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ORIGINAL RESEARCH ARTICLE

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

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ABSTRACT

The majority of pressure ulcers are preventable. Nurses are 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 the workload on nurses. To identify the deficits in knowledge and practices of bed sore prevention among staff nurses' working in general wards as well as special units and to prepare a Self Instructional Module (SIM) for improving the quality of nursing practices.An exploratory approach and participating observation approach 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. Purposive sampling method was used for data collection with self prepared questionnaire. Multiple-choice questions were administered for study the knowledge level and an audit form with checklist for assessment of practice. The data was analyzed using in terms of descriptive and inferential statistics. SIM was developed based on the deficit found in the result. Staff nurses working in special units have significantly better knowledge (72.92%) than the nurses in general wards (62.50%). Similarly, the results showed special unit nurses practice significantly better (60.29%) than general ward nurses (46.68%). Overall knowledge of staff nurses was higher (67.71%) as compared to their practice (53.49%) regarding bed sore prevention. Although 40% of overall staff nurses achieved excellent level on knowledge, none of them crossed the excellent level on practice. It strongly suggested developing SIM for them. Self instructional Module was developed inferring the results that staff nurses' working in special units have excellent (deficit only 2.08%) knowledge in different areas of knowledge compared to staff nurses working at general wards (deficit 12.50%) where as 100% of respondents did not achieve excellent level on practice regarding Bed Sore prevention. Hence all of them need improvement in practices of Bed Sore prevention to come up to excellence level.

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 from 3% -14%. 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.[3] 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. [4]

The prevalence of pressure ulcers has been reported

in various studies ranging 4.7 % to 18.6 %. The occurrence among clients admitted to nursing home is between 12%.and 25%.[5] As highlighted 58% of clients with Pressure sores were above 65 years. When the Pressure ulcers occur, the length of the hospital stay increases resulting the amplified overall cost of health care. 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.[6]

Pressure ulcer has been recognized as a serious complication of any condition associated with immobility.[7] In certain high risk patients like critical patients, patients with spinal cord injuries and elderly patient with hip fractures, the incidence is much higher with one estimate as high as 29%.[8]

OBJECTIVES

- To assess the staff nurses' knowledge and practice of Bed Sore Prevention according to general wards and special units.
- To identify the deficits in staff nurses' knowledge and practice of bed sore prevention according to general wards and special units.
- To find the relationship between staff nurses' level of knowledge and

  Practices of Bed Sore Prevention.
- To prepare the Self Instructional Module (SIM) on Bed Sore Prevention for Staff nurses.

MATERIALS AND METHODS

It was a hospital based exploratory study conducted among the staff nurses' working in general and special wards of Christian Medical College and Hospital, Ludhiana, Punjab, India. Purposive sampling method 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). Anonymity of the subject was maintained to protect their privacy. Tool used for data collection was semi structured a self administered questionnaire that was prepared on the basis of extensive literature review and consulting subject expert for content validity. Reliability of the tool was established by pre test done on 10% of sample size from general and special units and they were excluded from the study sample.

In the data Collection period, firstly, questionnaire for assessing knowledge were administered to the subjects after obtaining informed consent. They were allotted 20 - 30 minutes to fill the questionnaire in respective wards under keen observation of the investigator. Secondly, researcher filled observation checklist by watching the selected staff nurses from general and special units. Staff nurses were ignorant about being observed by participatory observation. Researcher selected different fixed timings in different wards between 1 - 2 PM, 6 - 9 PM and 6 - 8AM to cover entire three shifts i.e. morning, evening and night. Moreover, the selected time was appropriate to provide back care before signing off their shift duty in accord to the protocol of hospital.

The data was analyzed using descriptive and inferential statistic i.e. Mean, Mean Percentage and Standard Deviation, `t' value, F-Ratio, Chi-square and degree of freedom, Karl Pearson's correlation coefficient test whenever required.

Based on the findings, a Self Instructional Module was developed to overcome the deficit found.

RESULTS

Scores of knowledge regarding Bed Sore prevention revealed that 36.67% of the staff nurses working in general wards had good knowledge followed by 26.67% each with excellent and average knowledge respectively and 10% had knowledge below average where as 53.33% of the staff nurses in the special units had excellent knowledge followed by 26.67% with average and 20% had good knowledge and none of them were having below average score. (Fig-1).

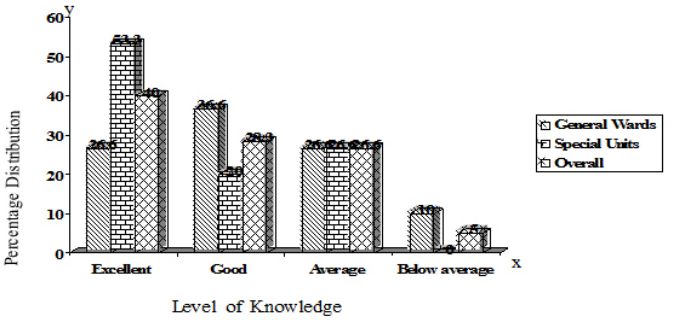

Fig 1. Level of Knowledge Regarding Bed Sore Prevention Among Staff Nurse

Staff nurses' working in special units had practice mean percentage score (60.29%) and those working in general wards (46.67%). This means that all the staff nurses needed improvement in practice for attaining excellence i.e. >85%. The overall practice mean percentage score of staff nurses was 53.48% which was much lower than the excellent level.

Hence overall mean score of knowledge was 67.71% regarding bed sore prevention and statistically significant association between knowledge of staff nurses in general (62.5%) and special units (72.92%) was found (x^2 =4.61). Regarding practice, staff nurses working in special units had practice mean percentage score 60.29% and those working in general wards had 46.67%. The overall practice mean percentage score of staff nurses was 53.48%

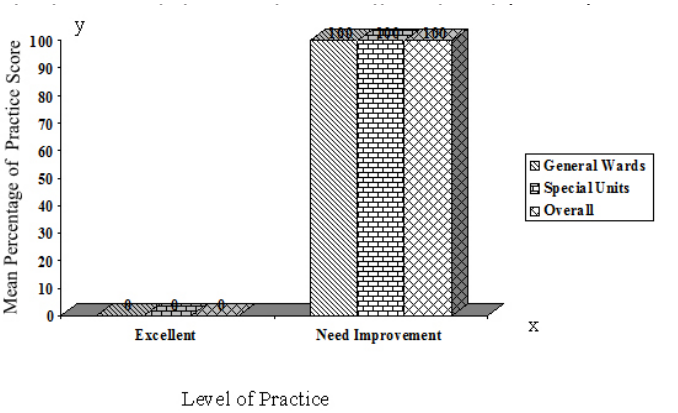

Fig 1. Level of Practice Regarding Bed Sore Prevention Among Staff Nurse

Knowledge of the staff nurses was higher as compared to their practices with a low positive correlation (r-0.087). The data (Table no 1) showed that the correlation between staff nurses' overall knowledge and practice of bed sore prevention had low correlation (r = 0.087) between knowledge and practice. Staff nurses in general wards had (r =0.125) and nurses in special units had (r = 0.005) relation between knowledge and practice. So, it inferred that there was low positive relation between knowledge and practice according to clinical area.

There is no significant difference in knowledge and practice score of the staff nurses with selected variables.

Table no 1: Correlation between Staff Nurses' Score of Knowledge and Practices Regarding Prevention of Bed Sore N=60

	Knowledge & Practice Score of Staff Nurses'					
Variables		**General Ward**	**Special Unit**	**Overall**		
D	**Max.**	**Mean**	**Mean**	**Mean**	**Mean**	**S**
	Score	**%**	**%**	**%**	**%**	
Knowledge	24	62.5	72.91	16.25	67.70	3.29
Practice	34	46.67	60.29	18.19	53.19	4.42
r		0.125	0.005		0.087	
p – Value		>0.10NS	>0.10NS		>0.10NS	
df		28	28			

NS = Non significant

DISCUSSION

According to the clinical areas of staff nurses, knowledge level regarding preventing bed sore was found to be the highest (98.50%) in definition and lowest (52.50%) in clinical manifestation (Table no 2).

Staff nurses working in special units had statistically significant high mean score in areas/sites of bed sore ($p<0.01$), clinical manifestation ($p<0.01$) and found to be significant difference in causes ($p<0.10$). A similar study conducted by Anju bala et al, (2003) found that staff nurses of special unit have higher percentage related to knowledge as well as in practice than those working in general unit.[9]

Table no. 2: Percentage Deficit Scores of Staff Nurses Regarding Bed Sore Prevention According to Areas of Knowledge **N = 60**

Knowledge Score of Staff Nurses'						
Areas of Knowledge	**General n =30**		**Special n =30**		**Overall**	
	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 Manifestation	35.00	40.00	70.00	5.00	52.50	22.50
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 Knowledge Score	62.50	12.50	72.92	2.08	67.71	7.29

Finding showed that practices level regarding preventing bed sore was found to be too low (53.48%) suggesting a real need for immediate improvement. It showed highest mean score in planning (86.50%) and lowest in evaluation (38.83%), which was statistically significant ($p < 0.01$) among staff nurses working in special units (Table no 3).

Table no. 3: Percentage Deficit Scores of Staff Nurses regarding Bed Sore Prevention According to Areas of Practices. **N = 60**

Practice score of staff nurses'						
Areas of Practice	**General n = 30**		**Special n = 30**		**Overall**	
	Obtained	Deficit	Obtained	Deficit	Obtained	Deficit
	%	**%**	**%**	**%**	**%**	**%**
Risk assessment	38.00	47.00	42.00	43.00	40	45
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 Practice Score	46.68	38.32	60.29	24.71	53.49	31.51

Walia, I., *Nurses Role in the management and prevention of pressures ulcers in PGIMER , Chandigarh* The Nursing Journal of India, 2004. **XCV** (5): p. 111-112.

Overall deficit mean score of knowledge was 7.29% and according to clinical area, 2.08% and 12.50% in special units and general wards respectively. Similarly, overall deficit mean score of practice was 31.51% and according to clinical area, in special unit 24.71% and in general wards 38.32%.

Finding showed that mean score of knowledge of staff nurses is 67.71% and in practice 53.49% and overall knowledge found to be higher (80.58%) and practice was found to be lower (51%). Similar research conducted by Stotts A Nancy (1987) showed that the mean knowledge score of high risk patient regarding developing pressure ulcer according to age specific characteristic was not statistically significant.[10]

According to state of domicile, Punjab nurses' mean knowledge score was found to be 76.33% where as practice mean score was higher in staff nurse from outside Punjab. In contrast, Anju Bala et al, (2003) stated that staff nurses belonging Punjab had more practice (79.5%) than the group of staff nurses belonging outside Punjab.

According to training institute, mean score of knowledge and practice were found to be 76.62% and 48% respectively. Practice score was found to be higher among nurses trained from Private institutes than those trained from government institutes. This finding was rejected by the research conducted by Steven J. (2005), that was the respondents had maximum mean knowledge and practice score among govt. trained health professionals followed by those trained from non govt .[11]

Regarding professional qualification, mean score of knowledge was found to be 77.29% in GNM and 61.79% in B.Sc. (nursing) degree but in a study conducted by Anju Bala (2003) revealed that staff nurses with B.Sc. degree were having more skill (80%) than the GNM.

Regarding to professional experience, mean score of knowledge was higher (79.75%) and practice (48.79%) in those staff nurses having experience of 2-5 years. But a study conducted by Zernike (1994) found that the mean practice score was higher (46.25%) in staff nurses with 4 - 6 years of experience.

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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