

EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING CARDIOPULMONARY RESUSCITATION AMONG STUDENT NURSES

Nursing

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ABSTRACT

Background: Cardiac arrest kills many people in the world. Major concern is the lack of awareness about CPR among health care professionals. The present study is conducted to improve the knowledge of student nurses regarding CPR through planned teaching program. **Aim:** Evaluate the effectiveness of teaching programme on knowledge regarding CPR among student nurses. **Methodology:** A pre-experimental one group pre-test post-test design was used. 40 student nurses were selected using consecutive sampling technique. The pre-test was evaluated by knowledge questionnaire. Post-test was conducted after 8 days of teaching. Data was analyzed using descriptive and inferential statistics. **Result:** The findings revealed that mean value of pre-test was 17.1 with SD of 6.14 and post-test mean value was 25.6 with SD of 9.30. The calculated 't' value was 18.89 and it was statistically significant at $p < 0.05$ level. There was significant increase in knowledge after teaching. **Conclusion:** The study concluded that planned teaching program was an effective tool in improving the knowledge regarding CPR.

KEYWORDS:

Cardiopulmonary Resuscitation, Effectiveness, Knowledge, Nurses

INTRODUCTION

Cardiac arrest is the disturbance of the electrical or mechanical activity that governs the ordered pumping of blood from the heart, often leading to sudden collapse without warning.¹ For every minute that passes after a patient goes into cardiac arrest, their chance of survival decreases by 7-10% until a defibrillator arrives.²

According to AHA (2015) nearly 6 lakh people suffers from sudden cardiac arrest every year, about 4 lakh of them outside of hospitals. Less than 6% of victims survive cardiac arrest outside hospitals. Out of 2 lakh cardiac arrest that occur in hospitals, 24% of victims survived. Effective treatment of cardiac arrest is CPR and defibrillation. If these treatments were more efficiently implemented on the broader basis, could avoid needless deaths and disability.¹

American Heart Association 2010 guidelines for CPR recommended a change in BLS sequence to step from A-B-C to C-A-B for adult, children and infant. While following a A-B-C sequence, there is a significant delay because they spend so much time in trying to open the airway and make an air tight seal around the mouth. With the new C-A-B sequence, people initiate the chest compression soon. It is helpful to increase the survival rate of a person having a cardiac arrest.³

World Heart Federation 2015 says that less than 1% Indians presently know how to carry out a CPR. In India, 7.5 lakh people die with sudden cardiac arrest every year and over 80% of the emergencies occurring outside the hospital settings. If victim do not receive CPR within four minutes of cardiac arrest, his chance of survival drop by 10% and effective CPR from a bystander can double the victim's chance of survival.⁴

Latest guidelines were made in 2015, CPR begins with atleast 2 inches (5cm) deep compressions delivered hard and fast at the rate of 100-120 per minute. A universal compression ventilation ratio of 30:2 is recommended for adults and 15:2 for children.⁵

A patient who has suffered sudden cardiac arrest must receive effective treatment rapidly. When delivered promptly, resuscitation can save the lives of many patients in cardiac arrest. Every nurse and physician should be skilled in CPR because cardiac arrest may occur at any time or in any setting.⁶

A quasi experimental study was conducted on randomly selected 42 B.Sc. Nursing students of M.M College of Nursing, Mullana,

Ambala, Haryana in January 2015. The objective was to assess the knowledge and practices related to BLS. Tool consisted of structured knowledge questionnaire and practice checklist on BLS. On the first day, pre-test of knowledge about BLS was conducted and on the same day training program was administered and post-test of knowledge was carried out. On the day 2-8, pre-test of practices regarding BLS was conducted, demonstration was given and post-test was taken on the same day. On the 16th day, 2nd post test of knowledge was conducted. Significant findings of the study were that the mean of post-test knowledge score (14.12 ± 1.15) was higher than the mean of pre-test knowledge score (7.19 ± 2.00). The study further revealed that mean of post-test practice scores was higher (23 ± 1.18) than the mean of pre-test practice scores (10.31 ± 3.84). Thus, the training program was effective in enhancing the knowledge and practices of Nursing Students regarding BLS.

(Rashmi Goswami, Kanika and Sembian N, 2015)⁷

The development of knowledge and skills is an essential component of professional development in nurse education programs. The American Heart Association (AHA) recommends that nurses and physicians working with patients be certified in BLS and ACLS. Certification involves attending formal classes and passing cognitive and motor skill tests.⁸ In order to enhance the retention of knowledge and skill, repeated training is needed. With this background, the study was aimed to assess the effectiveness of teaching program on CPR among nursing students.

METHODOLOGY

The quantitative research approach and pre-experimental one group pre-test post-test design was utilized for the study. The study was conducted in S.P.N. College of Nursing, Mukerian, Hoshiarpur (Punjab) in the month of May 2016 on 40 student nurses selected using consecutive sampling technique. Tool for data collection consisted of two sections: Demographic variables & Self-structured Knowledge questionnaire. Pre-test was conducted and thereafter teaching was given. Post-test was taken after 8 days. The analysis was done by using descriptive and inferential statistics.

RESULT

Table 1 Frequency and percentage distribution of student nurses according to demographic variables
N=40

Sr. No	Demographic Variables	N	%
1.	Age		
	20-21	38	95
	22-23	02	05
2.	Religion		
	Sikh	16	40
	Hindu	24	60
3.	Source of information		
	Health Personnel	04	10
	Newspaper	21	52.5
	TV and Internet	15	37.5
4.	Family Type		
	Nuclear family	31	77.5
	Joint family	09	22.5
5.	Habitat		
	Rural	31	77.5
	Urban	09	22.5

Table 1 depicts that most of the subjects (95%) were in age group of 20-21 years, only a few i.e. 5% were in age group of 22-23 years. All the subjects were unmarried females. More than half i.e. 60% belong to Hindu family and 40% belong to Sikh family. With regard to source of information, slightly more than half of the subjects i.e. 52.5% got information from Newspaper and 37.5% of the subjects took information from TV and internet. Only a few i.e. 10% got information from health personnel. With regard to family type, 77.5% subjects belonged to nuclear family and a few i.e. 22.5% were living in joint family. Further it was found that maximum number of the subjects i.e. 77.5% live in rural area and a few of them (22.5%) in urban area.

Table 2 Frequency and percentage distribution of pre-test and post-test knowledge scores regarding CPR among student nurses.

N=40

Level of knowledge	Score	Pre-test		Post-test	
		n	%	n	%
Average	≤10	0	0	0	0
Good	10-20	36	90	3	7.5
Excellent	21	4	10	37	92.

Maximum Score = 30

Minimum Score = 0

Table 2

depicts that majority of the subjects (90%) had good knowledge and some subjects (10%) had excellent knowledge regarding CPR in pre-test. In post-test, maximum number of subjects (92.5%) had excellent knowledge and a few subjects (7.5%) had good knowledge regarding CPR.

Figure 1 Comparison of Pre-test and Post-test mean and standard deviation regarding CPR among student nurses.

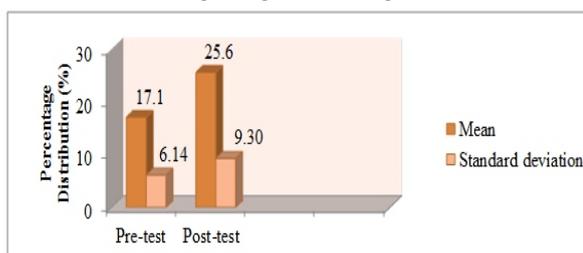


Figure 1 illustrates that the mean value of pre-test was 17.1 with Standard deviation 6.14 and post-test mean value was 25.6 with SD of 9.30. The calculated 't' value was 18.89 and it was statistically significant at $p < 0.05$ which showed that there was significant increase in knowledge after administration of the structured teaching program. The knowledge of student nurses regarding CPR increases from good to excellent.

CONCLUSION

Result indicated significant increase in the knowledge of student

nurses regarding CPR which will further assist them in managing the patients suffering from cardiac arrest. It can also be concluded that planned teaching programme was an effective tool in improving knowledge of student nurses regarding CPR.

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