

**A DESCRIPTIVE STUDY TO ASSESS THE KNOWLEDGE OF STAFF NURSES
REGARDING PREVENTION OF PRESSURE ULCER AMONG BEDRIDDEN PATIENTS
IN SELECTED HOSPITALS, MANGALURU**

Sreekanth P. S.^{1*}, Prof. Shashi Kumar Jawadagi², Anju Ullas² and Nidhina Paul²

¹MSc. Nursing, Dept of Medical Surgical Nursing, Yenepoya Nursing College, Yenepoya (Deemed to be University), Deralakatte, Mangaluru, Karnataka, India.

²Lecturer, Department of medical surgical nursing, Yenepoya Nursing College, Yenepoya (Deemed to be University), Deralakatte, Mangaluru, Karnataka, India.

*Corresponding Author: Dr. Sreekanth P. S.

MSc. Nursing, Dept of Medical Surgical Nursing, Yenepoya Nursing College, Yenepoya (Deemed to be University), Deralakatte, Mangaluru, Karnataka, India.

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ABSTRACT

Background of the study: A pressure ulcer is commonly termed as bedsores, Decubitus ulcer or pressure sore and sometimes as pressure necrosis or ischemic ulcer. The term pressure ulcer was popularized by the Agency for Healthcare Research and Quality. Pressure ulcer has been set as “an area of unrelieved pressure usually over a bony prominence leading to ischemia, cell destruction and tissue necrosis. Pressure ulcers have been identified as one of the most costly and physically debilitating complications in the 21st century. Pressure ulcers are the third most expensive disorder after cancer and cardiovascular diseases. In Indian context, the prevalence of pressure ulcers in hospitalized patients has been reported to be 4.94%. Prevention of pressure ulcer is an important goal. Not surprisingly the hospital stay is longer in these patients with increased risk of nosocomial and renal infections. The hospital re-admission charge per unit is likewise very high. The cognition of the staff nurses regarding prevention of pressure ulcer plays a significant role in safeguard and health, preventing pressure ulcer. The present study aimed to assess the knowledge of staff nurses regarding prevention of pressure ulcer among bedridden patients in selected hospital. • To assess the level of knowledge of staff nurses regarding prevention of pressure ulcer among bedridden patients. • To find out association between knowledge score and the selected socio demographic variables. **Methodology:** The data was collected after obtaining permission from the concerned authority to conduct the study. The purpose of study was explained and written consent was obtained from the study participants. The participants were assured about the confidentiality of their responses. The baseline characteristics with 5 items and dichotomous questionnaire with 30 items were administered to the staff nurses working in the yenepoya hospital. For the present study, non probability, convenience sampling technique was used for selecting the samples. 100 staff nurses working in the yenepoya hospital in Mangalore were selected as the samples for the study. Data collected from the samples were analyzed by descriptive and inferential statistics. **Result:** In this study shows that, the highest percentage (76%) of the samples were in the age group of 22-40 years. Majority of the samples were females (88%). More than half (61%) of the subjects were with the qualification of GNM. 76% were with the experience of 2 – 4 years and 38% were working in the medicine ward. • The subjects were with the mean 15.25 ± 2.74 , the mean % of 50.83 revealed that subjects were with inadequate knowledge regarding prevention of pressure ulcers. • More than half of the subjects 60% were with adequate knowledge and rest 40% were with inadequate knowledge. **Conclusion:** Pressure ulcers are the third most expensive disorder after cancer and cardiovascular diseases. It can develop quickly and are very difficult to treat. Consistent, planned skin care assessment and interventions are critical to ensuring high quality of nursing care.

INTRODUCTION

Pressure ulcer fall into one of four stages based on their severity. The National Pressure Ulcer Advisory Panel, a professional organization that promotes the prevention and treatment of pressure ulcers, defines each stage as follows. **Stage I:** The initial stage of a pressure ulcer has the following features. The skin is not broken. The skin looks red on people with lighter skin color, and the skin

doesn't briefly lighten when touched. The ulcers appear as a defined area of persistent redness in lightly pigmented skin, whereas in darker skin tones, the ulcer may appear with persistent red, blue, or purple hues. **Stage II:** The outer layer of skin and part of the underlying layer of skin (dermis) is damaged. The wound may be shallow and pinkish or red. The wound may look like a fluid-filled blister or a ruptured blister.

Stage III: the ulcer is a deep wound: The loss of skin usually exposes some fat. The ulcer looks crater-like. The bottom of the wound may have some yellowish dead tissue. The damage may extend beyond the primary wound below layers of healthy skin.

Stage IV: A stage IV ulcer shows large-scale loss of tissue. The wound may expose muscle, bone or tendons. The bottom of the wound likely contains dead tissue that's yellowish or dark and crusty. The damage often extends beyond the primary wound below layers of healthy skin.^[1]

Each stage pressure ulcer increases, skin becomes more and more prone to get infection. Moist wounds and necrosis (dead tissue) create a best place to breed for bacteria. Infection stands one of the greatest delays in pressure ulcer healing and is one of the worst complications. Preventing infection is a key step to the healing of all wounds, pressure ulcer and ulcerations. When bacteria spread under the skin and into the soft tissues, the body reacts by creating inflammation. To speed up bed sore healing and prevents infection; you need a medical grade solution. Also, it is important to manage skin inflammation throughout the healing process. Inflamed skin is highly fragile and can easily be at risk for secondary infection. Above all, monitor daily progress of the skin to watch for any negative changes so that you can respond quickly.^[2]

There are two main reasons that contribute to pressure ulcer formation: (1) external pressure that compresses blood vessels (2) friction and shearing forces that tear and injure blood vessels. External pressure applied over an area of the body, especially over the bony prominences can result in obstruction of the blood capillaries, which deprives tissues of oxygen and nutrients, causing ischemia (deficiency of blood in a particular area), hypoxia (inadequate amount of oxygen available to the cells), oedema, inflammation, and, finally, necrosis and ulcer formation. Ulcers due to external pressure occur over the sacrum and coccyx, followed by the trochanter and the calcareous (heel). Friction is damaging to the superficial blood vessels directly under the skin. It occurs when two surfaces rub against each other. The skin over the elbows and can be injured due to friction. The back can also be injured when patients are pulled or slid over bed sheets while being moved up in bed or transferred onto a stretcher. A shear is a separation of the skin from underlying tissues. When a patient is partially sitting up in bed, their skin may stick to the sheet, making them susceptible to shearing in case underlying tissues move downward with the body toward the foot of the bed. This may also be possible on a patient who slides down while sitting in a chair.

In addition to pressure, friction, and shear, there are more risk factors of pressure ulcers. Physiological (intrinsic) and non-physiological (extrinsic) factors that may place

a patient at risk include diabetes mellitus, peripheral vascular disease, cerebral vascular accident and hypotension. Other factors are age of 70 years and older, current smoking history, dry skin, low body mass index, impaired mobility, altered mental status, urinary and faecal incontinence, malnutrition, physical restraints, malignancy, history of pressure ulcers.^[3]

MATERIAL AND METHODS

The data was collected after obtaining permission from the concerned authority to conduct the study. The purpose of study was explained and written consent was obtained from the study participants. The participants were assured about the confidentiality of their responses. The baseline characteristics with 5 items and dichotomous questionnaire with 30 items were administered to the staff nurses working in the Yenepoya hospital. For the present study, non probability, convenience sampling technique was used for selecting the samples. 100 staff nurses working in the Yenepoya hospital in Mangalore were selected as the samples for the study.

Statistics: Data collected from the samples were analyzed by descriptive and inferential statistics.

Section 1: Distribution of staff nurses based on selected socio demographic variable

Table No: 1 Frequency and percentage of distribution of samples according to age in years

Demographic variables	Frequency (f)	Percentage (%)
Age in years	76	76
22-29	24	24
30-39		

N=100

From above table it was evident that majority of the subject 76 (76%) belongs to the age group of 22-29 years and 24 (24%) belongs to the age group of 30-39 years.

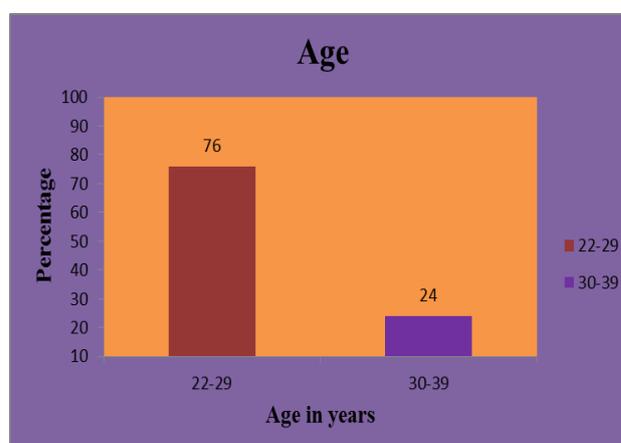


Figure. 1: Bar diagram showing the percentage distribution of samples according to their age.

Table No. 2. Frequency and percentage of distribution of samples according to gender.

Demographic variables	Frequency (f)	Percentage (%)
Sex		
Male	12	12
Female	88	88

Table 2 revealed that maximum number of subject 88 (88%) were females and 12 (12%) were males.

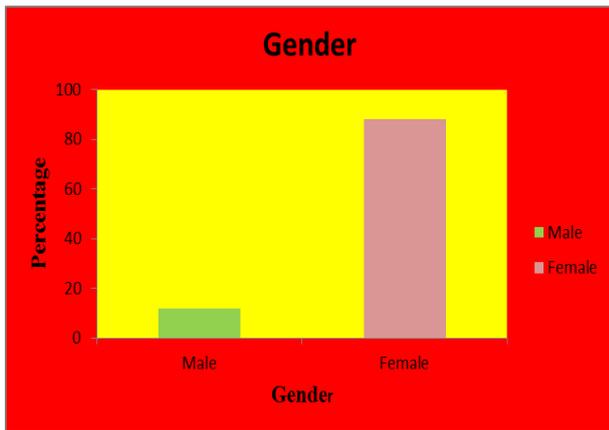


Figure. 2: Bar diagram showing the percentage distribution of samples according to their gender.

Table No. 3. Frequency and percentage of distribution of samples according to qualification.

Demographic variables	Frequency (f)	Percentage (%)
Qualification		
Gnm	61	61
Bsc	29	29
Pbbssc	10	10

The above table depicts that most of the subject 61 (61%) were GNM and only 10 (10%) were belongings to Pbbssc.



Figure. 3: Bar diagram showing the percentage distribution of samples according to their qualification.

Table No. 4 Frequency and percentage of distribution of samples according to Experience.

Demographic variables	Frequency (f)	Percentage (%)
Experience		
2-4 years	76	76
5-9 years	24	24

From above table it was evident that majority of the subject 76 (76%) were 2-4 years experience and 24 (24%) subject were 5-9 years experience.

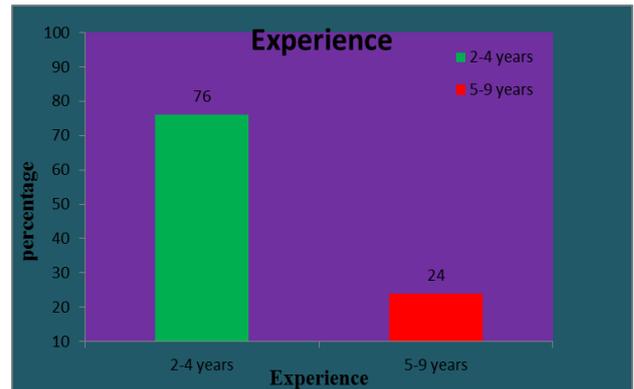


Figure. 4: Bar diagram showing the percentage distribution of samples according to their experience.

Table No: 4. Frequency and percentage of distribution of samples according to area of working.

Demographic variables	Frequency (f)	Percentage (%)
Area of working		
Icu	15	15
Medicine	38	38
Surgery	23	23
Ortho	16	16
Neurology	8	8

From the above table it was evident that majority of the subject 38 (38%) were from medicine ward and 8 (8%) were from neurology ward.

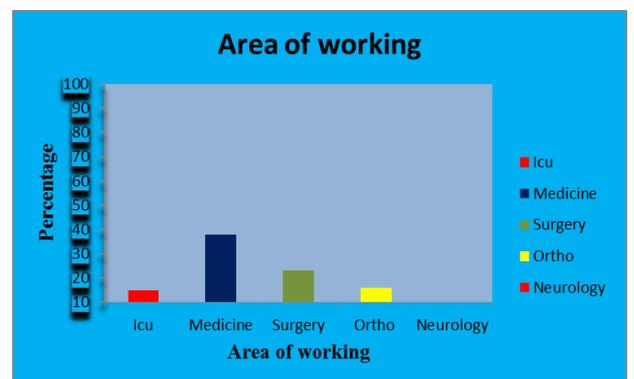


Figure. 4: Bar diagram showing the percentage distribution of samples according to their area of working.

Section II: Distribution of score of staff nurses regarding prevention of pressure ulcer.

Table 5: level of knowledge among the nurses by using descriptive statistics.

N=100

Description	Mean	Mean %	Median	SD
Knowledge score	15.25	50.83	15	2.74

The table 2 revealed that among the 100 subjects the mean \pm SD of knowledge level of nurses were 15.25 ± 2.74 . The mean % was 50.83. Which indicates that subjects knowledge regarding prevention of pressure ulcers is inadequate.

Table 6: grading of overall knowledge score.

Knowledge score	Frequency	Percentage	Inference
Excellent	1	1.0	Adequate
Good	59	59	
Average	38	38	Inadequate
Poor	2	2.0	

The above table reveals that more than half of the subjects 60% have adequate knowledge on pressure ulcer prevention.

Section III: Association between knowledge of staff nurses regarding prevention of pressure ulcers with selected demographic variables.

Table 7: association between knowledge of staff nurses regarding prevention of pressure ulcers and selected demographic variables.

Age						
22-29	48	28	1.31	1	0.25	N s
30-39	12	12				
Sex						
Male	5	7	1.91	1	0.16	N s
Female	55	33				
Qualification						
GNM	32	29	39.86	2	0.0001	
Bsc	21	8				
PBBSC	7	3				
Experience						
2 – 4 years	48	28	1.31	1	0.25	NS
5 – 9 years	12	12				
Area of working						
ICU	10	5	25.90	4	0.0001	S
Medicine	23	15				
Surgery	14	9				
Ortho	6	10				
Neurology	7	1				

S=significant, NS=not significant

DISCUSSION

- Section i: demographic Performa of the staff nurses
- Section ii: knowledge regarding prevention of pressure ulcers.
- Section iii: association between knowledge of staff nurses regarding prevention of pressure ulcers and selected demographic variables.

Section I: Demographic Performa of the staff nurses

- In the present study, results showed that most of the participants belong to the age group of 22-29.

This finding is supported by the cross-sectional survey conducted by nurhusien nuru to find out knowledge and practice of nurses towards prevention of pressure ulcer and associated factors in Gondar university hospital, northwest ethiopia.the study reveals that most of the participants belong to the age group of 20-30, followed by 31-40.^[46]

- In the present study, results showed that most of the participants had completed diploma in nursing.

This finding is contradicted to the cross-sectional survey conducted by nurhusien nuru to find out knowledge and practice of nurses towards prevention of pressure ulcer and associated factors in Gondar university hospital, northwest Ethiopia.the study reveals that more than half (62.5 %) of the nurses had completed Bsc nursing.

- In the present study, the researcher found that most of the participants in the study had experienced in medicine ward. There is no supportive studies are available to support these findings.

Section II: knowledge regarding prevention of pressure ulcers: In the present study, results showed that subject's knowledge regarding prevention of pressure ulcers is inadequate.

This finding is supported by the descriptive and exploratory research conducted by margareth yuri miyazaki and maria helena larcher caliri to find out knowledge on pressure ulcer prevention among nursing professionals. The study results say that the participants of the study display knowledge deficits in some areas related to the theme.^[46]

Available from: https://en.wikipedia.org/w/index.php?title=Pressure_ulcer&oldid=759056666

Knowledge on Pressure Ulcer Prevention among Nursing Professionals

Another study which is contradicted to the present study is cross-sectional survey conducted by nurhusien nuru to find out knowledge and practice of nurses towards prevention of pressure ulcer and associated factors in Gondar university hospital, northwest ethiopia. the study reveals that nearly half (54.4 %) of the nurses had good knowledge; similarly 48.4 % of them had good practice on prevention of pressure ulcer.^[47]

Section III: association between knowledge of staff nurses regarding prevention of pressure ulcers and selected demographic variables

- In the present study, results showed that there is an association between the knowledge level of the participants with their area of working and their qualification.

This finding is contradicted to the cross-sectional survey conducted by nurhusien nuru to find out knowledge and practice of nurses towards prevention of pressure ulcer and associated factors in Gondar university hospital, northwest ethiopia. the study results says that inadequate facilities and equipment were found to be significantly associated with the practice on prevention of pressure ulcer.

CONCLUSION

The entire process of carrying out the present study was an enriching experience to the investigator. It helped in exploring and improving the knowledge and ability of the researcher and the respondents. This has helped to know the knowledge of staff nurses regarding prevention of pressure ulcer.

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Conflicts of interest

There are no conflicts of interest.

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