Effectiveness of Self Instructional Module on Knowledge and Practices of Nurses regarding Care of the Patient on Mechanical Ventilator

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Introduction

Nursing care is often directed towards meeting unmet needs. While providing nursing care all the dimensions that affects basic needs should be taken into consideration. This allows the nurse to provide proper nursing care while ensuring all basic health care needs are met.

Proper oral care and suctioning have been identified as preventive measures against acquiring ventilator-associated pneumonia and for reducing the risk of complications.

Problem Statement:

A Study to Assess the Effectiveness of Self Instructional Module on Knowledge and Practices of Nurses regarding Care of the Patient on Mechanical Ventilator in selected hospitals of Vidarbha region.

Objectives:

1. To assess the knowledge of nurses regarding care of patient on mechanical ventilator.
2. To observe the practices of nurses regarding care of the patient on mechanical ventilator.
3. To assess the effectiveness of the self instructional module regarding care of the patient on mechanical ventilator.
4. To associate the knowledge finding with the selected demographic variables.

Hypothesis:

H₁: There will be significant difference between the pre and post test knowledge and practices of Nurses regarding care of patient on mechanical ventilator.

Methodology:

A descriptive evaluative research approach was used with one group pre-test post-test design to evaluate the effectiveness of the Self Instructional Module on ‘care of the patient on mechanical ventilator among nurses’. The study was conducted in selected Hospitals of Vidarbha region. The sample composed of 30 nurses of selected area of hospitals. The sampling technique used in this study was non probability convenience method of sampling. A structured knowledge questionnaire and observation checklist on care of the patient on mechanical ventilator was used for data collection.

Self Instructional Module on “Care of the patient on mechanical ventilator” was developed by the investigator. The content validity of the tool and self instructional module was established by nine experts against the criteria checklist based on suggestions of the experts the final draft of tool and self instructional module was prepared. Reliability of the tool was tested by using split half method and intra class correlation. (i.e. 0.8) The questionnaire and observation checklist was found to be reliable. A pilot study was conducted on a small sample of five nurses.
In the data gathering process, a pre test was administered first to assess knowledge and practices of the samples. On first day self instructional module was administered. On the seventh day post test was administered using the same questionnaire and checklist to assess knowledge and practices after self instructional module.

The data collected was analyzed in terms of frequency, percentages, paired 't' test and coefficient of correlation and presented in the form of table and graph.

**Finding of the study:**

The participants included in the study were between the age group of 21-36 and above, maximum number of nurse (18) were in the age of 21-25 years. Maximum number of nurses (26) was female. Maximum numbers of nurses (28) were completed GNM programme. Maximum numbers of nurses (21) are having 1-5 years of experience.

Regarding the existing knowledge of the nurses, there was an average knowledge in all area of care of the patient on mechanical ventilator. Knowledge was highest in the area of ABG interpretation (60.00%) and lowest in the area of oral care (48.66%).

Regarding the existing practices of the nurses, there was a good practice in all area of endotracheal tube suctioning and mouth care. Practice score was highest in the area of procedure (58.78% and 61.26%) and lowest in the area of article require for procedure (55.00% and 56.25%).

Regarding the effectiveness of Self instructional module on “care of the patient on mechanical ventilator”, it was found to be effective in terms of increasing the knowledge scores and practice score. The major findings of the study were: the post-test knowledge scores and practice score were higher than the pre-test knowledge scores and practice score and the differences between the pre-test and post-test scores were statistically significant at 5% level.

In relation to knowledge and practice score of care of the patient on mechanical ventilator before and after self Instructional Module, there was significant difference between pre test and post test knowledge score which was evident by t-value is 16.91 and p-value is 0.000 which is less than 0.05. There was significant difference between pre test and post test Practice score of endotracheal tube suctioning which was evident by t-value is 13.90 and p-value is 0.000 which is less than 0.05, and for oral care t-value is 16.74 and p-value is 0.000 which is less than 0.05.

**Table:** Pre and Post Test mean knowledge and practice score regarding care of the patient on Mechanical ventilator among nurses n = 30

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pre-Test</th>
<th>Post Test</th>
<th>t value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>12.93</td>
<td>20.63</td>
<td>16.91*</td>
</tr>
<tr>
<td>Practice (ETT Suctioning)</td>
<td>17.33</td>
<td>28.30</td>
<td>13.90*</td>
</tr>
<tr>
<td>Practice (Mouth care)</td>
<td>17.36</td>
<td>28.60</td>
<td>16.74*</td>
</tr>
</tbody>
</table>

* Significant at 5% level p<0.05. df = 29

Table depicts that the pre test mean score for knowledge was 12.93 and the post test was 20.63 regarding Care of the patient on Mechanical ventilator for practice pre test mean score was 17.33 and 17.36 and post test mean was 28.30 and 28.60. The statistical paired 't' test indicates that the enhancement of mean knowledge and practice score was found to be significant (p<0.05) revealing the effectiveness of self instructional module.

This indicates that self instructional module was an effective method of imparting information to the nurses regarding care of the patient on mechanical ventilator. From the
statistical analysis it was clear that there was significant increase in the knowledge level of the nurses regarding care of the patient on mechanical ventilator after administration of the Self Instructional module.

This study shows that there is positive correlation and marked relationship between knowledge and practices of nurses. This implies that with respect to increase in knowledge there is an improvement in the practices of nurses.

Regarding association between the baseline variables with post-test knowledge scores and practice score it was found that there was no significant association between the variables like age, sex, educational qualification and experience.

Conclusion
Findings of the study show that Self instructional module was an effective teaching strategy in increasing the knowledge and practices of the nurses on care of the patient on mechanical ventilator. There is positive correlation between knowledge and practices of the nurses.

References
2. Evans, G. A rationale for oral care, Nursing Standard: 15(43), 33 - 36.