



## **Nursing students' attitude & belief towards prevention of pressure sores in long-term bedridden patients**

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### **Abstract**

**Background:** Pressure blisters, sometimes referred to as pressure ulcers or scrapes, are localized skin lesions brought on by prolonged pressure or pressure combined with shear, usually over bony elevations. People with physical or internal medical disorders that promote immobility, particularly those who spend extended periods of time confined to a chair or bed. Nursing students' attitude and beliefs play a crucial role in their preparedness to prevent pressure sores in clinical practice. A descriptive cross-sectional design was employed among nursing students. Nursing students demonstrated generally positive attitudes towards pressure sore prevention and belief scores reflected awareness of prevention importance but gaps remained in knowledge of repositioning schedules and risk assessment tools. Students with prior clinical exposure had significantly higher attitude scores ( $p < 0.05^*$ ) attitude and belief were significantly correlated. Nursing students have favourable attitude and belief, but targeted education and practical training are needed to improve pressure sore prevention practices.

**Keywords:** Pressure sore prevention, long-term bedridden patients, nursing students, belief, attitude

### **1. Introduction**

A type of injury known as a pressure ulcer occurs when an area of skin is subjected to continuous pressure for a specific amount of time. This results in tissue ischaemia, which obstructs the tissue's ability to receive nutrients and oxygen, and eventually leads to tissue necrosis. The most accurate description of a pressure ulcer is probably one of constant pressure causing "deformation" or "disformation" damage [1]. Most cases of pressure blisters occur in patients with physical or internal medical disorders that promote immobility, particularly those who spend extended periods of time confined to a chair or bed. Similar to type 2 diabetes, a number of other medical disorders that affect blood flow and capillary perfusion might increase a person's susceptibility to pressure ulcers. Another determinant is age; most pressure ulcers (about two-thirds) affect persons between the ages of (60 and 80) [2]. Simply stated, anyone who is unable to prevent prolonged periods of continuous compression, whether or not they have a medical problem, is susceptible to developing pressure ulcers. The majority of cases, which resemble sacral, ischial, and trochanteric pressure ulcers, are said to occur over the region where skin covers bones [3]. Complications from linen distortion driven on by a combination of pressure, shear, warmth, and moisture are known as pressure ulcers (PUs) [4]. This distortion can directly damage cell structures or vitiate blood perfusion, lymphatic function and transport between interstitial spaces which causes ischaemia, tissue damage

and cell death [5, 6]. Relating the pressure sore is at risk is important to give with frequent body turns, pressure-reducing support shells and to secure a healthy skin condition [7]. Despite constituting a multidisciplinary accountability, nurses play an essential function in pressure ulcer prevention. The Agency for Healthcare Research and Quality (AHRQ, previously the Agency for Health Care Policy and Research) in the United States released guidance for clinical practice on pressure ulcer prevention in 1992 [8]. The survival of skin and tissue depends on hydration and nutrients, which also aid in tissue restoration when managing pressure ulcers [9]. An important factor in the healing of wounds is nutritional status. A poor outcome is accompanied by malnutrition, which increases morbidity and death [10]. The occurrence of various issues can be considerably decreased while caring for elderly patients who are bedridden all the time by using prophetic nursing measures, improving nursing quality and effectiveness, and improving communication between nurses and patients [11]. Additionally, nursing focuses on maintaining the ulcer clean and in a state of moisture balance, preventing infections, preventing future ulcer deterioration, and keeping the patient pain-free [12]. Nursing students, as future frontline caregivers, play a critical role in pressure sore prevention, especially as they transition from theoretical knowledge to clinical practice. Therefore, through this study, we aimed to assess the attitude and belief among the nursing students' on prevention of pressure sores in long-term bedridden patient.

## 2. Materials and Methods

A descriptive cross-sectional study was conducted to assess Nursing students' attitude and belief toward prevention of pressure sores in long-term bedridden. A self-developed questionnaire is prepared and validation of the questionnaire is done by team of faculties of Columbia Group of Institutions. The questionnaire includes demographic information and 25 questions on attitude and belief. A sample of 90 nursing students was selected by convenience sampling. Data were collected through Google form which was sent to the targeted population and consent form were also obtained from each participant. The response obtained from AB questionnaire are presented in the excel sheet and the mean values were calculated using descriptive statistics. Scores were categorized to positive attitude and good belief. The inclusions criteria for the participant were undergraduate nursing students and exclusive criteria for the participant were 1<sup>st</sup> semester BSc (N).

## 3. Results and Discussion

### 3.1 Results

The statistical analysis was done using SPSS 23.0. The categorical variables were represented in frequency and percentage. Association of demographic variables with attitude and belief was found using fisher's exact test. A p value < 0.05 was considered statistically significant.

### 3.2 Discussion

This study aimed to assess the attitude and belief of nursing students towards the prevention of pressure sores in long-term bedridden patients. Among the 90 participants, significant proportion (86.7%) demonstrated a positive attitude, while 71.1% exhibited good belief in the importance and effectiveness of pressure sores prevention. These findings suggest that the majority of nursing students recognize the critical role they play in preventing pressure ulcers and understand the importance of early intervention. The high percentage of students with positive attitude reflect a strong awareness of the ethical and professional responsibility nurses have in maintaining skin integrity and promoting patient comfort. The previous studies indicate the

findings are harmonious with the reports of Uba *et al.* (2015) and Isa *et al.* (2019) which indicate that student nurses had a high positive attitude towards forestallment of pressure ulcers. Isa *et al.* (2019) support the findings of this study regarding possession of advanced knowledge of pressure ulcers that is restated into a positive attitude towards the prevention of pressure ulcers. According to Simonetti *et al.* (2015), clinical capability may be identified with the extent of clinical exposure thereby adding the students confidence and positive attitude toward care. Similarly, in the Namibian environment, student nurses are first taught and only allowed to perform nursing procedures on preliminarily simulated content by their lecturers for them to acquire and exercise nursing skills appropriately (Mukumbang & Adejumo 2014) [13]. However, while the attitude scores were higher, the lower percentage of students (71.1%) showing good belief suggest that belief may be influenced by practical confidence and perceived competence. This gap might indicate that although students know prevention is important, some may lack confidence in their ability to apply preventative measures effectively, such as repositioning technique, risk assessment tools (Braden scale), or use of pressure-relieving devices. This finding may be attributed to several factors such as limited clinical exposure which may not have fully internalized the practical aspects of prevention, curricular gap, and systemic barriers. Therefore, the results suggest the need to strengthen nursing education and clinical training programs focusing on integrating simulation-based training to improve students' practical confidence. Emphasizing the importance of early and consistent interventions during clinical rotations and encouraging mentorship programs where students can observe and participate in effective prevention strategies under supervision. Moreover, reinforcing student's belief through case studies, reflective learning, and real patient outcomes could bridge the gap between knowledge and action. Encouraging critical thinking and clinical reasoning related to pressure sore risks will empower students to take initiative to translate that attitude into effective care in clinical setting.

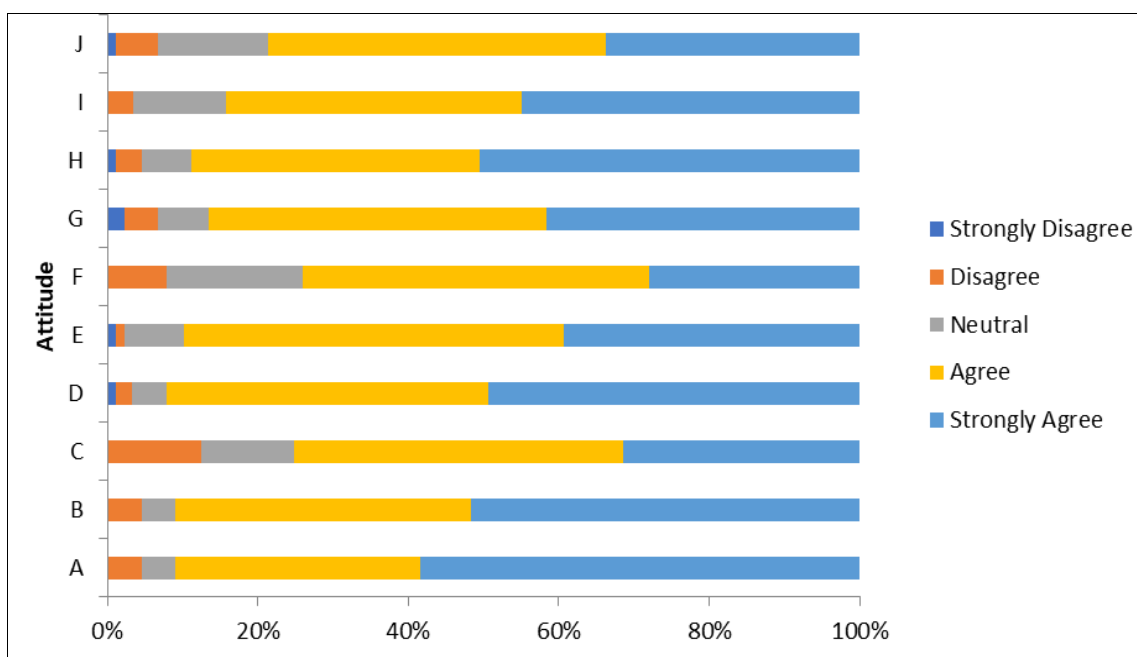
## 4. Table and Figure

**Table 1:** Distribution based on attitude towards prevention of pressure sores in long-term bedridden patients

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Frequent repositioning is the most important factor in preventing pressure sores in bedridden patients.		4 (4.5%)	4 (4.5%)	29 (32.6%)	52 (58.4%)
Braden scale is commonly useful to assess a patients is at risk of developing pressure sores.		4 (4.5%)	4 (4.5%)	35 (39.3%)	46 (51.7%)
Using harsh soaps and alcohol-based cleansers is NOT a preventive measure for pressure sores.		11 (12.4%)	11 (12.4%)	39 (43.8%)	28 (31.4%)
Training and education on pressure sore prevention should be mandatory for all healthcare providers.	1 (1.1%)	2 (2.2%)	4 (4.5%)	38 (42.7%)	44 (49.4%)
Dietary components of protein and vitamins are essential for wound healing and preventing pressure ulcers.	1 (1.1%)	1 (1.1%)	7 (7.9%)	45 (50.6%)	35 (39.3%)
Workload and staffing levels affect the ability to implement pressure sore prevention strategies effectively		7 (7.9%)	16 (18.0%)	41 (46.1%)	25 (28.0%)
Special mattresses can help reduce the risk of bedsores.	2 (2.2%)	4 (4.5%)	6 (6.7%)	40 (44.9%)	37 (41.6%)
Early detection of redness and breakdown helps in preventing of pressure ulcers.	1 (1.1%)	3 (3.4%)	6 (6.7%)	34 (38.2%)	45 (50.6%)
Bony prominences like the sacrum, heels, hips are the area which are most susceptible to developing pressure sores in bedridden patients.		3 (3.4%)	11 (12.4%)	35 (39.3%)	40 (44.9%)
Bedridden patient with malnutrition is at the highest risk for developing pressure sores.	1 (1.1%)	5 (5.6%)	13 (14.6%)	40 (44.9%)	30 (33.7%)

The majority of respondents (58.4%) strongly agreed that frequent repositioning is the most important factor in preventing pressure sores in bedridden patients, while 32.6% agreed and only a small fraction (4.5% each) were neutral or disagreed. Similarly, the Braden scale was widely recognized as useful for assessing a patient's risk, with 51.7% strongly agreeing and 39.3% agreeing. When it came to using harsh soaps and alcohol-based cleansers, 43.8% agreed that it is *not* a preventive measure, and 31.4% strongly agreed though a notable 24.8% were neutral or disagreed, suggesting some uncertainty or variation in practice. Regarding training and education, nearly all respondents supported its necessity, with 49.4% strongly agreeing and 42.7% agreeing. On the role of dietary components, 50.6% agreed and 39.3% strongly agreed that protein and vitamins are essential for wound healing.

However, opinions were more mixed on workload and staffing levels, where only 28% strongly agreed, though 46.1% agreed, and 25.9% remained neutral or disagreed highlighting the real-world challenges of implementing preventative strategies. Special mattresses were also viewed favorably, with 41.6% strongly agreeing and 44.9% agreeing that they reduce the risk of bedsores. Early detection of redness and skin breakdown was strongly supported, with 50.6% strongly agreeing and 38.2% agreeing. When asked about bony prominences as high-risk areas, 44.9% strongly agreed and 39.3% agreed, indicating strong awareness of these risk zones. Lastly, a majority (44.9%) agreed and 33.7% strongly agreed that malnutrition in bedridden patients significantly raises the risk of developing pressure sores.



**Fig 1:** Based on attitude to towards prevention of pressure sores in long-term bedridden patients

**Table 2:** Distribution based on belief towards prevention of pressure sores in long-term bedridden patients

Item	No	Unsure	Yes
Do you believe pressure ulcer prevention should be a top priority in long-term care facilities?	7 (7.9%)	3 (3.4%)	79 (88.8%)
Do you believe caregivers and healthcare providers should receive regular training on pressure sore prevention?	8 (9.0%)	5 (5.6%)	75 (84.3%)
Do you believe frequent skin assessments are necessary for preventing pressure ulcers?	11 (12.4%)	4 (4.5%)	74 (83.1%)
Do you believe that a lack of staff in healthcare facilities affects pressure ulcers prevention efforts?	12 (13.5%)	9 (10.1%)	68 (76.4%)
Do you believe that pressure ulcer prevention strategies should be individualized for each patient?	9 (10.1%)	12 (13.5%)	68 (76.4%)
Do you believe using advanced wound care technology is necessary to prevent pressure sores?	10 (11.2%)	20 (22.5%)	59 (66.3%)
Do you believe financial constraints impact the availability of pressure ulcer prevention resources in healthcare settings?	15 (16.9%)	22 (24.7%)	52 (58.4%)
Do you believe that pressure sore prevention should start as soon as a patient becomes bedridden?	11 (12.3%)	9 (10.1%)	69 (77.5%)
Do you believe emotional and psychological well-being impacts a patients is at risk of developing pressure sores?	27 (30.3%)	22 (24.7%)	40 (44.9%)
Do you think pressure ulcers only affect elderly bedridden patients?	58 (65.2%)	6 (6.7%)	25 (28.1%)

The majority of respondents demonstrated a strong belief in key pressure ulcer prevention measures. A significant 88.8% agreed that prevention should be a top priority in long-term care facilities, and 84.3% believed that caregivers and healthcare providers should receive regular training. Furthermore, 83.1% recognized the necessity of frequent skin assessments. A substantial proportion (76.4%) agreed that staff shortages affect prevention efforts, and an equal percentage felt that prevention strategies should be

individualized. While 66.3% supported the use of advanced wound care technology, fewer (58.4%) believed that financial constraints impact prevention resources. Additionally, 77.5% supported starting preventive measures as soon as a patient becomes bedridden. However, only 44.9% believed emotional and psychological well-being affects ulcer risk, and 28.1% rejected the misconception that pressure ulcers only affect elderly bedridden patients, indicating misconceptions persist among some respondents.

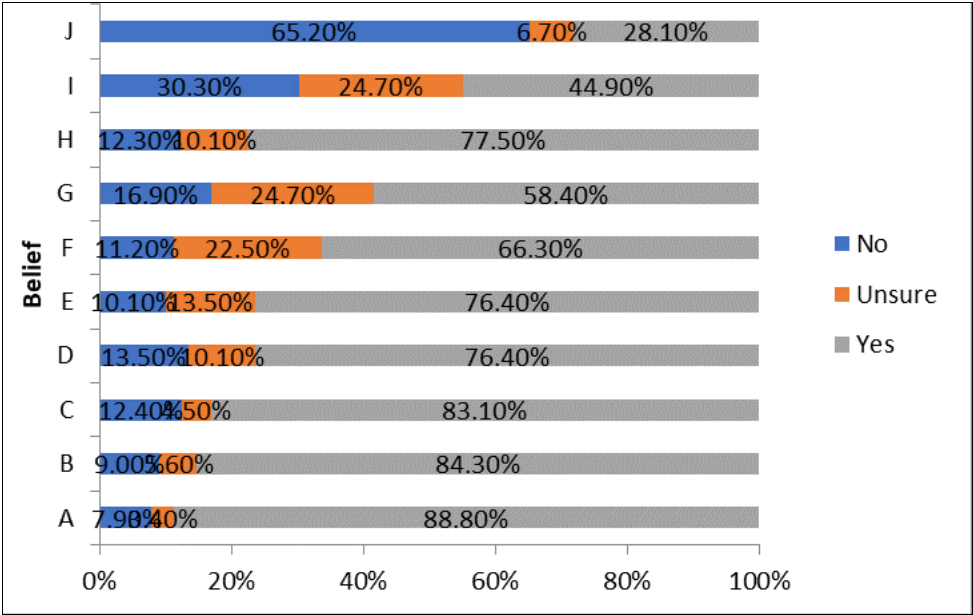


Fig 3: Based on belief towards prevention of pressure sores in long-term bedridden patients

Table 4: Classification based on attitude

Attitude	Frequency	Percent
Negative (10-30)	3	3.3
Positive (31-50)	87	86.7
Total	90	90.0

Out of a total of 90 participants, the majority (86.7%) demonstrated a positive attitude toward pressure ulcer prevention, as indicated by attitude scores ranging from 31 to 50. Only 3 participants (3.3%) were categorized as having a negative attitude, with scores between 10 and 30.

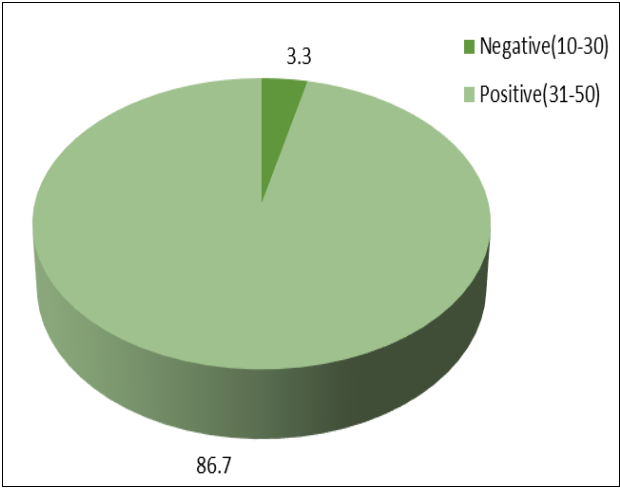


Fig 5: Representation of classification of attitude

Table 6: Classification based on belief

	Frequency	Percent
Poor belief (<=5)	26	28.9
Good belief (>5)	64.0	71.1
Total	90	100.0

Among the 90 participants, 71.1% (N=64) were found to hold a good belief about pressure ulcer prevention, as reflected by scores greater than 5. In contrast, 28.9% (N=26) demonstrated a poor belief, with scores of 5 or less.

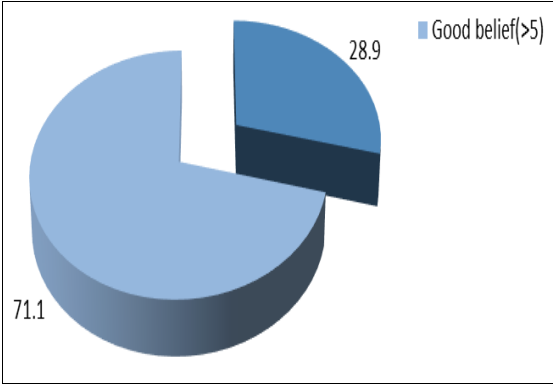


Fig 8: Representation based on belief

5. Conclusion

This study highlights that nursing students generally retain positive attitude and belief towards prevention of pressure sores in long-term bedridden patients. However, a gap

remains between their theoretical knowledge and the confidence demanded to apply preventative measures in clinical setting, need for enhanced clinical exposure, skills training, and clinical confidence. Therefore, nursing education programs should promote a strong foundation based on enhancing clinical exposure, simulated-based learning, mentoring, which can reinforce both belief and competence. Promoting a strong foundation in pressure sore prevention among nursing students is essential to improve patient outcomes and reducing complications. As future frontline caregivers, nursing students must be well-equipped not only with knowledge and positive mind-set but also with skilled and confidence

## 6. Acknowledgement

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## Conflict of Interest

Not available

## Financial Support

Not available

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