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Effectiveness of Basic Life Support Training on Knowledge among Nursing Students

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ABSTRACT

Background: For the professional growth of nursing students as well as their responsibilities as practitioners and educators, it is crucial to provide current knowledge and training in basic life support procedures. **Objectives:** The purpose of the study was to examine the effectiveness of basic life support training on knowledge among nursing students. **Methods:** A non-randomized quasi-experimental design (One group pre-test-post-test) was used in this study. The investigation was carried out in a lab at a college for nursing students. The sample consisted of a convenience sample of 3rd semester students enrolled in the undergraduate nursing class. The study sample consisted of 70 nursing students. Basic life support training included both theoretical and practical components. The students' knowledge were assessed before basic life support training. Data were collected using the knowledge assessment questionnaire. The pre- and post-assessment knowledge scores were compared. **Results:** After basic life support training, level of knowledge scores were higher as compared to pre-training scores (t= 11.06, p=0.000). **Conclusion:** The study showed that basic life support training improved knowledge and skills related to basic life support practices in nursing students. Periodic basic life support training is very important for competency in this area among nursing students.

KEYWORDS: *Effectiveness, Basic life support training, Knowledge, Nursing students*

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INTRODUCTION

Among the top causes of death worldwide are cardiac conditions. As it happens more frequently across all age groups, sudden cardiac arrest necessitates emergency interventions. The prevention of mortality related to sudden cardiac arrest is dependent on life-saving measures. Performing a successful cardiopulmonary resuscitation is the first stage in bringing someone who has suffered a cardiac arrest back to life. Successful cardiopulmonary resuscitation performed on the scene by medical personnel helps to lower the fatality rates associated with cardiac arrest.

In order to lower the occurrence of sudden cardiac arrests, the American Heart Association emphasises the necessity for health team members to become competent in cardiopulmonary resuscitation techniques. Theoretical knowledge is necessary, but it is insufficient in and of itself to perform a successful cardiac resuscitation. According to training and manual guidelines created for the health team, it is necessary to maintain current knowledge, consolidate technical abilities, and establish enough self-esteem related to the application in order to properly perform cardiopulmonary resuscitation.

Effective emergency aid services are demanded of nurses. Within the units they operate in and in situations outside the hospital, nurses may meet a variety of emergency circumstances, such as sudden cardiac arrest. In these emergency situations, nurses must perform basic life support procedures first. Successful first aid and basic life support interventions by nurses in emergency situations may have a positive impact on the morbidity and death rates associated with cardiac arrest.

Advanced life support practices would be considerably impacted by nurses with excellent knowledge and skills in basic life support. For nursing students' professional development and roles as practitioners and educators, it is crucial that nurse education programmes provide current information

and skill training linked to basic life support procedures. Additionally, nurses have significant roles and obligations in educating society about current standard life support procedures. Previous research indicated that there was need for improvement in nursing students' knowledge of basic life support. During their study, nursing students acquire fundamental theoretical knowledge and practical abilities in basic life support. However, instruction in fundamental life support techniques might not be enough. The practice of basic life support may cause anxiety and low self-esteem in nursing students who lack the necessary skills.

Nursing students that receive basic life support training are more knowledgeable and are required to use evidence-based basic life support techniques. Basic life support training considerably increased nursing students' knowledge, practise skills, attitudes, and self-efficacy, according to previous studies. Additionally, training in basic life support would boost nurses' confidence in their ability to perform these procedures and help them control their anxiety. For students to gain better knowledge and abilities in this area, it is crucial to provide them with both theoretical and practical training in basic life support as well as regular repetition and updating of this training. The aim of the study was to evaluate the impact of basic life support instruction on nursing students' knowledge and behaviour.

Materials and Methods

A quasi-experimental study design was used on the nursing students of the college. The sample size found to be was 70. The study used a technique called purposive sampling. Knowledge of basic life support was the study's dependent variable. Both genders students of 3rd semester were included in the study, whereas other classes' students and teachers were excluded from the study.

The self-structured closed-ended questionnaire was used to collect data which consists of items related to knowledge regarding basic life support. A scoring key was designed where each correct answer was awarded 1 mark and the wrong answer 0. Thus, the item maximum score was 20 and the minimum was 0. Consequently, the highest total knowledge score for nursing students was 20. Since nursing students should have sufficient knowledge in this very critical area, knowledge scores of above 14 or >70% were considered "good" knowledge, scores 0-14 or below 70 % were considered "poor" knowledge.

Before actual data collection, the instrument was pretested on 10% of the total sample size. Ethical consideration was taken from principal of state college of Dehradun and informed consent was designed; confidentiality of the information was maintained throughout the study. Collected data were checked and rechecked for their completeness for missing items before their processing, and that data were edited, coded, and entered into computer base software using SPSSV20 by using both descriptive and inferential statistics.

Statistical Analysis

The data were presented as mean and standard deviation. Paired 't' test were performed to find the significant mean difference between the pre and post-test level of assessment.

Results of the Study

The study included a total of 70 nursing students with age ranging between 18-22 years. Frequency and percentage distribution of knowledge regarding Basic Life Support (BLS) among nursing students is shown in Table No. 1.

Table No.1 Criterion measure of knowledge score

N = 70

Level of knowledge	Knowledge score	Range of score	Pre test		Post test	
			Frequency	Percentage	Frequency	Percentage
Good	Above 70%	15- 20	27	38.57	70	100
Poor	Below 70%	0 – 14	43	61.42	0	0

Table No. 1 shows that subjects having score between 15 and 20 were considered having good knowledge and subjects getting a score of 0 to 14 were considered having a poor knowledge. In the pre-test, majority of students 43 (61.42) were having poor knowledge and in the post test all students (100%) were having good knowledge related to Basic Life support.

Table No. 2 Comparison between pre-test and post-test knowledge score of nursing students

N = 70

Variable	Pre test (Mean±SD)	Pre test (Mean±SD)	MD	Paired t test	df	p value
Knowledge score	13.60 ±3.13	18.59 ±1.74	4.98 ±3.77	11.06	69	0.000

Table No 2 shows that there was statistically significant difference between pre-test and post-test level of knowledge with t value =11.06 at p=0.000. Hence, the null hypothesis was rejected and it shows that teaching program on BLS was effective in improving knowledge among nursing students.

Conclusion

The study's findings show that hospitals' health workers, including nurses, health assistants, auxiliary nursing midwives, and community medicine assistants, have insufficient knowledge of BLS, which is a serious problem that needs to be fixed in the future. There is a requirement for all healthcare practitioners to have some type of standard training and assessment because BSL training and clinical exposure affect how much information is retained. The purpose of the research study was to evaluate hospital staff members' understanding of basic life support. Based on the study's findings, various recommendations can be made, such as conducting a comparative study and a study of a similar nature to determine the efficacy of programmes for spreading knowledge about basic life support.

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