

## Aseptic Wound Dressing Practices among Nurses

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**Abstract:** The study was aimed at evaluating the effectiveness of self-instructional module on aseptic wound dressing practices for staff nurses. One group pre-test post-test design was used. Multi stage random sampling was considered appropriate for this study. A total of 100 staff nurses has been taken from the selected hospital. Aseptic wound dressing practices as measured by structured questionnaire. Collected data was analyzed using descriptive and inferential statistics. A very highly significant ( $t=31.74$ ,  $p<0.05$ ) difference was observed between the pre-test and post-test knowledge scores of staff nurses in the areas of aseptic wound dressing practices, which shows the effectiveness of SIM.

**Keywords:** Effectiveness, Aseptic, wound, dressing, self instructional module.

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### I. Introduction

The skin is the body's largest organ. It measures about 1.5 -2m<sup>2</sup> in adults and weighs about 15% of total body weight. It is portal of entry for micro-organisms (Roth and James, 1999). An international survey conducted by WHO (2000) showed that wound infection is a common disease accounting for 5-34% of the total patients. Out of which 77% of the deaths of surgical patients were related to surgical wound infections. In US it is reported that wound infection causes death of more than 1,00,000 patients each year. Hallet C.E. (2001) in his study on 136 nurses regarding 'nursing practices on wound dressing procedure', UK, revealed knowledge of nurses after education programmes, has improved from 42.2% to 77.7%. Well designed clinical teaching have demonstrated that aseptic techniques reduces the incidence of infection in high risk surgical patients by two thirds with a corresponding reduction in mortality from wound infection. The wound care resolution has occurred due in part Dr. Winter discovers in the 1960s. Hinman and Maibach paralleled these findings of faster resurfacing in partial thickness wounds in Human. Aseptic technique is one infection control method used to prevent contamination by bacteria from all sources, during dressing, operation and through out the healing process. Bacteria can never be absolutely eliminated from the operating field, but practicable aseptic measures can reduce the risk of contamination to an acceptable level. It includes appropriate use of skin disinfectants, personal hygiene practices, hand washing before and after patient contacts (King, 2000)<sup>3</sup>.

**Statement Of The Problem:** Effectiveness Of Self-instructional Module On Aseptic Wound Dressing Practices Among Nurses In Sree Balaji Medical College and Hospital, Chrompet, Chennai.

### Hypothesis

H<sub>1</sub> : the mean post-test knowledge score of the nurses regarding aseptic wound dressing practice will be significantly higher than the mean pre-test knowledge scores

### Objectives:

The objectives included to obtain answers to the above research problem were as follows.

- Determine the existing knowledge the staff nurses on aseptic wound dressing practices.
- Develop and administer a self instructional module on aseptic wound dressing practices.
- Evaluate the effectiveness of self instructional module on aseptic wound dressing for the staff nurses as measured by same structured questionnaire in terms of gain in knowledge.

### II. Materials And Methods

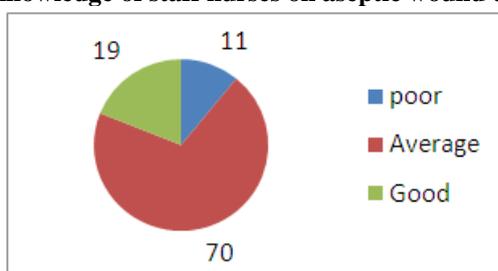
One group pre-test post-test design judges the effects of the treatment by the difference between the pre-test and post-test scores without comparing with a control group. Multistage random sampling technique was used to select a sample of 100 staff nurses studying in selected hospitals. The data obtained were analysed using descriptive and inferential statistics. The prepared instrument along with the objectives, blue print, criteria for evaluation and the SIM was submitted by six experts in the fields of medicine and nursing. The experts were requested to give their opinion and suggestions regarding the relevance and appropriateness of the tool. The recommendations and suggestions of the experts were considered to modify the questionnaire as well as the

content of the instructional module. Ambiguous items were removed. Pilot study was conducted in **SREE BALAJI HOSPITAL** to find out the feasibility of the study. **10** staff nurses were selected by simple random sampling. Permission of the study was obtained from the administrations. The samples for pilot study possess the same characteristics as that of sample for final study. To find out the effectiveness of an instructional module as per the objectives of the study, the pilot study was conducted in two phases. The first phase, a knowledge questionnaire on aseptic wound dressing practices was administered to **10** staff nurses with the instruction to complete it. The completed data was analysed by using descriptive and inferential statistics. The significance of difference between the pre-test and post-test was found by paired 't' test. The difference was found very highly significant. (**t=15, p=0.005**)

### III. Results And Discussion

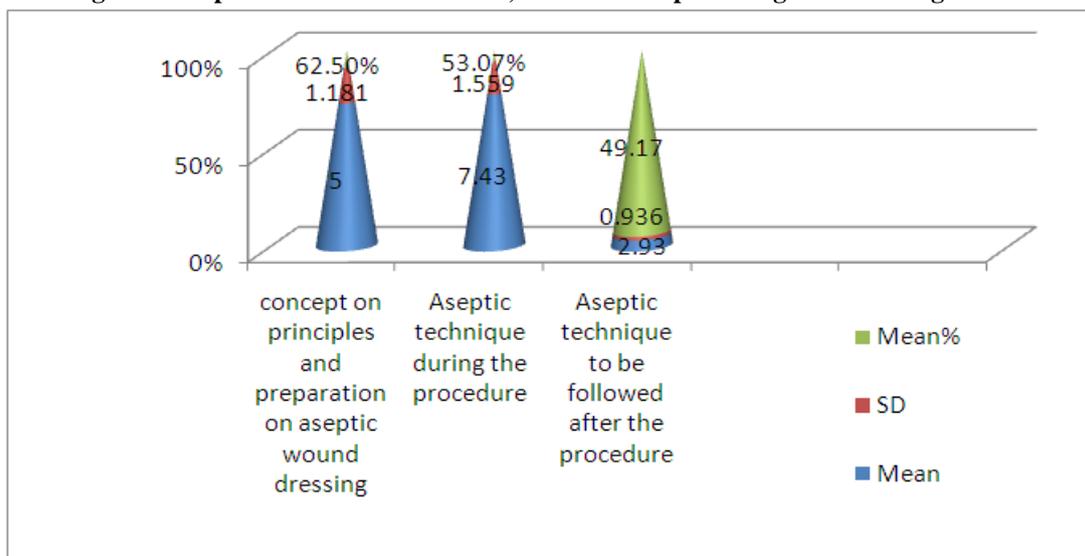
One group pre-test and post-test pre-experimental design was used to evaluate the effectiveness of the **SIM** to assess the knowledge of staff nurses on aseptic wound dressing practices. A close-ended structured knowledge questionnaire in English was used to assess the knowledge of staff nurses who were selected by multi stage simple random sampling from sree balaji medical college and hospital.

**Fig 1: Level of knowledge of staff nurses on aseptic wound dressing practice**



The level of knowledge of staff nurses regarding aseptic wound dressing practices revealed that highest percentage (**70%**) of the respondent had average knowledge and their scores ranged between **10-19**. **19%** of the subjects had good knowledge and **11%** of the respondents had poor level of knowledge, with scores ranging between zero and nine.

**Fig 2: Description of area –wise means, sd and mean percentage of knowledge scores.**



The total mean percentage of the score was **53.03%** with **15.38 + 2.415** as mean + SD of the total score. In the area “concept on principles and preparation of patient on aseptic wound dressing practice” the area-wise mean percentage was **62.5%** with mean+ SD of procedure” the area-wise mean percentage was **53.07%** with mean + SD **7.43 + 1.559**. Area-wise mean percentage of knowledge score was **49.17** in the area “aseptic technique to be followed after the procedure, with mean + SD of the knowledge scores as **2.95 + 0.936**. The above findings revealed that the staff nurses had average knowledge regarding aseptic wound dressing practices.

**Table – 1: item – wise distribution of percentage of correct responses of staff nurses on ‘concept on principles and preparation of patient on aseptic wound dressing practices.**

Sl.No	Items	Percentage
1	Dressing trolley should be cleaned with any disinfectant	88
2	Area with less number of organisms is cleaned first because minimizes spread of organisms.	80
3	The preparatory phase of dressing includes explanation of the procedure to the patient.	71
3	To remove the adherent dressing, wet it with normal saline.	64
4	The dressing should be done one hour before or after meal time	31
4	Prior to dressing the room should be cleaned at least an hour before	58
5	The principle used in dressing in order to restore the function of the affected part is avoid adhesion of true skin surface	49
5	Ideal place to keep chattel forceps is lotion bottle	

Highest percentage (**88%**) of correct responses is observed in the item ‘Dressing trolley should be cleaned with any disinfectant’. Eighty percent of the subject knew ‘area with less number of organisms is cleaned first to minimizes spread of organisms’. Seventy one percent of subjects responded correctly to the item ‘preparatory phase of dressing includes explanation of procedure to the patient. Sixty-four percent of the subjects were aware that ‘to remove the adherent dressing wet it with normal saline’. More or less similar percentage (**59%**) of the subjects were aware the ‘ideal place to keep chattel forceps is lotion bottle and **58%** of the subjects were awareness that ‘prior to dressing, the room should be cleaned atleast an hour before.’ Forty-nine percent of the participants were aware that the principle used in dressing in order to restore the function of the affected part is avoid adhesion of true skin surface. The least percentage (**31%**) of the knowledge is on the item the dressing should be done one hour before or after meal time’.

Item-wise analysis revealed that highest percentage (**64%**) of the respondents knew that ‘the corner stone technique to minimize the spread of wound infection is hand washing. The percentage of correct responses to the items three and two are **56%** and **52%**. Fifty percentage of the sample responded correctly to the item while inserting. the hand into gloves keep the thumb against the plan for easy insertion. More or less similar percentage (**45%** and **42%**) of awareness is found in the items ‘four and five’. Forty-two percent of the participants were aware that ‘hand washing should be done in rotational rubbing manner’. Least percentage (**29%**) of the knowledge is on the item sterile glove should be opened by placing on a clean dry surface.’

Analysis showed that majority (**66%**) of sample knew ‘the most common type of dressing is gauze dressing.’ Sixty three percent of the sample responded correctly to the item ‘Clean the wound with normal saline by slowly as per gravity’. More or less similar percentage (56% and 53%) of awareness is found in the items ‘the wound should be cleaned from contaminated area to the least’ and ‘In case of sterile dressings first thing to be applied gauze pieces’. Forty nine percent of sample responded correctly to the item ‘when cleaning the wound, use of separate swabs for each stroking helps prevent contamination of cleaned area. Forty six percent of sample responded correctly to the item ‘when cleaning the wound, the tips of the forceps should be lower than the handles’. Least percentage (**38%**) of the knowledge is on the item ‘when cleaning the wound, the tips of the forceps should be lower than the handles’.

#### IV. Conclusion

The study was found to be effective in post self instructional module on aseptic wound dressing among the nurses in selected Hospital. All Nurses should be aware of aseptic wound dressing to reduce the infection for the patients. The study showed to be SIM effective in wound dressing among nurses in sree balaji medical college and hospital.

#### Acknowledgement

I would like to express heartfelt gratitude towards my principal prof.V.Hemathy ,Mental Health Nursing Dept.

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