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ORIGINAL RESEARCH ARTICLE

KNOWLEDGE AND PRACTICES OF BED SORE PREVENTION AMONG STAFF NURSES WORKING IN A SELECTED HOSPITAL, LUDHIANA, PUNJAB, INDIA

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ABSTRACT

The majority of pressure ulcers are preventable. Nurses should be able to constantly observe their client's skin for breaks or impairment in skin integrity. Pressure ulcers not only cause suffering to the patients but also increases nurses' work-load in clinical setting. Prevention of pressure ulcers is a significant nursing concern to reduce the costs of treatment and patients' suffering. To assess the level of knowledge and observe the practices of bed sore prevention among staff nurses working in general wards as well as special units. A descriptive, cross sectional and participating observational method was adopted. This study was conducted in Christian Medical College & Hospital, Ludhiana, Punjab, India among 60 staff nurses working in general wards and special units. Non probability, purposive sampling technique was used. Semi structured self administered questionnaire was developed for assessing knowledge and observation checklist was developed for practice of bed sore prevention for data collection procedure. Data were entered in SPSS 17.0 version and analyzed using in terms of descriptive (Frequency, percentage, mean, standard deviation and mean percentage) and inferential statistics (Independent t test, ANOVA and correlation). Findings highlight a difference in knowledge between special (73%) and general (62%) based nurses regarding pressure ulcers. Similar results were also found for practice. Overall discrepancies between knowledge (68%) and practice (53%) were reported for staff nurses regarding bed sore prevention. The results showed special unit nurses' practice significantly better (60.29%) than general ward nurses (46.68%). Although 40% of overall staff nurses achieved excellent level on knowledge, none of them crossed the excellent level on practice. It is concluded that knowledge and practice of bed sore prevention among nurses working within specialists and generalist ward differed and a theory practice gap exists which has implications for patients care suggesting the need for a specific educational intervention to respond to this need.

Key words: *Bed sore, Knowledge, Practice, Prevention, Staff Nurses.*

INTRODUCTION

Nursing is a unique profession because it addresses humanistically and holistically, the response of clients and families to actual and potential health problems.[1] A pressure ulcers is a localized area of tissue necrosis that tends to develop when soft tissue is compressed (for a prolonged period of time) between a bony prominence and an external surface. Early action to prevent pressure ulcers such as increasing patient mobility can cut down hospital stay and reduce demands on nursing time. The frequency of pressure ulcers ranges from3% -14% globally. The incidence of pressure ulcer in hospital has been reported to be 23% to 27.5 % .[2]

Prevention of pressure ulcers is a significant nursing concern. Nurses' ability to identify the patient at risk for the formation of the pressure ulcer would help to reduce the costs of treatment. A major aspect of nursing care is the maintenance of skin integrity to ensure quality of care. Pressure ulcers not only cause suffering to the patients but also increases the economical burden. [3, 4]

The prevalence of pressure ulcers has been reported in various studies ranging 4.7 % to 18.6 %.[5-7].The occurrence of pressure ulcer among clients admitted to nursing home is between 12%.and 25%. [8] As

highlighted 58% of clients with Pressure sores were above 65 years. Therefore, prevention of pressure ulcers is major nursing priorities. The ability to find or identify clients at risk will help to maintain the health care in preventing pressure ulcers. [9] This study was conducted to assess the knowledge and practices of bed sore prevention among staff nurses working in a selected hospital of India.

MATERIALS AND METHODS

A hospital based exploratory study was conducted among the staff nurses' working in general and special wards of Christian Medical College and Hospital, Ludhiana, Punjab, India. Purposive sampling technique was used for selecting 60 respondents; thirty respondents working in general wards (Male Medical, Orthopedic and Neurology Department) and thirty from special units (Intensive Care Unit, Intensive Coronary Care Unit and Intensive Neurosurgery Unit) were included. Eligibility was based on attained a Diploma in nursing; registered nurse with atleast 6 month professional experience in respective unit. Anonymity of the subject was maintained to protect their privacy. A semi-structured, self administered questionnaire was developed by investigator based on extensive literature reviewed and pretested with 10% of sample size (n=6) in a similar setting which was excluded from main study. Minor changes were made in response to the pilot study. International reliability was tested using Cronbach's alpha (0.7) which is considered as a reliable instrument.

In the data collection period, firstly, written informed consent was obtained from each respondent and confidentiality assurances made. A semi structured questionnaire was administered to the subjects for assessing knowledge score. They were allotted 20-30 minutes to complete after their duty hours. Secondly, participatory observation was undertaken based on checklist to assess practice of those nurses who took part in the questionnaire. Observations were undertaken across the nurses shift patterns to cover morning, evening and night. Moreover the selected time was appropriate to provide back care before signing off their shift duty.

Data was analyzed using SPSS version 17.0. Categorical variables were described as frequency and percentage while continuous variables were presented as mean, standard deviation and degree of freedom. Correlation coefficient test was used to findout if relationship existed between knowledge and practice score of bed sore prevention among staff nurses working at general and specialized unit. Association was calculated by using independent sample t test and ANOVA test for findout influencing variables of knowledge and practice of bed sore prevention among nurses.

RESULTS

A sample of 60 staff nurses drawn purposively showed that the majority of the respondents were aged between 21-25 years of age (45%) and resided in Punjab (83.0 %). The majority were trained from private institutes (95%), held a proficiency certificate level qualification (90%) and had between 3-5 years of professional nursing experience (36%) (see table 1).

Higher level of knowledge regarding bed sore prevention among nurses working in general ward was good (36.67%) whereas nurses working in specialized areas (53.33%) and overall (40.0%) had excellent (see in figure 1).

Level of practice regarding bed sore prevention was lower (<85%) than standard skill level among nurses working in general (46.67%) as well as special unit (60.29%) and overall was (53.48). Although staff nurses working in special units had better practice percentage score than those working in general ward , yet all of them needed improvement to come up to excellence level (refer to figure 2).

The relationships between mean percentage score of knowledge the staff nurses was higher (67.70) as compared to their practices (53.5) with a low positive correlation (r - 0.087) (see table 2). Staff nurses in general wards had (r=0.125) and nurses in special units had (r=0.005) relationship between knowledge and practice.

According to the clinical areas of staff nurses, overall knowledge areas regarding preventing bed sore was found to be the highest (98.50%) in definition and lowest (52.50%) in clinical manifestation by semi structured self administered questionnaire (see table no 3).

Finding showed that practices areas regarding

preventing bed sore was found to be too low (53.48%). It showed highest mean score in planning (86.50%) and lowest in evaluation (38.83%) among staff nurses working in special units by participatory observation using checklist (see table no 4).

There is no significant difference in knowledge and practice score of the staff nurses with selected variables such as age, state of domicile , training institute and professional experience and duty shift (p=>0.10) except in professional qualification (p=<0.05) for knowledge score(see in table 5).

DISCUSSION

The present study aimed to assess the level of knowledge and practice regarding bed sore prevention among staff nurses working in general and special units of selected hospital in India.

In this study, findings showed that a difference between the knowledge and practice scores between specialist and generalist based registered nurses. Such findings confirm previous research by Anju Bala et al, (2003) which found that staff nurses of special unit have higher percentage related to knowledge as well as in practice than those working in general unit. [10] This might be the reason for critical patient are more prone to get bed sore and nurses are aware of it.

Finding showed that practices areas regarding preventing bed sore was too low than standard skill level (>85%) suggesting a real need for immediate nursing intervention to upgrade their quality nursing care for high risk patients.

Overall deficit mean score of knowledge and practice was 7.29% and 31.51% respectively (see table no 3 &4).

Finding showed that mean score of knowledge of staff nurses is 67.71% and in practice 53.49%.This finding was consistent with a similar study conducted in Spain reported that the level of knowledge of prevention intervention was 79.1%, while the level of practice were notably lower 68.1% for preventive measures of bed sore among nurses. [11] While in a study conducted in Sweden by Kallman and Suserud reported that all respondents displayed good knowledge on prevention and treatment of pressure ulcers. [12]

Professional qualification is significant influencing variable for knowledge mean percentage score of bed sore prevention among nurses (p=<0.05) but in practice non significant (p=0.10). However, a study done by Anju Bala et al, (2003) reported that staff nurses with B.Sc degree were having significantly more skill (p=0.03) than the nurses with diploma degree (GNM).

CONCLUSION

Study findings concluded that SIM on bed sore prevention would help to bring awareness among nursing personnel clinically which helps to identify high risk patients to prevent pressure sore preventing devastating effects on the prognosis of the patient. Only knowledge would not be enough for preventing bed sore but also utilizing developed protocol is equally important. Regular assessment of skin integrity and documentation, reporting any alteration for timely initiating nursing intervention would improve the quality care to the patient resulting reduced hospital stay.

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REFERENCES

1. Potter PA, Perry GA. Fundamental of Nursing 2nd ed. 1993, Toronto: Mosby Co.

2. Abdellah FG, Levine E. Better patient care through Nursing Research. 1992, New York: Macmillan.

3. Chrisp M, Pressure sores. Nursing Times 1998; 89:1200 -7.

4. Rithalia S. Reducing the pressure. Nursing Times 1993;89(42):67.

5. Wound O. Continence Nurses Society. Guideline for prevention and management of pressure

ulcers 2003; p. 11-17.

6. Vati J, Chopra S, Walia I. Nurses's Role in the Management and Prevention of Pressure Ulcers-A Study. Nursing Journal of India 2004;95(5):111.

7. Tweed C, Tweed M. Intensive care nurses' knowledge of pressure ulcers: development of an assessment tool and effect of an educational program. American Journal of Critical Care 2008; 17(4):338-346.

8. Reid J, Morison M. Classification of Pressure Sore Severity. Nursing Times May 1994;90(20):46-48.

9. Zernike W. Preventing heal pressure Sores, A comparison of heal pressure relieving devices. Journal of Clinical Nursing 1994;3:375-380.

10. Bala A. A study to assess the knowledge level of bed sore and skill in giving back care of staff nurses, Ludhiana Punjab. 2003; p. 85-86.

11. Pancorbo-Hidalgo PL, et al. Pressure ulcer care in Spain: nurses' knowledge and clinical practice. Journal of Advanced Nursing 2007;58(4):327-338.

12. Källman U, Suserud BO. Knowledge, attitudes and practice among nursing staff concerning pressure ulcer prevention and treatment–a survey in a Swedish healthcare setting. Scandinavian journal of caring sciences 2009;23(2):334-341.

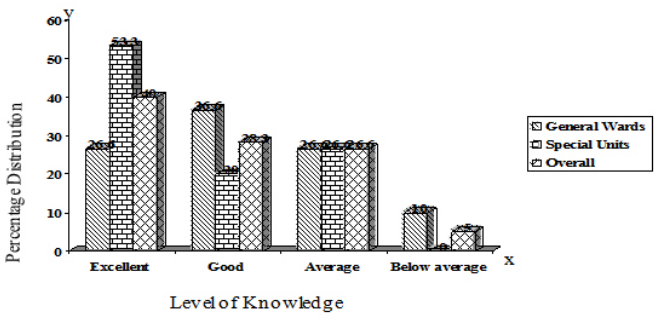

Fig. 1. Level of Knowledge Regarding Bed Sore Prevention Among Staff Nurse

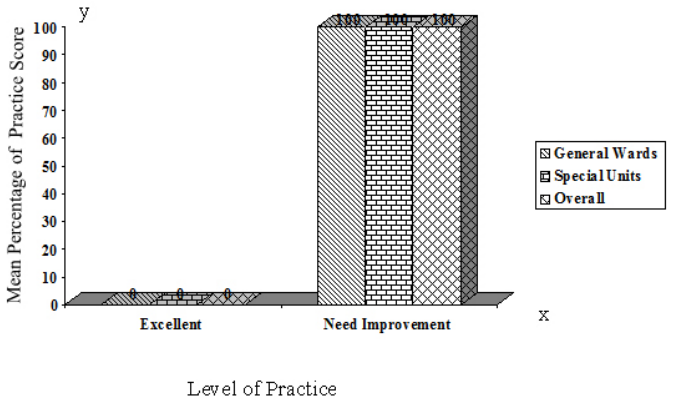

Fig. 2. Level of Practice Regarding Bed Sore Prevention Among Staff Nurse

Table 1: Percentage Distribution of Sociodemographic Characteristics of Respondent

Sociodemographic Characteristics	Over-all (%) (n=60)	General Ward (%) (n=30)	Special Units (%) (n=30)
Age group (in years)			
21-25	45.0%	36.7%	53.3%
26-30	35.0%	33.3%	36.7%
31-35	10.0%	20.0%	-
>35	10.0%	10.0%	10.0%
State of Domicile			
Punjab	83.0%	90.0%	76.7%
Non-Punjab	17.0%	10.0%	23.3%
Training Institute			
Private	95.0%	90.0%	100.0%
Government	5.0%	10.0%	-
Professional Qualification			
B.Sc Nursing	10.0%	6.7%	13.3%
PCL Nursing	90.0%	93.3 %	86.7%
Professional Experience (in years)			
0-2	32.0%	23.0%	40.0%
3-5	36.0%	40.0%	33.0%
>5	32.0%	37.0%	27.0%
Duty Shift			
Moring	45.0%	40.0%	50.0%
Evening	33.0%	40.0%	27.0%
Night	22.0%	20.0%	23.0%

Table 2: Correlation between Staff Nurses' Score of Knowledge and Practices Regarding Prevention of Bed Sore (n=60)

Variables	Max. Score	Knowledge & Practice Score of Staff Nurses'			
		General Ward	Special Unit	Overall	
		Mean %	Mean %	Mean %	Mean ± SD
Knowledge	24	62.5	72.91	67.70	16.25±3.29
Practice	34	46.67	60.29	53.5	18.19±4.42
r		0.125	0.005	0.087	
p- Value		>0.10NS	>0.10NS	>0.10NS	
df		28	28	28	

NS = Non significant

Table 3: Percentage Deficit Scores of Staff Nurses Regarding Bed Sore Prevention According to Areas of Knowledge

Area of Knowledge	Knowledge Score of Staff Nurses'					
	General n=30		Special n=30		Overall (n=60)	
	Obtained %	Deficit %	Obtained %	Deficit %	Obtained %	Deficit %
Definition	**100.00**	**-25.00**	**97.00**	**-22.00**	**98.50**	**-23.50**
Causes	**75.75**	**-0.75**	**86.75**	**-11.75**	**81.25**	**-6.25**
Risk Factor	**69.00**	**6.00**	**74.33**	**0.67**	**71.67**	**3.33**
Clinical	**35.00**	**40.00**	**70.00**	**5.00**	**52.50**	**22.50**
Manifestation Area/site	**54.25**	**20.75**	**77.50**	**-2.50**	**65.88**	**9.13**
Intervention	**60.30**	**14.70**	**63.30**	**11.70**	**61.80**	**13.20**
Total Score	**62.50**	**12.50**	**72.92**	**2.08**	**67.71**	**7.29**

Table 4: Percentage Deficit Scores of Staff Nurses regarding Bed Sore Prevention According to Areas of Practices.

Areas of Practice (n=60)	Practice score of Staff Nurses'					
	General n =30		Special n=30		Overall (n=60)	
	Obtained %	Deficit %	Obtained %	Deficit %	Obtained %	Deficit %
Risk Assessment	38.00	47.00	42.00	43.00	40.00	45.00
Nursing Diagnosis	50.00	35.00	47.00	38.00	48.50	36.50
Planning	83.00	2.00	90.00	-5.00	86.50	-1.50
Implementation	48.33	36.67	65.54	19.46	56.94	28.06
Evaluation	34.33	50.67	43.33	41.67	38.83	46.17
Overall Score	46.68	38.32	60.29	24.71	53.49	31.51

Table 5: Association between Selected Variables and Mean Percentage Score of Knowledge and Practice of Bed Sore Prevention (n=60)

Sociodemographic Characteristics	Knowledge		Practice	
	Mean % Score	P-value	Mean % Score	P-value
Age group (in years)				
21-25	75.0		46.94	
26-30	80.3	>0.10	49.29	>0.10**
31-35	58.3		43.14	
>35	80.6		51.0	
State of Domicile				
Punjab	76.33	>0.10	47.23	>0.10*
Non-Punjab	72.91		50.58	
Training Institute				
Private	76.62	>0.10	48.0	>0.10*
Government	59.70		44.11	
Professional Qualification				
B.Sc Nursing	61.79	<0.05	48.52	>0.10*
PCL Nursing	77.29		47.73	
Professional Experience (in years)				
0-2	75.87		46.44	
3-5	79.75	>0.10	48.79	>0.10**
>5	17.04		48.0	
Duty Shift				
Moring	75.16		47.94	
Evening	77.29	>0.10	48.67	>0.10**
Night	74.66		46.14	

Independent sample t test ANOVA*