneself should be examined	110	55	90	45	1.68	Moderate
A patient who has previously experienced pressure ulcers is more likely to do so again	104	52	96	48	1.69	Moderate
If patients are mobilized, there will be a lower incidence of pressure ulcers	102	51	98	49	1.7	Moderate
Pressure ulcers can develop as a result of urine, feces, or	102	51	98	49	1.7	Moderate

wound drainage						
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PU: Pressure ulcer, %: percentage, ferq. : Frequency, Assess of knowledge : low = mean of score 1- 1.67, moderate = mean of score 1.68- 2.34, good = mean of score 2.35- 3.

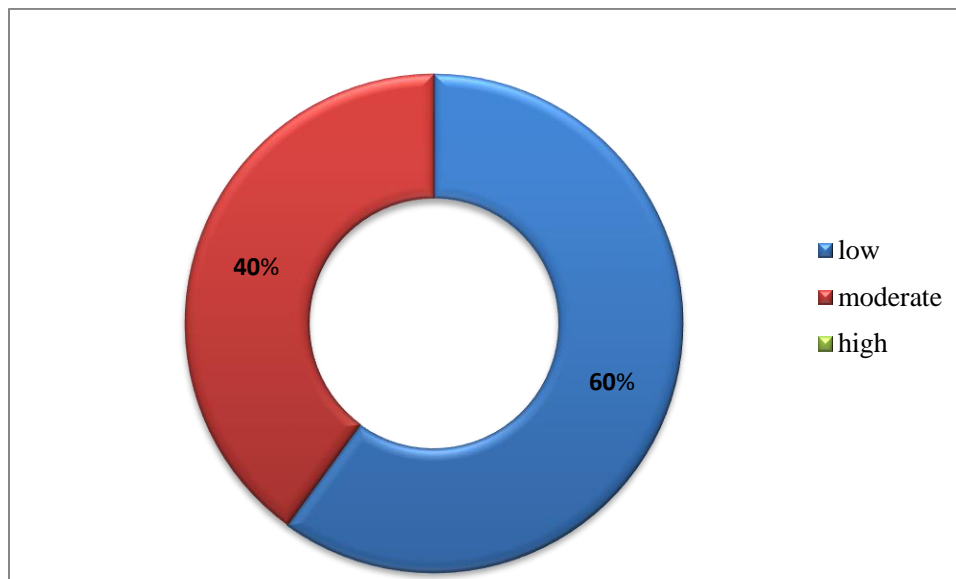


Figure (1) nurses knowledge regarding the prevention of pressure ulcer

Table 3: Nurses attitudes regarding the prevention of pressure ulcer:

Item	Agree		Disagree		Assess	
	Freq.	%	Freq.	%	mean of score	attitudes
I'm sure I'll be capable of preventing PU, you know	44	22	156	88	1.46	Negative
To prevent PU, I had the necessary training	68	34	132	66	1.43	Negative
Preventing PU is given a lot of consideration	38	19	162	81	1.41	Negative
Prevention of PU is not so important	48	24	152	76	1.44	Negative
Patient discomfort from PU is extremely rare	96	48	104	52	1.36	Negative
Financial distress for patients as a result of PU is severe	90	45	110	55	1.39	Negative
PU has a significant financial impact on society	40	20	160	80	1.45	Negative
Even if my patients have PU, I am not liable	64	32	136	68	1.43	Negative
I feel obligated to stop PU	88	44	112	56	1.40	Negative
High-risk patients can avoid getting PU	52	26	148	74	1.44	Negative

%: percentage, Ferq. : Frequency. Assess of attitudes: negative = mean of score 1- 1.49, positive = mean of score 1.50- 2.

Table 4: Distribution of daily nursing practice regarding pressure ulcer prevention:

Daily practices	Never (%)	Sometimes (%)	Always (%)	M.S	Level
On a daily or weekly basis, complete evaluation	78	12	10	1.33	Poor

and documentation of a pressure ulcer were made, including its Size, location, wound bed, grade, exudates, surrounding skin, pain, and undermining					
As a patient's condition deteriorates, reassess a pressure ulcer	88	8	4	1.15	Poor
giving patients who have a newly formed pressure ulcer a thorough physical examination	60	22	18	1.56	Poor
Identify and address patients' nutritional needs, including food intake, who have acquired or are at risk for developing pressure ulcers	58	22	20	1.64	Poor
patient manual repositioning for at least three hours	28	10	62	2.86	Good
moving patients using specific tools like sliding sheets, sliding boards, and/or hoists	63	17	20	1.55	Poor
Avoid placing the patient on a pressure ulcer that has already formed	30	48	22	2.33	Moderate
Implement pressure ulcer alleviation, reduction, or redistribution tools such an alternate air mattress (bed), a low air loss system, and gel pads	32	50	18	1.81	Moderate
Apply aseptic techniques (hand washing, sterile dressing) when providing care for individuals who are at risk for pressure ulcers or who have osteomyelitis symptoms	56	34	20	1.61	Poor
Taking careful care of the skin, especially at pressure points, and moisturizing it with products like Vaseline or skin care creams	55	35	10	1.48	Poor

#: percentage, Assess of practice: poor = mean of score 1- 1.67, moderate = mean of score 1.68- 2.34, good = mean of score 2.35- 3.

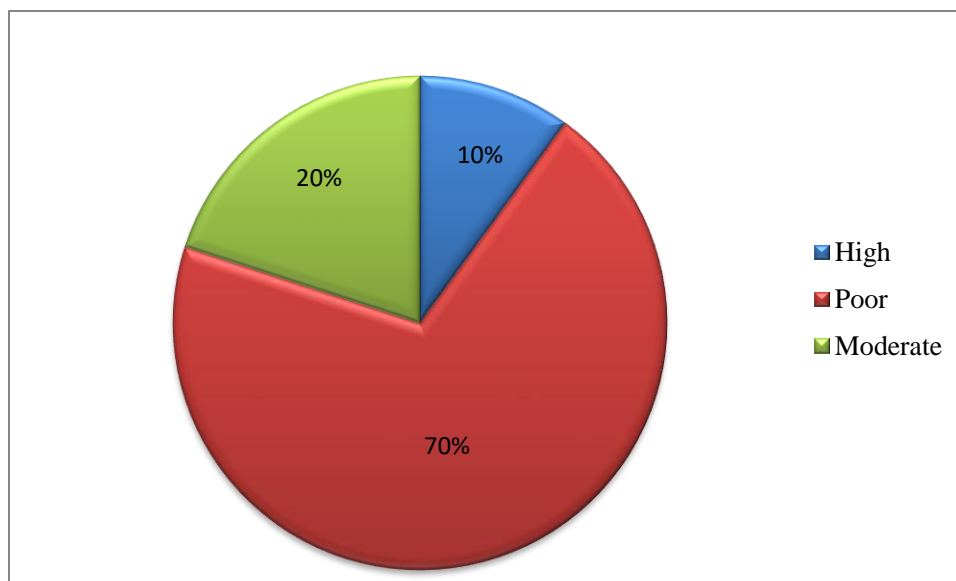


Figure (2) Over all distribution of daily nursing practice regarding pressure ulcer prevention

Table 5: Perceived barriers of nursing staff towards pressure ulcer prevention:

Perceived barriers	Agree		Disagree	
	Freq.	%	Freq.	%
Poor access to literature and reading facilities about PU	156	88	44	22
Heavy workload	132	66	68	34
Shortage of nursing staff	162	81	38	19
Lack of pressure ulcer prevention in-service training	152	76	48	24
Uncooperative patients	104	52	96	48
Presence of other priorities than pressure ulcer	110	55	90	45
Shortage of resources	160	80	40	20
Shortage of time	136	68	64	32
Lack of multidisciplinary initiative	112	56	88	44
clinical decision-making by nurses is lacking in independence	148	74	52	26

%; percentage, Ferq. : Frequency.

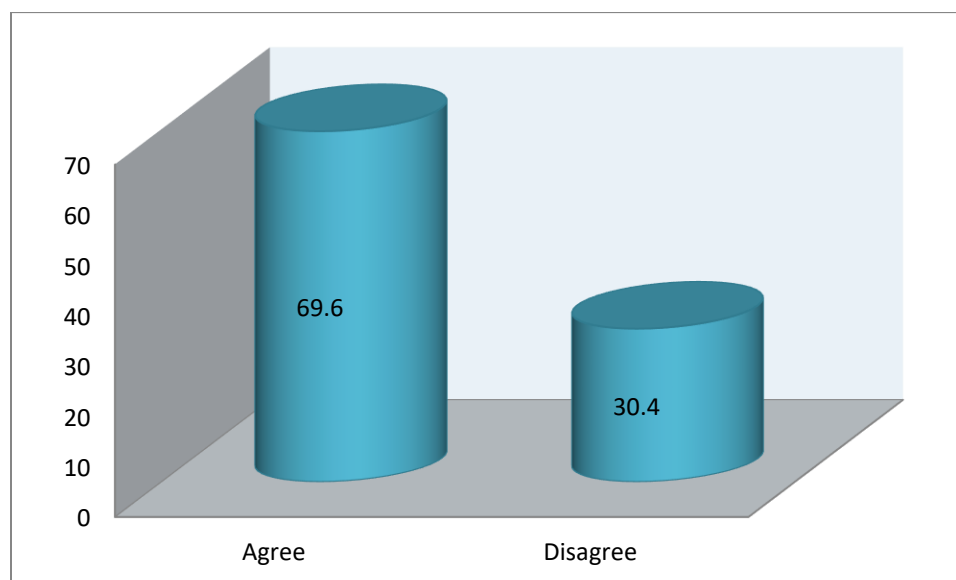


Figure (3) Over all perceived barriers of nursing staff towards pressure ulcer prevention

Table 6: Correlation between Attitudes, knowledge, practice, and perceived barriers of nursing staff towards pressure ulcer prevention:

Variables	1	2	3	4
	r	r	r	r
1. Attitudes	-	0.20**	0.26**	0.29

2. Knowledge	-	-	0.55**	0.05
3. Practice	-	-	-	-0.51**
4. Perceived barriers	-	-	-	-

r : Pearson correlation value, **p < .01

Discussion:

Table (1) exposed that there is 40 % of nurse who aged of 25-34 years, 41% of them was Higher professional education as an education level , De Meyer, et al., (2019),and Kısacık, & Sönmez, (2020). 55% of them was female, Gedamu, et al., (2021) and 35% of them had 5-10 years of experience come along with Saleh, et al., (2013).. Finally, 40% of them was work in surgical wards, these results were consistent with Saleh, et al., (2019) and Kim, & Lee, (2019).

Table (2) indicated that most of the nurses gave incorrect answers to items of knowledge about prevention of pressure ulcer. Most of them had low knowledge for majority of items De Meyer, et al., (2019). Kim, & Lee, (2019), conducted a study in Korea that exposed that the most of nurse had moderate level of knowledge about prevention pressure ulcer. A study done by Tulek, et al., (2016), explain that 40% of nurse had in correct answer about prevention pressure ulcer.

Table (3) showed that all of nurse had negative attitudes regarding the prevention of pressure ulcer. This means that all nursing staff working in the hospital participating in this research has wrong attitudes that may negatively affect their behavior towards preventing pressure ulcers. A study conducted by Awad, & Hewi,(2020), revealed that more than two thirds (67.5%) of the study participants had a negative attitude toward older individuals, and PUs preventive.

Regarding practice table (4) revealed that 70% of the nurses participating in the study do not work properly and their practices are wrong in preventing pressure ulcers come along with Kısacık, & Sönmez, (2020). This means that patients who are treated with these nurses have a greater chance of developing pressure ulcers than other patients Kim, & Lee, (2019). A study conducted by Awad, & Hewi,(2020), revealed that, previous to the implementation of the study's interventions, 65.0% of the study nurses had poor levels of PUs preventative practices.

Regarding the barriers table (5) indicated that nearly two-thirds of the nurses participating in the study admitted that there are barriers in their work, and thus they attributed the reason for the high risk of patients developing bedsores to the presence of a number of obstacles or barriers that prevent them from correct practices to prevent the occurrence of bedsores. A study done by exposed that approximately 94% of nurses were answer with agree about if found barriers to prevent the correct implementation to prevent pressure ulcer.

Pearson correlation table show a strong correlation and positive relationship between nurses' Attitudes and knowledge ($r= 0.20$), and show also high significant associations between it ($p\text{-value} =0.001$), this means that nurses who have good knowledge about prevention of pressure ulcer in the same time have positive attitudes. Also show a strong correlation and positive relationship between Attitudes and practice ($r= 0.26$), and show also high significant associations between it ($p\text{-value} =0.000$), this means that nurses who have positive attitudes toward prevention of pressure ulcer are able to prevent the pressure ulcer because they had good practice. Also show a strong correlation and positive relationship between knowledge and practice ($r= 0.55$), and show also high significant associations between it ($p\text{-value} =0.000$), this means that nurses who have good knowledge toward prevention of pressure ulcer are able to prevent the pressure ulcer because they had good practice. While there is a negative relationship between barriers and practices ($r= -0.51$), and show also high significant associations between it ($p\text{-value} =0.000$), this means that there is a direct relationship between barriers and practices. When there are high barriers, it negatively affects the quality of practices, so they are poor this results come along with a study done by Kısacık, & Sönmez, (2020).A study conducted by Awad, & Hewi,(2020), in Egypt confirmed that there is a statistical relationship between age and gender, which means that these variables are related to each other and the effect of some on the occurrence of others.

Conclusion

The study concluded that 40 % of nurse who aged of 25-34 years, 41% of them was higher professional education as an education level, 55% of them were female, and 35% of them had 5-10 years of experience. Finally, 40% of them was work in surgical wards. Most of them had low knowledge for majority of items. All of nurse had negative attitudes regarding the prevention of pressure ulcer. A 70% of the nurses participating in the study do not work properly and their practices are wrong in preventing pressure ulcers and nearly two-thirds of the nurses participating in the study admitted that there are barriers in their work.

Recommendations:

Based on the findings of the study, we recommend holding educational seminars and implementing educational courses and training sessions for nurses on the prevention of pressure ulcer. We also recommend investigating all the obstacles and barriers facing nurses by conducting correct practices to prevent the occurrence of pressure ulcer.

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References

1. Awad, W. H. A., & Hewi, S. A. H. (2020). Effect of pressure ulcer preventive nursing interventions on knowledge, attitudes and practices of nurses among hospitalized geriatric patients in Alexandria, Egypt. *J Nurs Health Sci*, 9(2), 1-12.

2. De Meyer, D., Verhaeghe, S., Van Hecke, A., & Beeckman, D. (2019). Knowledge of nurses and nursing assistants about pressure ulcer prevention: A survey in 16 Belgian hospitals using the PUKAT 2.0 tool. *Journal of tissue viability*, 28(2), 59-69.
3. Gedamu, H., Abate, T., Ayalew, E., Tegenaw, A., Birhanu, M., & Tafere, Y. (2021). Level of nurses' knowledge on pressure ulcer prevention: A systematic review and meta-analysis study in Ethiopia. *Heliyon*, 7(7), e07648.
4. Khojastehfar, S., Ghezeljeh, T. N., & Haghani, S. (2020). Factors related to knowledge, attitude, and practice of nurses in intensive care unit in the area of pressure ulcer prevention: A multicenter study. *Journal of tissue viability*, 29(2), 76-81.
5. Kim, J. Y., & Lee, Y. J. (2019). A study on the nursing knowledge, attitude, and performance towards pressure ulcer prevention among nurses in Korea long-term care facilities. *International wound journal*, 16, 29-35.
6. Kısacık, Ö. G., & Sönmez, M. (2020). Pressure ulcers prevention: Turkish nursing students' knowledge and attitudes and influencing factors. *Journal of Tissue Viability*, 29(1), 24-31.
7. Lotfi, M., Aghazadeh, A. M., Asgarpour, H., & Nobakht, A. (2019). Iranian nurses' knowledge, attitude and behaviour on skin care, prevention and management of pressure injury: A descriptive cross-sectional study. *Nursing open*, 6(4), 1600-1605.
8. Muhammed, E. M., Bifttu, B. B., Temachu, Y. Z., & Walle, T. A. (2020). Nurses' knowledge of pressure ulcer and its associated factors at Hawassa University comprehensive specialized hospital Hawassa, Ethiopia, 2018. *BMC nursing*, 19(1), 1-8.
9. Rafiei, H., Reza, M., Mostafaie, M. S., Moosavi, A. S., Esmaeili, F., Yousefi, F., & Razaghpoor, A. (2019). Assessment of student nurses' knowledge of pressure ulcers and their associated factors. *Wounds*, 6(1), 24-27.
10. Saleh, M. Y., Al-Hussami, M., & Anthony, D. (2013). Pressure ulcer prevention and treatment knowledge of Jordanian nurses. *Journal of tissue viability*, 22(1), 1-11.
11. Saleh, M. Y., Papanikolaou, P., Nassar, O. S., Shahin, A., & Anthony, D. (2019). Nurses' knowledge and practice of pressure ulcer prevention and treatment: an observational study. *Journal of tissue viability*, 28(4), 210-217.
12. Sengul, T., & Karadag, A. (2020). Determination of nurses' level of knowledge on the prevention of pressure ulcers: The case of Turkey. *Journal of tissue viability*, 29(4), 337-341.
13. Tulek, Z., Polat, C., Ozkan, I., Theofanidis, D., & Togrol, R. E. (2016). Validity and reliability of the Turkish version of the pressure ulcer prevention knowledge assessment instrument. *Journal of tissue viability*, 25(4), 201-208.