



Full Length Research Article

EFFECT OF STRUCTURED DEMONSTRATION ON ASEPTIC WOUND DRESSING AMONG THE NURSING STUDENTS OF INE GTBS(C) HOSPITAL LUDHIANA, PUNJAB

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ABSTRACT

A Pre experimental study was conducted among the 300 nursing students of Institute of nursing education, Guru Teg Bahadur Sahib (C) Hospital, Ludhiana. Information was collected with the help of self structured checklist. The tool for data collection included socio-demographic variables and checklist consisting of items related to steps of aseptic wound dressing technique. Structured Check list was used to collect data regarding technique of aseptic wound dressing, which contain 40 items regarding aseptic wound dressing. Data were coded, validated and analyzed using SPSS (version 18). Each of the 40 items were rated using a score of one mark for step to be done and zero marks for step not to be done with a score ranging from 0-40. Based on major findings it can be concluded that 63.33% of students had prior experience of aseptic wound dressing and least 36.66% had no prior experience of aseptic wound dressing. According to source of information majority 63.33% of students had information from lab demonstration and least 30% had information from other sources.

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INTRODUCTION

The human skin is the outer covering of body. In humans, it is the largest organ of integumentary system. Skin forms a barrier between the internal and the external environment and participates in the vital body functions (http://en.wikipedia.org/wiki/Human_skin). A wound is defined as a disruption of the integrity and function of tissues in the body. The state of having a wound infers an imperfection, an insult resulting in a physical and emotional vulnerability (Edward, 2000). A superficial wound involves only the epidermis. Presently nurses make the most mistakes with dressing and the main reason for this is skipping the assessment of dressing. Partial thickness wounds extend into the dermis. Full thickness wounds have the deepest layer of tissue destruction because they involve the subcutaneous tissue and sometimes even extend into the fascia and underlying structures such as the muscle, tendon, or bone (Alphonsa, 2004). Certain factors interfere with the wound healing and lead to complications. These factors may include malnutrition, obesity, decreased blood supply, tissue trauma, smoking, drugs, wound debris such as narcotic tissue and infection (Edward, 2000).

Dressing is an effective barrier to reduce infections in moderate to heavily exuding partial and full thickness wounds. It can protect wounds from additional trauma and help to prevent contamination (Alphonsa, 2004). Aseptic technique is a procedure used by medical staff to prevent the spread of infection. The goal is to reach asepsis, which means an environment that is free from micro-organisms (Lewis, 2001). A dressing is an adjunct used by a person for application to a wound to promote healing and/or prevent further harm. Wound infection has been defined as the invasion and multiplication of micro-organisms in wound tissue resulting in pathophysiological effects or tissue injury (Bree-Williams et al., 2001). Wound infection is a common preventable cause of morbidity and mortality. The management of wound begins by identifying the overall wellbeing of the patient (Poole, 2002).

Review of Literature

WHO (2002) conducted a prevalence survey on nosocomial infection in 55 hospitals of 14 countries representing four WHO Regions Europe, Eastern Mediterranean, South-east Asia and western pacific. The result of the survey showed that average of 8.7% of hospital patients with post operative wound infections, had hospital acquired infection. The highest frequencies of hospital acquired infection

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were reported in the Eastern Mediterranean and South-East Asian Regions 11.8% to 10.0% with a prevalence of 7.7% and 9.0% respectively in the European and Western Pacific Regions.¹⁷ Williams LC, Hoffman (1997) conducted an evaluatory study on examination of nurses practices when performing aseptic techniques on wound dressing .By convenience sampling technique , 21 trained nurses were selected .Observation and formal interviews were used to collect quantitative and qualitative data. The findings showed that the procedure was more complicated than required ,as hands were washed more than twice in 16 out of 17 observations. This study concluded that many nurses did not understand the principles of glove technique since 12 nurses were unaware that the bag could be used to arrange sterile field.10 nurses were unaware that the bag could be used to remove dirty dressings.

MATERIALS AND METHODS

A Pre experimental study was conducted among the nursing students of Institute of nursing education, Guru Teg Bahadur Sahib (c) Hospital, Ludhiana. A sample of 300 nursing students was selected using simple lottery method. Information was collected with the help of self structured checklist. The tool for data collection included socio-demographic variables and checklist consisting of items related to steps of aseptic wound dressing technique. The tool was developed through extensive literature review and after consulting experts in field of nursing and medicine. Permission to conduct study was taken from the concern authority of the college. The pre-test and post test was conducted for the nursing students. In this pre-test is conducted and the result is seen and after that the intervention is given and the post test is conducted and the result is seen. Examiner is observing the phenomenon with the help of checklist that the students are following the things. After explaining the purpose of the study and taking verbal consent from the students, the subjects were asked to fill the checklist. The demographic variables of the study included age, previously practiced wound dressing, source of information. Structured Check list was used to collect data regarding technique of aseptic wound dressing, which contain 40 items regarding aseptic wound dressing. Data were coded, validated and analyzed using SPSS (version 18). Each of the 40 items were rated using a score of one mark for step to be done and zero marks for step not to be done with a score ranging from 0-40.

RESULTS

- Number of subjects of age group <_18yrs are 20, age group 19yrs are 170,age group 20yrs are 70 and age group>_ 21yrs are 40 Technique score was obtained by subjects in age group ≤18 years. In the post test highest 29.82 post test mean technique score was obtained by subjects in age group 19 years and least 23.75 was obtained by students of age group of ≥21 years.
- Majority of the subjects were of the age group of >18 yrs. Data was collected from the students of G.N.M 1STYear. The highest 15.75 pre test mean technique score was obtained by subjects in age group of ≥21 years and least 10.05 was obtained by subjects in age group 19 years. The

maximum 29.82 post test mean technique score regarding aseptic wound dressing was obtained by subjects in age group 19 years and least 23.75 post test mean technique score was obtained by students in age group of ≥21 years. Maximum subjects 93.3% had below average pre test technique score followed by 6.66% having average pre test technique score regarding aseptic wound dressing. Maximum subjects 36.6% had excellent Post test technique score, 30% had good and least 06.6% had below average post test technique regarding aseptic wound dressing. Pre test mean technique score was 10.86, however post test technique score was 28.2. The difference between pre test and post test mean technique score was statistically significant at p=0.05 level.

Objective 1: To assess the pre demonstration technique regarding Aseptic wound dressing among students.

Table 1. Frequency and Percentage distribution of students according to pre test technique score regarding aseptic wound dressing

N=300			
Technique efficacy	score	Pre test	
		n	%
Excellent (≥80%)	(≥32)	-	-
Good (66-79%)	(26-31)	-	-
Average (51-65%)	(21-25)	20	6.66
Below average (≤50%)	(≤20)	280	93.33

Maximum score=40
Minimum score=00

Table 1 reveals that maximum number of students 93.33% had below average pre-test technique score followed by 6.66% students having average pre-test technique score.

Objective 2: To assess the post demonstration technique regarding aseptic wound dressing among subjects.

Table 2. Frequency and percentage distribution of students according to post test technique score regarding aseptic wound dressing

Technique efficacy	score	Post Test	
		n	%
Excellent (≥80%)	(≥32)	110	36.6
Good (66-79%)	(26-31)	90	30.0
Average (51-65%)	(21-25)	80	26.6
Below average (≤50%)	(≤20)	20	06.6

Maximum score =40
Minimum score =0

Table 2 reveals that in post test maximum 36.66% of students had excellent level of technique score regarding aseptic wound dressing followed by 30% of the subjects with good and least 06.6% of the students had below average level of technique score regarding aseptic wound dressing. Thus it shows that there was increase in technique efficacy of students regarding aseptic wound dressing, after planned demonstration.

Objective 3: To assess the post test demonstration technique regarding aseptic wound dressing among subjects.

Table 3 shows the comparison of pre test and post test mean technique score among subjects regarding aseptic wound dressing. Pre test mean technique score was 10.86, however

post test technique score was 28.2. The difference between pre test and post test mean technique score was statistically significant at $p=0.05$ level.

Table 3. Comparison of Mean pre-test and Mean post-test technique score

N =300

		SUBJECTS					
		Pre test		Post test			
Group	n	Mean	SD	Mean	SD	df	't'
Students	300	10.86	±4.73	28.2	±29	29	12.83*

*= Significant at $p<0.05$ level

Hence, it was concluded that planned demonstration was effective to increase the technique level of subjects regarding aseptic wound.

Conclusion

The aseptic wound dressing technique score of majority of the students regarding aseptic wound dressing was below average in pre test and was excellent in post test. The difference between the mean pre test and post test technique score was highly significant at $p=0.05$ level. Hence research hypothesis was accepted that planned demonstration had impact on technique of subjects regarding aseptic wound dressing. The post test mean technique of subjects was higher than their pre test mean technique score in all variables which show that planned demonstration was effective. Based on major findings it can be concluded that 63.33% of students had prior experience of aseptic wound dressing and least 36.66% had no

prior experience of aseptic wound dressing. According to source of information majority 63.33% of students had information from lab demonstration and least 30% had information from other sources.

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