

ORIGINAL ARTICLE

Effectiveness of Planned Teaching Programme on Knowledge and Skill Regarding BLS among B.Sc (N) I & II year Students at Selected Nursing College in Chennai

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ABSTRACT

Background: Being at the heart of the health care delivery is an enormous challenge for nurses, but it is also a golden opportunity to save the life of the patient. A high level of knowledge and skill of CPR is expected for all nurses to save the life of the victims who had cardiac arrest. According to the American heart association estimated that in the world among the incidence of death due to cardiac arrest varies between 0.2 to 0.4 percent per year. WHO estimates that 60% of the world's cardiac patients will be Indian by 2015 Cardiovascular disease related to deaths in India occur below the age group of below 70 compared with just 20% in the west.

Aims and Objectives: 1. To assess the knowledge and skill regarding BLS among B.Sc(N) I & II year students. 2. To evaluate the effectiveness of planned teaching programme on knowledge and skill regarding BLS among B.Sc(N) students. 3. To find out the association between knowledge and skill among B.Sc (N) I & II year students with their selected demographic variables.

Methodology: A quantitative research approach with a pre-experimental one-group pre-test and post-test design was adopted. The study was conducted in Venkateswara nursing college, Thalambur, Chennai, among 72 students among B.Sc(N) I&II year selected through non probability convenient sampling.

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Results: Significant improvement was observed in post-test scores ($p < 0.05$), indicating the effectiveness of the teaching module. Post-test knowledge levels showed a statistically significant difference in level of knowledge and skill on BLS.

Conclusion: The findings suggest that a planned teaching programme significantly improves knowledge and skill among B.Sc (N) I&II year students. Implementing similar for other field of students, police man, fire workers.

KEYWORDS

- Basic Life Support • Knowledge • Skill • B.Sc (N) Students • Effectiveness
- Structured Teaching Programme

INTRODUCTION

Basic Life Support (BLS) is performed to support the patient's circulation and respiration through the use of cardiopulmonary resuscitation (CPR) until advanced life support arrives. Victims who have had early and correct BLS intervention will be better oxygenated and are more likely to respond to advanced techniques to revive them, thereby increasing their chance of survival. CPR is a lifesaving technique. It aims to keep blood and oxygen flowing through the body when a person's heart and breathing have stopped. Cardiac arrest occurs in unexpected places other than medical facilities. CPR is for people experiencing cardiac arrest. When the heart stops beating, cardiopulmonary resuscitation is used to save the patient's life. After a cardiac arrest, immediate CPR can double or triple the possibilities of survival.

Statement of The Problem

A study to assess the effectiveness of planned teaching programme on Knowledge and skill regarding BLS among B.Sc (N) I & II year students at selected nursing college in Chennai.

OBJECTIVES OF THE STUDY

1. To assess the knowledge and skill regarding BLS among B.Sc (N) I & II year students.
2. To evaluate the effectiveness of planned teaching programme on knowledge and skill regarding BLS among B.Sc (N) students.
3. To find out the association between knowledge and skill among B.Sc (N) I & II year students with their selected demographic variables.

Hypothesis:

H1: There will be a significant difference between pretest and post-test level of knowledge and skill regarding BLS among B.Sc(N) I & II year students.

H2: There will be a significant association between the level of knowledge and skill regarding BLS with their selected demographic variables.

MATERIALS AND METHODS

A quantitative research approach with a pre-experimental one-group pre-test and post-test design was employed to evaluate the effectiveness of planned teaching programme on Knowledge and skill regarding BLS among B.Sc(N) I & II year students. The study was conducted in Venkateswara nursing college, thalambur, Chennai, with 72 students were selected through Non probability convenient sampling based on inclusion criteria. After obtaining informed consent, demographic data, including age, course of the study, gender, previous knowledge of CPR, medium of study were collected. A structured, self-administered questionnaire and skills was assessed by checklist consisting of 25 items of knowledge based BLS was used for the pre-test, with each correct answer scored as one and each incorrect answer scored as zero. The teaching module, delivered using flashcards with pictures and, lesson plan, power point presentation on BLS and demonstration of CPR technique using manikin. A post-test using the same questionnaire was conducted to assess changes in knowledge. Scores were categorized for knowledge as $>80\%$ (Good knowledge), $60-80\%$ (Average knowledge), and $<60\%$ (adequate knowledge), score were interpreted as follow for skill as 15-20 (Satisfactory), >15 (Unsatisfactory). The effectiveness of the intervention was

determined by comparing pre-and post-test scores.

Plan For Data Analysis: A study to assess the effectiveness of planned teaching programme on Knowledge and skill regarding BLS among B.Sc (N) I & II year students was analyzed using descriptive and inferential statistics. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to describe the demographic variables and assess the level of knowledge and skill. The paired t-test was used to evaluate the effectiveness of the intervention by comparing pre-test and post-test knowledge and skill scores. The association between post-test knowledge and skill scores and demographic variables was analyzed using the chi-square test.

RESULTS & DISCUSSION

The study included 72 students of B.Sc (N) Ist and IIRD year, with the age group of 17–25 years. Most participants were B.Sc (N) IIRD year, female students. The majority belonged to age group of 17-19 years, and a significant proportion reported regarding to the previous knowledge and skill the students by doctor and nurses.regarding the medium of study both tamil and english are equal.In the pre-test, 5 (6.9% Good knowledge), 10(13.9% had average knowledge, and 57 (79.2% had poor knowledge) regarding BLS, and 25(34.7% satisfactory), 47 (65.3 unsatisfactory) regarding skill on CPR. After the planned teaching programme, post-test results showed improvement: 23 (31.9%) had Good knowledge and 30(41.7%) had average knowledge, and 19 (26.4%) had poor knowledge regarding knowledge on CPR, and 65 (90.3%) had satisfactory, 7(9.7%) had unsatisfactory regarding skill assessment on CPR.

A paired t-test revealed a statistically significant increase in post-test scores ($p < 0.05$), confirming the effectiveness of the intervention. A significant difference was observed between the pre-test and post-test level of knowledge and skill regarding BLS among B.Sc (N) I &II year students.

Assessment of the effectiveness of knowledge on BLS among B.Sc (N) students in Table 1, and the effectiveness of skill on CPR among B.Sc (N) students in Table 2.

Table 1: Assessment of the effectiveness of pre-test and post-test level of knowledge on BLS among B.Sc (N) students N=72

Level of Knowledge	Pre-test		Post-test		T-Test
	N	%	N	%	
Good knowledge (>80%)	5	6.9	23	31.9	t=15.54
Average knowledge (60-80%)	10	13.9	30	41.7	
Poor knowledge (<60%)	57	79.2	19	26.4	

There is significant difference between pre-test and post-test level of knowledge regarding BLS among B.Sc(N) I &II year students.

Table 2: Assessment of the Effectiveness of skill on CPR among B.Sc (N) students N=72

Level of Skill	Pre-test		Post-test		t-test
	N	%	N	%	
Satisfactory (15-20)	25	34.7	65	90.3	t=9.62
Unsatisfactory (>15)	47	65.3	7	9.7	

There is significant difference between pre-test and post-test level of skill on CPR among B.Sc (N) I &II year students.

There is no significant association between the post-test level of knowledge, skill and demographic variables among B.Sc (N) I &II year students.

A similar study conducted by **Kannammal (2022)** in chhattisgarh assessed the effectiveness of structured teaching programme on knowledge regarding cardio pulmonary resuscitation among B.Sc. nursing 1st year students in colleges of nursing using a pre-experimental design. The study included 40 students, selected by purposive sampling technique. The intervention Structured Teaching Programme was introduced to the group after the pre-test. Knowledge was assessed by self structured questionnaire assessed by questionnaire before and after the intervention. The result revealed that mean pre-test 82.5% students had inadequate knowledge and 17.5% students had moderate knowledge. And during post-test 85% students had moderate knowledge and 15% students had adequate knowledge. A paired t-test confirmed the effectiveness of the intervention with a statistically significant improvement in scores ($p < 0.05$).

A similar study conducted by D. Ravivarman, (2020) in Karaikal, assessed the effectiveness of a structured teaching programme on Knowledge Regarding Basic

Life Support among First Year Undergraduate Nursing Students, using a Quantitative pre experimental research design was adopted for this present study. First year 59 undergraduate Nursing students were chosen by Purposive sampling technique. The data were collected by using demographic proforma and self structured knowledge questionnaire. Pre-test and post-test knowledge scores revealed that during pre-test, the mean score 8.6 ± 3.07 (SD) which is 43% of the total mean score, whereas in post-test, the mean score was 15.13 ± 2.26 (SD) which is 75.65% of the total mean score depicting difference of 32.65% increase in mean percentage of score. The calculated 't' value 24.89 which is higher than the $P < 0.05$, stated that highly significant difference between the pre-test and post-test. It proved that the structured teaching programme was highly effective to improve the student's knowledge.

CONCLUSION

The planned teaching programme was found to be effective in improving the knowledge and skill regarding BLS among B.Sc (N) I & II year students. The intervention significantly enhanced the participants' understanding of BLS indication, guidelines used as per American Heart Association and techniques of CPR. The improvement in post-test scores indicates that structured health education can play a crucial role in B.Sc nursing students on CPR and recommended for other field of students, police man, fire workers.

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Conflict of Interest: No conflict of interest. In addition, this study was not funded.

Statement of Human and Animal Rights

All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2008.

Statement of Informed Consent

Informed consent was obtained from all the study participants for being included in the study.

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