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Original Research Article

Knowledge and Attitude of Nursing Staff Regarding Preventability of Pressure Ulcers

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Abstract: *Pressure ulcers are a significant health concern in hospitalized patients and a key indicator of nursing care quality. Adequate knowledge and positive attitudes among nurses are essential for effectively preventing and managing pressure ulcers.* ***Objective:*** *To assess the level of knowledge and attitudes of nurses working at Medicare Hospital, Multan, regarding pressure ulcers.* ***Methods:*** *An exploratory cross-sectional study was conducted at Medicare Hospital, Multan, from February 2024 to February 2025. A total of 100 nurses from various departments were recruited based on availability. Knowledge was assessed using the 26-item Pressure Ulcer Knowledge Assessment Tool, which covered six key dimensions of pressure ulcer prevention and management. Attitudes were evaluated using a 13-item Attitudes Towards Pressure Ulcers Prevention (APuP) tool. Data were analyzed using SPSS version 25.* ***Results:*** *The overall mean knowledge score was 50.4% (12.01 ± 3.91), with only 10% of nurses achieving a high knowledge level (≥60%). The highest knowledge scores were recorded in the nutrition domain (80%), while the lowest were in risk assessment (40%). The mean attitude score was 68.2% (35.45 ± 12.00), below the satisfactory threshold of 75%. Only 55% of participants demonstrated a satisfactory attitude toward pressure ulcer prevention.* ***Conclusion:*** *Nurses at Medicare Hospital exhibited unsatisfactory levels of knowledge and suboptimal attitudes regarding pressure ulcer prevention. These findings highlight the urgent need for structured educational interventions and training programs to improve patient care outcomes related to pressure ulcers.*

Keywords: Bedsores, Knowledge, Pressure Injuries, Pressure Ulcers

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Introduction

Pressure ulcers are a common condition in the elderly and bedridden patients because of staying immobile for a prolonged period. If left untreated, they can be fatal and painful. It occurs in 7-71.6% of patients and has a greater risk of mortality. In Pakistan, pressure ulcers occur in 43-75% of patients in tertiary care facilities. (1, 2) ICU patients are most affected by pressure injuries, with a prevalence of 10-26% in Europe and 31.4-39.3% in Asia. (3, 4)

Pressure ulcers are a significant complication in nursing care, as they significantly affect quality of life and medical expenditures and can lead to poor outcomes. Friction, prolonged hospital stays, nutrition, shear forces, medications, comorbidities, old age, limited mobility, and smoking are major risk factors for the development of pressure ulcers. Since nurses are mainly responsible for diet, hygiene, mobilization, and medication, they play an important role in preventing pressure injuries.

Previous studies conducted to assess nurses' knowledge regarding pressure injuries showed unsatisfactory results. A meta-analysis by Wu et al reported a knowledge score of 51.5% while Gedamu et al reported a 46.2% rate in Ethiopia. (5, 6)Similarly, a 43.2% knowledge score was reported in Saudi Arabia. (7) In Pakistan, only 29.6% of nurses reported having good knowledge. (8)

This study assessed the level of knowledge and attitudes of nurses working in Medi Care Hospital regarding pressure ulcers.

Methodology

An exploratory cross-sectional study was conducted among nurses working at Medicare Hospital, Multan, from February 2024 to February 2025. A total of 100 nurses from all departments were selected depending on their availability. Newcomers and non-consenting nurses were excluded. All participants agreed to provide their data for the study, which was approved by the hospital's ethical committee.

Knowledge was evaluated by a 26-item Pressure Ulcer Knowledge Assessment Tool on six dimensions. The dimensions included risk factors and occurrence, types and signs, nutrition, risk assessment, mitigation of severity of shear and tearing, and reducing the duration of pressure and tearing. The minimum possible score was zero, and the maximum score was 26. The score was converted into a percentage out of 100%. A score of 29 or less was considered very low, 30-59 was considered low, 60-89 was considered high, and a score of 90 or higher was considered very high.

The 13-item Attitudes Towards Pressure Ulcers Prevention tool assessed nurses' attitudes. The assessment was done on five dimensions: ability to prevent ulcers, the effect of this prevention, results of pressure ulcers, responsibility to prevent ulcers, and confidence in the effectiveness of prevention. The responses could be provided on a Likert scale from 1 to 4, with one being strongly agree and four being strongly disagree. The maximum possible score was 52, converted into percentages with a score of 75 or more, which was considered satisfactory.

Data analysis was done using SPSS version 21. Descriptive analysis was performed to present data. The Spearman test was used to assess the association between study variables. The ANOVA test determined the difference in scores in the study groups. Statistical significance was considered at a p-value less than 0.05.

Results

The response rate of the study was 100%. The average age of nurses was 40.52 ± 10.07 years, with an average experience of 18.87 ± 10.34 years. Most of the nurses (25%) worked in surgery, followed by medicine (15%), neurology (13%), ICU (12%), trauma (11%), and oncology (13%). 80 (80%) had a bachelor's degree or higher, and 20 (20%) had a nursing diploma. 75 (75%) nurses studied pressure ulcer management, and 15% studied it during continued education. Only 2 (2%) nurses underwent additional training workshops or courses.

The total mean knowledge score was 50.4% (12.01±3.91). Only 10 (10%) nurses had a high knowledge level (60% or higher) (Table I). The highest score was 80% in the nutrition dimension, and the lowest was 40% in the risk assessment. An overall attitude score of 68.2% was noted (35.45 ± 12.00), lower than the satisfactory threshold of ≥75%. Only 55 (55%) participants had satisfactory attitude scores(Table II).

A significant association was observed between knowledge and attitude scores ($p<0.001$), between risk factors and occurrence and responsibility to prevent ulcers ($p<0.001$), and risk assessment and responsibility to prevent ulcers ($p<0.001$) (Table III). The knowledge score between nurses working in trauma units (50%) and nurses working in neurology (41.72%) was statistically significant ($p=0.05$). Similarly, the knowledge score between nurses with a bachelor's (51.80%) and nurses with postgraduate education (43.51%) also differed significantly ($p=0.029$).

Table I: Assessment of Nurses' Knowledge Regarding Pressure Ulcers

Domains	Percentage score	Mean ± SD
Risk factors and occurrence	40.6%	2.44 ± 1.08
Types and signs	47.4%	2.37 ± 1.03
Nutrition	80%	0.80 ± 0.71
Risk assessment	40%	0.80 ± 0.36
Mitigation of the severity of shear and tearing	42.5%	2.98 ± 1.33
Reducing the duration of pressure and tearing	52.4%	2.62 ± 1.11

Table II: Assessment of Nurses' Attitudes Regarding Pressure Ulcers

Domains	Percentage score	Mean ± SD
Ability to prevent ulcers	69.3%	8.32 ± 2.98
Effect of PU prevention	67.7%	8.12 ± 2.07
Results of pressure ulcers	67.7%	8.13 ± 3.34
Responsibility for preventing ulcers	68.3%	5.47 ± 2.02
Confidence in the effectiveness of ulcers	67.6%	5.41 ± 1.79

Table III: Associations between Study Variables

Correlations	Spearman's correlation coefficient	P value
Knowledge and attitude	0.500	<0.001
Risk factors and occurrence, and the Responsibility to prevent ulcers	0.248	<0.001
Risk assessment and Responsibility to prevent ulcers	0.259	<0.001
Knowledge and age	0.130	0.057
Attitudes and age	-0.092	0.178
Knowledge and experience	0.122	0.091
Attitudes and experience	-0.088	0.176

Discussion

This study was conducted to evaluate the levels of knowledge and attitudes of nurses regarding pressure injuries. The results revealed unsatisfactory knowledge (50.4%) and unfavorable attitudes (68.2%) of nurses, similar to previous studies in other countries. Knowledge levels in Brazil (50%), China (51%), Ethiopia (46.24%), and Iran (43.2%) complied with our scores. (6, 7, 9, 10)The attitudes score of Balan et al (67%), Liu et al (70%), and Korkmaz et al (76.8%) agreed with our results. (11-13)

The knowledge and attitudes scores in the present study were significantly associated with a high knowledge score, leading to a more favorable attitude, as in Abrahams et al.(14). There is evidence in the literature about significant differences in knowledge concerning education or experience; this pattern was observed in our study. (15, 16)

The knowledge score between nurses working in trauma units (50%) and nurses working in neurology (41.72%) was statistically significant ($p=0.05$). Vahargah et al. also have high practice scores among trauma nurses, which can explain the need for better knowledge levels. (17) However, Parisod et al contradicted this finding and reported no significant difference between the unit type and department knowledge levels. (18)

Our study has some limitations. The sample size is limited, especially for ICU nurses, where the prevalence of pressure ulcers is most frequent. Secondly, we excluded nursing students, so the current curriculum about pressure ulcers could not be analyzed to reflect the knowledge and attitude scores.

Conclusion

There was unsatisfactory knowledge and unfavorable attitudes regarding pressure ulcers among nurses working in the Medicare Hospital.

Declarations

Data Availability statement

All data generated or analysed during the study are included in the manuscript.

Ethics approval and consent to participate

Approved by the department concerned. (IRBEC-MS-0883-23)

Consent for publication

Approved

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Conflict of interest

The authors declared the absence of a conflict of interest.

Author Contribution

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Review of Literature, Data entry, Data analysis, and drafting articles.
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Conception of Study, Development of Research Methodology Design,
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Study Design, manuscript review, critical input, Manuscript drafting,

All authors reviewed the results and approved the final version of the manuscript. They are also accountable for the integrity of the study.

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