

Improving nurses' knowledge of bed sore prevention using informative pamphlets

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ABSTRACT

Introduction: Decubitus ulcer or bed sore has significant value in health care system, especially in tertiary care hospitals, where patients are admitted for days, months and even years. It is a common problem among hospitalized and more specifically bedridden patients that increase both the hospital stay and suffering of the patients. The primary care provider has a significant role in preventing patients from developing bed sore and recovering from it, if they have already developed it. Therefore, the objective of this study was to improve the knowledge of nurses regarding bed sore prevention using informative pamphlets.

Materials & Methods: This was a Quasi experimental study conducted on the nurses of two tertiary care hospitals of Peshawar, in the duration of 6 months. A total of 109 participants were selected from public and private hospitals by means of convenience sampling. An adopted questionnaire was used for recording pre and post test data. Informative pamphlets regarding bed sore prevention were translated in the local language and were distributed. Data was analyzed using SPSS version 25. Mean and standard deviations were calculated for independent variables. In inferential statistics, paired t-test was used to assess significance of the results within the group. Chi square test was used to find out the association among variables.

Results: Out of 109 participants, 61 (56%) were females and 48 (44%) were males with a mean age of 26 ± 3.9 year. The pretest score was 9.59 ± 1.49 , while post-test was 16.7 ± 2.24 with a p-value of 0.001 signifying the improvement within the groups.

Conclusion: This study concluded that different educational sessions regarding basic nursing procedures are very productive. Nursing management shall develop pamphlet in local language related to different nursing procedures and make it available at nursing counters, which will help the nurses to read and memorize the standards of nursing procedures easily.

The authors declared no conflict of interest and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. All authors contributed substantially to the planning of research, questionnaire design, data collection, data analysis and write-up of the article. The research work was supervised by Aurang Zeb Assistant Professor Rehman Institute of Nursing Sciences.

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INTRODUCTION

Decubitus ulcers (DU) are localized injuries to the skin or underlying tissues caused by prolonged hypo-perfusion to the soft tissues mainly on bony prominences.¹⁻³ Major areas where DU occurs are sacrum, coccyx, heels, ears and scapula.⁴ The average blood pressure inside the capillaries is 20-40 mmHg; therefore, the external pressure, more than 30 mmHg, may optimize the risk of DU.^{5,6} The early signs of DU are erythema and pain that might be later converted into open wounds.^{7, 8} It affects the quality of life and increase suffering.^{9,10} It also increases the hospital stay and the financial cost on the patients.¹¹⁻¹³ Quality Nursing care can prevent the development of bed sore even in bedridden patients.¹⁴ Some basic procedures, including good skin care, regular and proper positioning, and administration of balance diet and fluids, are helpful in preventing bedsores.¹⁵ Improper positioning, poor nutrition, and moisture and prolong immobility can not only develop bed sore but also causes complications.¹⁶ Complicated DU increases morbidity and mortality rate; cost of hospitalization; and, most commonly, the spread of nosocomial infections.¹⁷

Being the primary care providers, nurses can play an important role in preventing bedsores formation and its complications not only in hospitalized patients, but also provide education to the family members to avoid any consequences of bedsores and to take good care of patients at home. This important task can only be performed if nurses have enough knowledge of bed sore prevention. Different studies have been conducted around the globe to identify the nurse's knowledge and practice of Bed sore prevention.

A study in Australia showed that only 30% of nurses document assessment and treatment of DU, 53% practice repositioning guidelines, and 50% practice the old method of water filled gloves to release pressure for DU prevention.¹⁸ Another study, conducted in 22 hospitals of Belgium, revealed that nurses use the dynamic mattress system only for 17.5% patients of DU.¹⁹ Results of a study also indicated that knowledge of nurses is evidently poor regarding DU prevention and they are unaware of new precautionary guidelines for DU prevention. The poor knowledge of nurses and their improper skills of preventing DU may lead to severe

complications such as cellulitis, septicemia, osteomyelitis, meningitis, and squamous cell skin cancer.²⁰

A study conducted on the knowledge and practice of nurses regarding DU prevention in Northwest Ethiopia which concluded that more than half (54.4%) of the participants had good knowledge, while remaining (45.6%) had poor knowledge regarding DU prevention.²¹ The result before the intervention were this 84% while after the intervention were 89% in a study which was conducted on the nurses' knowledge about DU in Wellington, New Zealand. The purpose of the study was to develop an assessment tool and to check the effects of educational intervention. This showed that the pre and post interventional score are not much different from each other.²² An interventional study conducted by Fraser et al (2012) in Sydney Australia showed that the knowledge regarding staging of DU increased from 52% to 83%, and for DU risk assessment was increased from 41% to 57% respectively.²³ Therefore, the current study was aimed to find out the significance of educational program by using informative pamphlet for improving nurses' knowledge of bed sore prevention.

MATERIALS & METHODS

This was a Quasi experimental study conducted on the nurses of two tertiary care hospitals of Peshawar, in the duration of 6 months. A total of 109 participants were selected from government (Hayatabad Medical Complex) and private hospitals (Rehman Medical Institute) by means of convenience sampling. Registered nurses, working in intensive care unit having an experience of at least 6 months were recruited. Permission was taken from the directors of medical services prior to data collection. The purpose of the study was explained, and the consent forms were duly signed by the participants. For data collection, an adopted questionnaire was used which was comprised of 21 close ended questions. The questionnaire contain knowledge about the prevention of DU. Each question carried 1 score and the total score was 21. Prior to data collection, ethical approval was taken from the nursing directors of both hospitals. Purpose of the study was explained, and consent forms were duly signed by the participants. Furthermore, they were assured that data will be kept confidential and only researchers and supervisor will have the access. The data was taken from the staff nurses of critical care units (Neurology ICU, General ICU, Cardiac ICU, Neonatal ICU, and Pediatrics ICU). Pre-test score was obtained before the awareness sessions and data was recorded in the questionnaire. Later, the participants were asked to attend an informative session and pamphlets were distributed among them. After which, the post test data was recorded. The obtained data was recorded on the SPSS version 25. Descriptive statistics, percentages and frequencies were calculated for nominal and ordinal data, while mean and standard deviations were calculated for scale. In inferential statistics, paired sample t-test was used to check significance of the results within the group. Chi square test was used to find out the association among variables for continuous data.

RESULTS

Out of 109 participants the response rate was 100% in which 61 (56%) were females and 48 (44%) were males with a mean age of

26 ± 3.9. Regarding the marital status of the participants, 69 (63.3%) were single and 40 (36.7%) were married. Among the nurses 47 (43.2%) had degree of BScN. Further details are given in table 1 and figure 1.

Table 1: table showing demographics details

Variables		Frequency
Gender	Female	61 (56%)
	Male	48 (44%)
Age	Mean ± SD	26 ± 3.9
	Single	69 (63.3%)
Marital Status	Married	40 (36.7%)

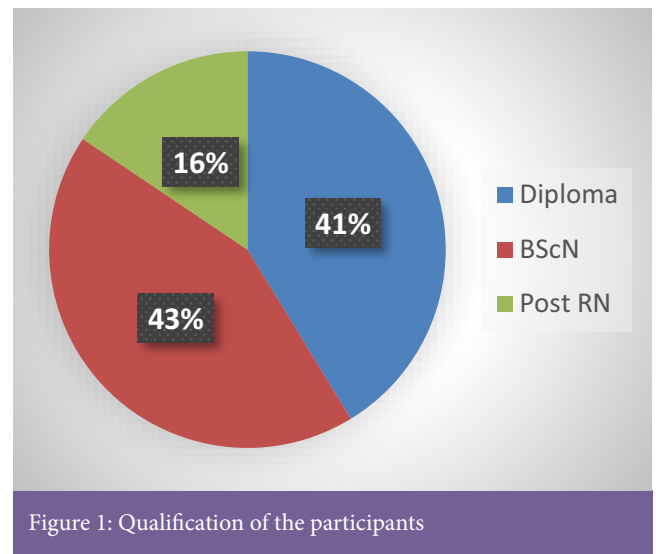


Figure 1: Qualification of the participants

Paired t- test was applied on pre- and post-score which was obtained through the questionnaire. The pre-test mean of the participants was 9.8 ± 1.49 which suggested that most of the participants had a moderate knowledge about the prevention of DU. The educational pamphlets were distributed among the participants which provide the knowledge about DU prevention. After reading the pamphlets, the participants were asked to answer the questions on the suggested questionnaire and the post-test data was recorded. The mean of the post test was 16.7 ± 2.24 with a p-value of 0.001 suggesting, good knowledge of DU prevention. There was 7 points improvement was observed between the pre and post test score.

Table 2: Difference in pre and Post Score

	Mean ± SD	p-value
Pre-test Score	9.8 ± 1.4	0.001
Post-test Score	16.7 ± 2.2	

DISCUSSION

A nurse care plays vital role in rehabilitation of patients with different conditions. An important aspect of nurses' care is their knowledge about different conditions of patients. DU is often associated with long term conditions where patients are more vulnerable to deteriorate significantly. The importance of nurses' knowledge about DU is crucial as improper management of this condition can lead to prolong stay of patients in hospital. Moreover, in some conditions if patients are not managed properly, patients can be exposed to develop other associated problems. There was lack of studies carried out on nurses' knowledge improvement about DU and therefore this study was carried out in order to assess the outcomes of an intervention on knowledge improvement of nurses.

Findings of the current study indicated that the pamphlet designed for the prevention of DU has significant impact on the knowledge enhancement of the nurses working in the hospitals and those nurses who got training in the form of pamphlet showed improved knowledge about the DU. Reading material is an easy way of learning where one has the liberty to read the material on one's free time. Formal training need some off time which is quite difficult in our health care system where nurses are overburdened in the hospital. Therefore, reading pamphlets for improving knowledge about the DU was selected for this trial. The findings of current study have been compared with other studies on same subject matter. According to systematic review carried by Niehauser, et al, implementation of preventive protocols for knowledge remained significant contributor factor in health workers.²⁴ Nurses knowledge in some of the countries remained limited and therefore the need of such programs has been reported in those countries. It was reported by Pieper and Mott that nurses' knowledge of DU prevention and staging by using DU knowledge

test remained poor and there was an intense need to arrange training for improvement of nurses knowledge in the mentioned area.²⁵ Similarly, Enein and Zaghoul found that nurses' knowledge about DU prevention was below the cutoff point which was supposed to be 70% and nurses' training for this area was identified.²⁶ Beeck Man, et al used a lower cutoff point 60% and reported similar results of nurses knowledge about the DU.²⁷ The need of nurses knowledge improvement was reported in another study and it was suggested to provide proper guidelines for different conditions dealt by these nurses.²⁸ Findings of our trial were limited to measure the difference between pre- and post-training of nurses knowledge, however, our result showed that nurses' knowledge showed improvement following implementation of the program. This might indicate that the nurses' knowledge about DU management in our trial was not up to the mark and therefore, arranging trainings or providing them training materials might be helpful in this regards.

CONCLUSION

The study concludes that the educational intervention has good effect on the knowledge of the nurses in different departments related to different nursing care procedures. DU prevention is seen as an indicator for quality nursing care to bed ridden patients. Increase in cases of DU reflects some loopholes which needs to be fixed in regard with nursing care. Educational programs update the nurses' knowledge and help them memorize standards of different procedures. It has been observed that informative pamphlets are very much helpful, especially if printed in local languages. Informative pamphlets related to different nursing procedure shall be developed and made available to Nurses to update their knowledge.

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