

Knowledge and Practice Regarding Basic Life Support among Nursing Students

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ABSTRACT

Background: Basic Life Support (BLS) includes recognition of signs of sudden cardiac arrest (SCA), heart attack, stroke and foreign-body airway obstruction (FBAO); cardiopulmonary resuscitation (CPR); and defibrillation with an automated external defibrillator (AED). It is very important that every person in the community know about Basic Life Support to save lives and improve the quality of community health. At least the doctors, nursing and paramedical staff are expected to know about it, as they are frequently facing life threatening situations and the knowledge of BLS will be definitely useful.

Objective: To assess the existing level of knowledge and practice of B Sc nursing students on BLS. To develop and validate planned teaching program (PTP) on knowledge and practice regarding BLS. To determine the effectiveness of PTP in terms of gaining knowledge and practice scores.

Design/setting/participants: Quasi experimental designs. A total of 40 subjects were chosen for the study. The instrument used to generate necessary data was structured questionnaire for knowledge assessment and observation checklist for practice assessment).

Results: The mean score of pre- test knowledge score of experimental group was 24.65 and post test mean score was 35.5. The median of pre- test and post- test knowledge score of experimental group i.e. 24 and 35 shows difference. The standard deviation of pre- test knowledge score was 1.87 shows difference in comparison to post- test score i.e. 2.27. The T. Value of post- test and post- test knowledge score was 7.08. The mean difference of post- test practice score of experiment group and control group was 4.95. The standard deviation difference of post- test practice score of experiment group and control group was 0.9. The standard error mean difference of pre- test and post- test practice score was 0.14. The T. Value of pre- test and post- test practice score was 5.84. Indicating that level of knowledge and practice of experimental group increase as compared to control group.

Conclusions: Findings indicate that PTP given on knowledge and practice regarding BLS was effective.

Key word: Basic Life Support, sudden cardiac arrest, heart attack, stroke, foreign-body airway obstruction, community health.

INTRODUCTION

Basic life support, are technique that are needed to keep someone alive in a life threatening situation until medical help arrives. ^[1] Nursing personnel should know the importance of basic life support in life

threatening situation. Planned teaching program on Basic life support will increase the knowledge and skill of nursing student. It will helpful to nursing personnel to perform BLS at pre hospital setting when necessary. ^[1-3] It is done with the intention

of creating numerous Basic Life Support responders. As per the review of literature, numerous studies have shown the impact of different teaching modules or programmes on knowledge and skills of various health personnel's regarding BLS. Many countries have guidelines on how to provide basic life support (BLS) which are formulated by professional medical bodies in those countries. [4] The guidelines outline algorithms for the management of a number of conditions, such as cardiac arrest, choking and drowning. BLS generally does not include the use of drugs or invasive skills, and can be contrasted with the provision of Advanced Life Support (ALS). [5]

Statement of the Problem

A study to assess the effectiveness of planned teaching program on knowledge and practice regarding Basic Life Support among B Sc nursing 1st year students of PIPRAMS, Greater Noida.

Objectives

- To develop and validate planned teaching program (PTP) on knowledge and practice regarding BLS.
- To determine the effectiveness of PTP in terms of gaining knowledge and practice scores.

Hypotheses

H1: there will be significant difference between the pre-test and post-test knowledge scores of experimental group & control group as measured by structured questionnaire at 0.05 level of significance.

H2: there will be significant difference between the pre-test and post-test practice scores of experimental group and control group as measured by observation checklist at 0.05 level of significance.

MATERIALS AND METHODS

Research Approach: Quantitative research

Research Design: Quasi experimental designs

TABLE: 1 Schematic Representation of Research Design

Groups	PRE TEST (DAY 1)	INTERVENTION	POST TEST (DAY 7)
Experiment Group	Assessment of knowledge and practice regarding BLS	Planned teaching program	Assessment of knowledge and practice regarding BLS
Control Group	Assessment of knowledge and practice regarding BLS.	-	Assessment of knowledge and practice regarding BLS.

Setting:

The study was conducted Prakash institute of Physiotherapy, rehabilitation and allied medical sciences, Greater Noida.

Population:

All the students of B.Sc. nursing 1st year present during the data collection period at PIPRAMS

Sampling Criteria:

1. Students who are willing to participate in the study.
2. Availability of B.Sc nursing students during data collection

Sampling Technique:

Simple random sampling, using lottery method was used in this study

Sample size: Following random sampling method 40 samples were selected for conducting the main study. 20 samples were for experimental group and 20 for control group.

Data Collection Tools and Technique:

TABLE: 02 Schematic Representations of Tools and Technique

S No.	TOOL	TECHNIQUE
1	Structured questionnaire	Questioning
2	Observation checklist	Observation

Conceptual Framework:

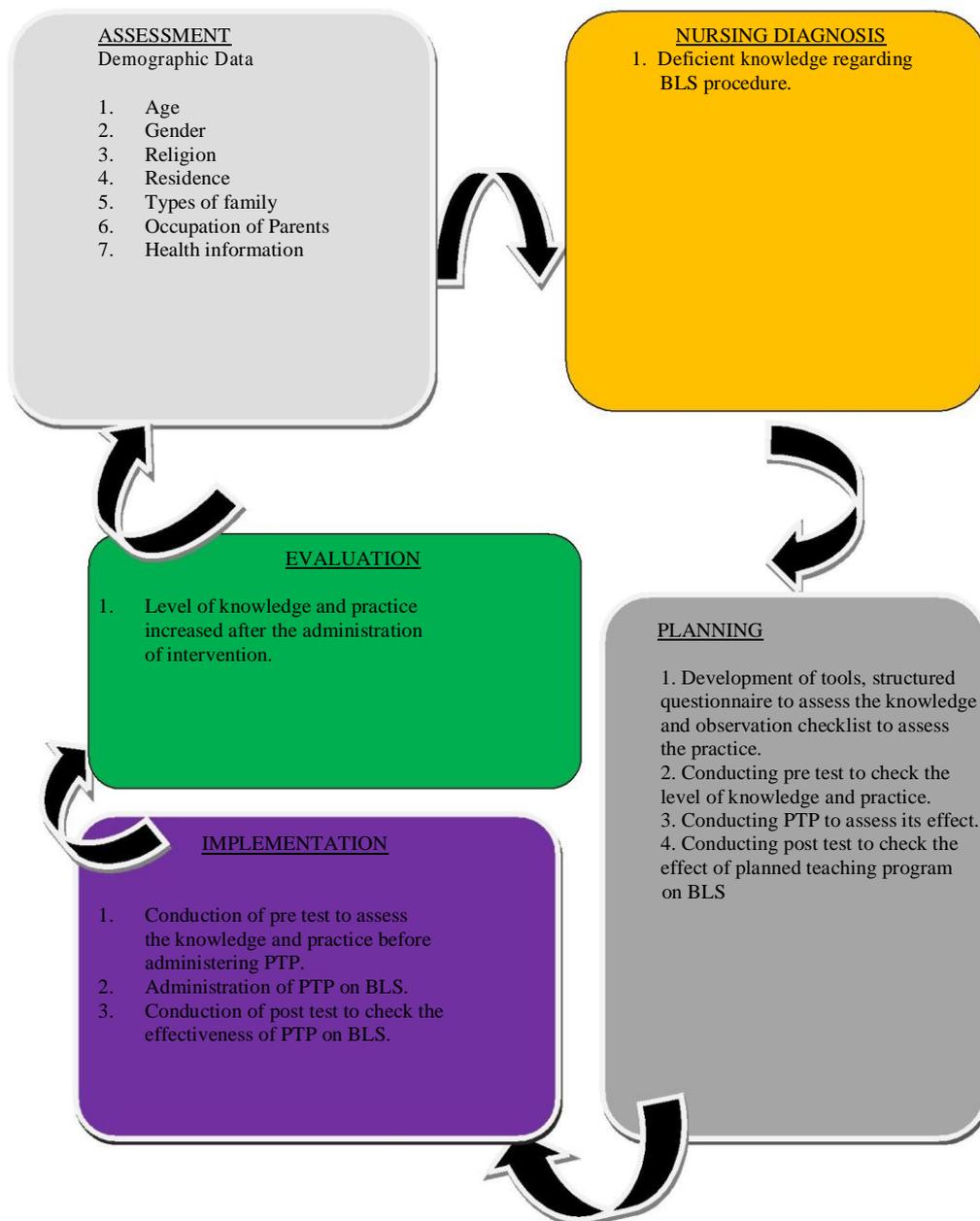


Fig 1: Conceptual Model based on Nursing Process Theory

Description of the structured questionnaire:

It consists of two parts:

- A. Questionnaire related to the background information of the subject.
- B. Questionnaire related to the knowledge of BLS.

Part A consisted of 8 items for obtaining the background information of study subjects such as age, gender, religion, residence, types of family, occupation of

parents, health information related to BLS, attendance of class on BLS.

Part B consisted of 20 structured questionnaires with 4 options from which one was correct answer. These structured questionnaires were based on BLS, EMS, location and depth of chest compression, rescue breathing, ratio of chest compression and ventilation, AED, first response at the time of choking, drowning, weakness in upper limb, chest discomfort.

Maximum score should be obtained was 40 and minimum was 20.

Pilot Study

Pilot study was conducted on B Sc nursing 1st year class from 27th February to

2nd March. Formal permission for conducting the study was obtained from the higher authority, Piprams Greater Noida

TABLE: 03 Schematic Representation of Establishing Reliability Of Tools

S No.	Tool	Method of Establishing Reliability	Value (In %)
1	Structured questionnaire	Cronbach alpha	0.84
2	Observation checklist	Inter- rater	100

Major Findings

1. Characteristics of the sample subjects

-21 of the subjects were between 18-20 (52.5%) years of age, 18 were male (45%) and 22 were female (55%). According to subjects, 23 were Hindu (57.5%) and 22 belong to rural areas (55%) whereas 18 were from urban areas (45%).

2. Findings related to knowledge score of pre- test and post- test of experimental group.

-The mean difference of pre- test and post- test knowledge score of experiment group was 10.60%.

-The standard deviation difference of pre- test and post- test knowledge score of experiment group was 0.43%.

-The standard error mean difference of pre- test and post- test knowledge score was 0.09. -The T. Value of pre- test and post- test knowledge score was 7.2.

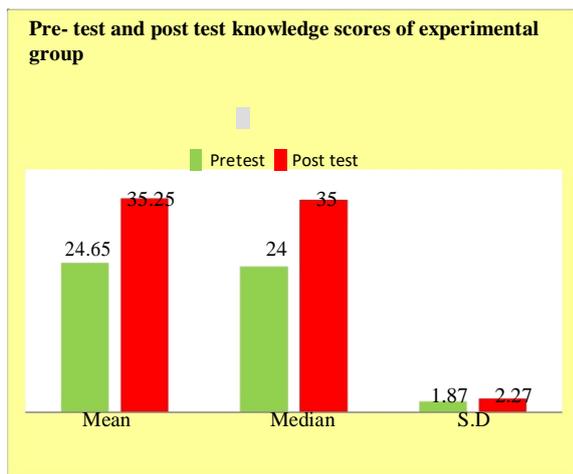


Fig 2: Column diagram showing mean, median and standard deviation of pre- test and post-test knowledge scores of experiment group of B.Sc nursing 1st year students on BLS.

3. Findings related to the difference between pre- test and post- test practice scores of experiment group.

-The mean difference of pre- test and post- test practice score of experiment group was 5.55.

-The standard deviation difference of pre- test and post- test knowledge score of experiment group was 2.33.

-The standard error mean difference of pre- test and post- test knowledge score was 0.52. -The T. Value of pre- test and post- test knowledge score was 6.7.

4. Findings related to difference between the post-test knowledge scores of experimental group and control group.

-The mean difference of post- test knowledge score of experiment group and control group was 14.25.

-The standard deviation difference of post- test knowledge score of experiment group and control group was 0.67.

-The standard error mean difference of post- test and post- test knowledge score was 0.19.

-The T. Value of post- test and post- test knowledge score was 7.08

5. Findings related to difference between post test practice scores of the experimental group and control group.

-The mean difference of post- test practice score of experiment group and control group was 4.95.

-The standard deviation difference of post- test practice score of experiment group and control group was 0.9.

-The standard error mean difference of post- test and post- test knowledge score was 0.14.

-The T. Value of pre- test and post- test knowledge score was 5.84.

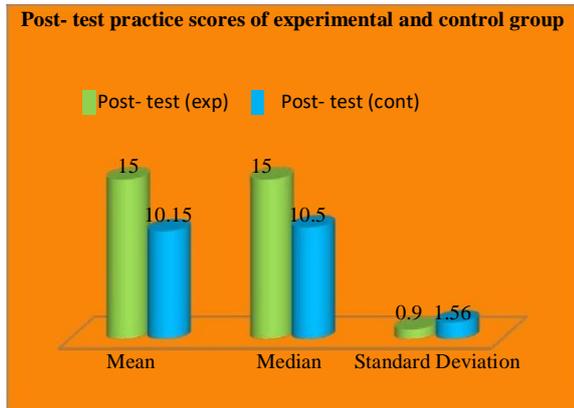


Fig 3: Cylindrical diagram showing the mean, median and standard deviation of post- test practice scores of experiment group and control group of B.Sc nursing 1st year students on BLS.

CONCLUSIONS

- Findings indicate that PTP given on knowledge and practice regarding BLS was effective.
- Level of knowledge and practice increased in the subjects of experimental group as compared to subjects of control group.

LIMITATIONS

- The study is limited to the knowledge and practice on BLS, among BSc nursing 1st year students.
- The study is limited to BSc nursing 1st year students.

RECOMMENDATIONS

- A similar study can be replicated on a large sample.
- A similar study can be undertaken in different institutes.
- A similar study can be replicated along with the health education programs.

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