EFFECTIVENESS OF PLANNED TEACHING PROGRAM IN TERMS OF KNOWLEDGE AND PRACTICE OF AUXILIARY NURSE MIDWIFE STUDENTS ON CARDIOPULMONARY RESUSCITATION IN SELECTED SCHOOL OF NURSING IN GWALIOR

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ABSTRACT
Cardiopulmonary resuscitation is a desperate lifesaving effort to restore circulation and respiration. It is done within a few minutes in an individual who has suffered cardio-respiratory arrest from a catastrophic event. The skill to provide basic cardiopulmonary resuscitation is required by both medical and paramedical personnel. A cross-sectional study was conducted on nursing students. A total of 40 students’ nurses was selected by non–probability purposive sampling technique from the K.S. school of nursing Gwalior, and the data was collected through a structured knowledge questionnaire and practice checklist. The result revealed that the planned teaching program was sufficient to improve the knowledge of auxiliary nurses’ midwife regarding cardiopulmonary resuscitation. A planned teaching program will have a great impact on nursing students.

Keywords: Auxiliary Nurse Midwife, cardiopulmonary resuscitation, planned teaching program.

About Authors

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**Introduction:** Cardiopulmonary resuscitation is a desperate lifesaving effort required to be learned by both medical and paramedical personnel. Respiratory physicians, especially those who look after critical care units are now frequently called to provide advanced cardiopulmonary resuscitation involving intubation and assisted ventilation.

Several studies have been done to assess the knowledge of nursing student on CPR. A study found that Knowledge of the importance of CPR is good among nursing students with a mean score of 64.62±17.84 out of 100 points. While only 11% of them were completely aware of the universal compression ventilation ratio, 16.2% were aware of the current compression depth. Also, 21.8% of participants have only indicated the order of CPR being compression; airway, and breathing. However, skills of CPR have to be improved by current training programs at regular intervals based on current guidelines in CPR (1). Another study reported that the knowledge and practice score of BLS or CPR was not sufficient in both medical, nursing and health science students. This indicates the need for BLS training as a part of the curriculum (2,3).

Studies also highlight the effect of training on the knowledge and skill of students. The participants trained in pediatric CPR using standard guidelines for 6 weeks showed an improvement in knowledge and skills. In comparison to preservice nurses, the in-service nurses seemed to retain knowledge better with time than skills (4). The findings of another study showed an acquisition in nurses’ CPR knowledge and psychomotor performance following a 4h CPR training program. But a deterioration in both CPR knowledge and skills was found 10 weeks following CPR training. However, students' knowledge and skills were improved over their pre-training scores (5).

Concerning training the concept map-based teaching method was more effective than the lecture method (6). The attitude and beliefs played a role in the ability of the students. Negative beliefs and attitudes toward defibrillation affect the students' attitudes toward practice guidelines (7). A study revealed that the training increased the knowledge and skill of the nursing students. but they tend to forget theoretical and applied CPR training after a couple of months. Hence there is a need for continuous CPR training and education and repeating the skills at regular intervals (8).

**Statement of the problem:** "A study to evaluate the effectiveness of planned teaching program in terms of knowledge and practice of Auxiliary Nurse Midwife students on cardiopulmonary resuscitation in a selected school of Nursing in Gwalior."

**Objectives**
1. To assess the knowledge and practice of Auxiliary Nurse Midwife students on Cardiopulmonary resuscitation before and after the planned teaching program.
2. To find out the correlation between the knowledge and practice of Auxiliary Nurse Midwife students regarding cardiopulmonary resuscitation.
3. To find out the association between pre-test knowledge and practice with selected socio-demographic variables of the students.

**Hypothesis**

**H1:** The mean post-test knowledge scores of Auxiliary Nurse Midwife students after the administration of the planned teaching program on cardiopulmonary resuscitation, will be significantly higher than their mean pre-test knowledge scores as evident from a structured knowledge questionnaire, at 0.05 level of significance.

**H2:** The mean post-test practice scores of Auxiliary Nurse Midwife students after the administration of the planned teaching program on cardiopulmonary resuscitation, will be significantly higher than their mean pre-test practice scores as evident from a structured observation checklist, at 0.05 level of significance.
ARTICLES

H₃: There will be a significant relationship between post-test knowledge and practice scores of Auxiliary Nurse Midwife students regarding cardiopulmonary resuscitation, at 0.05 level of significance.

H₄: There will be a significant association between pre-test knowledge of Auxiliary Nurse Midwife students regarding cardiopulmonary resuscitation with the selected socio-demographic variable at 0.05 level of significance.

H₅: There will be a significant association between pre-test practice of Auxiliary Nurse Midwife students regarding cardiopulmonary resuscitation with the selected socio-demographic variable at 0.05 level of significance.

METHODOLOGY

Research design: The study design is one group pre-test and post-test design. It was conducted in a selected school of nursing i.e., K.S. school of nursing Gwalior. Forty students’ nurses were selected for the study by non – probability purposive sampling technique, and data was collected by structured knowledge questionnaire. The reliability of the tool was 0.80. The researcher adhered to the ethical principles in research.

RESULTS

Table 1: Mean, Median and Standard Deviation of pre-test and post-test knowledge scores

<table>
<thead>
<tr>
<th>Knowledge score</th>
<th>Mean</th>
<th>Median</th>
<th>SD</th>
<th>The gain in Mean % Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>8.98</td>
<td>9</td>
<td>2.07</td>
<td></td>
</tr>
<tr>
<td>Post-test</td>
<td>17.43</td>
<td>17</td>
<td>1.96</td>
<td>35.2</td>
</tr>
</tbody>
</table>

Table: 1- depicts the mean pre-test knowledge score was 8.98, mean % was (37.40%), the median was 9, and SD 2.07. The mean post-test knowledge score 17.43 was higher than mean pre-test knowledge score, mean percentage was (72.60%), median 17, SD 1.96 and the gain in mean percentage score was (35.2%).

Figure: 1 – Column diagram showing pre-test & post-test knowledge score
Table: 2- Effectiveness of planned teaching program

<table>
<thead>
<tr>
<th>Knowledge Score</th>
<th>Mean</th>
<th>Mean Difference</th>
<th>Mean %</th>
<th>SD</th>
<th>SE</th>
<th>‘t’-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>8.98</td>
<td>8.45</td>
<td>37.43</td>
<td>0.11</td>
<td>0.35</td>
<td>24.40*</td>
</tr>
<tr>
<td>Post-test</td>
<td>17.43</td>
<td></td>
<td>70.83</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DF= 39 tabulated value-2.02  
*significant at p<0.05 level

Table: 2- Depicts the analysis of knowledge score to find out the effectiveness of planned teaching program regarding cardiopulmonary resuscitation, the mean post-test knowledge score and % 17.43 (70.83%) was higher than the mean pre-test knowledge score and % was 8.98(37.43%), mean difference was 8.45, SDD was 0.11, SE was 0.35, the ‘t’ test was calculated 24.40* which is greater than p<0.05 level of deviation thus ‘t’ value was found to be significant at 0.05 level. This shows that the obtained mean difference was a true difference and not by chance.

Hence, null hypothesis HO was rejected and the research hypothesis H1 was accepted. It can be inferred that the planned teaching program for Auxiliary Nurse Midwife students was effective in improving the knowledge regarding cardiopulmonary resuscitation.

Table 3: Mean, Median and Standard Deviation of pre-test and post-test practice scores

<table>
<thead>
<tr>
<th>Practice Score</th>
<th>Mean</th>
<th>Median</th>
<th>Mean %</th>
<th>SD</th>
<th>The gain in Mean % Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>4.10</td>
<td>4</td>
<td>15.77</td>
<td>2.57</td>
<td></td>
</tr>
<tr>
<td>Post-test</td>
<td>10.43</td>
<td>10</td>
<td>40.10</td>
<td>2.39</td>
<td>24.33</td>
</tr>
</tbody>
</table>

Table: 3 -depicts that in analysis of mean pre-test practice score was 4.10, median 4, mean % was (15.77%), SD was found to be 2.57 and the mean post-test practice score 10.43 was higher than mean pre-test practice score, median 10, mean % was (40.10%), SD was found to be 2.39, and the gain in mean % score was (24.33%)

Figure: 2 - Pyramid diagram showing pre-test & post-test practice score
DISCUSSION
The findings of the study revealed a deficiency of knowledge of student nurses regarding cardiopulmonary resuscitation. The planned teaching program was found to be effective in increasing knowledge and improving the practice of student nurses. There was a significant positive relationship between post-test knowledge and practice scores of student nurses regarding cardiopulmonary resuscitation. There was no significant association between pre-test knowledge and practice with selected socio-demographic variables.

CONCLUSION
The ability to respond quickly and effectively to a cardiac arrest situation rests on nurses being competent in the emergency life-saving procedure of cardiopulmonary resuscitation (CPR). The role of CPR training is critical in ensuring that nursing students are competent and confident to act in the event of a cardiac-related emergency. Education and training about Basic Life Support are necessary for different medical groups such as nurses. Training of nurses has an impact on the efficiency and outcome of cardiopulmonary resuscitation (CPR), and thus, assessment of CPR knowledge among undergraduate nurses is very important to improve the training programs.

REFERENCES