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The knowledge regarding cardio pulmonary resuscitation among III year B.Sc. nursing students

[1] Bhanu Param Jyothi B, [2] B Kavitha, [3] Dr. Indira S

[1] Assistant Professor, Department of Community Health Nursing, Sree Narayana Nursing College, Nellore, Andhra Pradesh, India
[2] Assistant Professor, Department of Community Health Nursing, Narayana College of Nursing, Nellore, Andhra Pradesh, India
[3] Prof & Nursing Dean, Department of Medical Surgical Nursing, Narayana Nursing Institutions, Nellore, Andhra Pradesh, India

Abstract
Background: (Cardio Pulmonary Resuscitation) CPR is an emergency procedure performed, to manually preserve intact brain function until further measures are taken to restore spontaneous blood circulation and breathing in a person who is in cardiac arrest.
Objective: To assess the level of knowledge regarding cardio pulmonary resuscitation among III year B.Sc nursing students.
Materials and Methods: Descriptive research design was adopted for present study, 30 samples were selected by using non probability convenient sampling technique.
Results: The results shows that level of knowledge regarding cardio pulmonary resuscitation among III Year B.Sc nursing students, 16 (53%) had adequate knowledge, 11 (37%) had moderately adequate knowledge and 3 (10%) had in adequate knowledge.
Conclusions: The findings of the study conclude that majority of the students have adequate knowledge on cardio pulmonary resuscitation.

Keywords: knowledge, CPR, nursing students

Introduction

Cardiopulmonary resuscitation (CPR) is an emergency procedure it is performed to restore and maintain breathing and circulation and to provide oxygen and blood flow to the heart, brain, and other vital organs. The main indication for cardio pulmonary resuscitation is heart attack, electric shock and as pyrexia, hocking allergic reaction secondary to severe injury. The main contraindications are the high risk of bleeding, any history of central nervous system damage (Neoplasm aneurysm intracranial or spinal surgery) haemorrhagic, sever uncontrolled hyper tension, major surgery biopsy of parenchyma organ or significant trauma with the 2 months, recent trauma to head, fractured ribs.

American Heart Association and International Liaison Committee on Resuscitation (2010), updated their CPR guidelines. The importance of high quality CPR (sufficient rate and depth without excessively ventilating) was emphasized. The order of interventions was changed for all age groups except newborns from airway, breathing, chest compressions (ABC) to chest compressions, airway, and breathing (CAB).

The new standard is to compress the chest at least two inches on each push, at a rate of 100 to 120 compressions per minute. The AHA says the perfect pace is that of the Bee Gees "Staying Alive". Chest compressions should be performed at 100 to 120 per minute. Increase the depth of chest compressions to at least 2 inches for adults/children (not more than 2.4 inches) and infants to 1.5 inches. Continue with chest compressions for as long as possible or until help arrives. There has been a change in the recommended sequence for the lone rescuer to initiate chest compressions before giving rescue breaths (C-A-B rather than A-B-C).

There are a two types of CPR 1-person and 2 persons. 1-person CPR Count aloud as you compress 30 times at the rate of about 3 compressions for every 2 seconds. Finish the cycle by giving the victim 2 breaths. This process should be performed 5 times - 30 compressions and 2 breaths - after which remember to check the victim's carotid artery for pulse (for no longer than 10 seconds) and other signs of consciousness. 2-person CPR Count aloud as you compress 30 times at the rate of about 3 compressions for every 2 seconds. Finish the cycle by giving the victim 2 breaths. The adult cardio pulmonary resuscitation is contraindicated for victim sustained for spinal neck injury & pregnancy.

Singh S (2016), conducted a prospective observational study aim to evaluate the outcomes and predictors of in-hospital cardiopulmonary resuscitation among adult patients. All in-hospital adult patients (age >14) who suffered cardiac arrest & were attended by a Code Blue Team between January 2012 & 30 April 2013 were part of the study. Return of spontaneous circulation (ROSC) was achieved in 44% of a total of 127 patients included in our study. A systole/Pulse less electrical activity was the most common presenting rhythm 87.5%. The survival to discharge was seen in 7.1% patients of whom only 3.9% patients had good neurological outcome. Regression and survival analysis depicted achievement of ROSC during CPR, absence of co-morbidities and shorter response time of code blue team as predictors of good outcome. We found poor

outcome of CPR after in-hospital cardiac arrest. This was mainly attributed to an initial presenting rhythm of a systole/PEA in most cases and delayed response times.

Objectives

1. To assess the level of knowledge regarding cardio pulmonary resuscitation among III year B.Sc nursing students in Sree Narayana Nursing college at Nellore.
2. To find out association between the level of knowledge regarding cardio pulmonary resuscitation among III year B.Sc nursing students with their selected socio demographical variables.

Methodology

Research approach: Quantitative research approach.
Research Design: Descriptive research design was adopted for present study.
Setting of the study: The setting of the study was Sree Narayana Nursing College, Stone house peta, Nellore.
Population: The population was III year B.Sc nursing students in Sree Narayana Nursing College.
Sample: The samples are III year B.Sc nursing students who full fill the inclusion criteria.
Sample Size: The sample size was 30, III year B.Sc nursing students.
Sampling technique: Non probability convenient sampling technique was adopted for present study.

Criteria for sample selection

Inclusion criteria: Who are,

- Studying III year B.Sc nursing
- Available at the time of data collection
- Willing to participate.

Exclusion Criteria: Who are**,**

- Not willing to participate in present study.

Description of Tool

Part I: Deals with demographic variables like age in years, source of information and Experience
Part II: It deals with structured questionnaire to convey the knowledge regarding cardio pulmonary resuscitation among III year B.Sc nursing students. It consists of 25 multiple choice questions. Each question gives success answer as 1 score. If not answering gives 0 score.

Result and discussion

Table 1: Frequency and Percentage distribution of level of knowledge regarding cardio pulmonary resuscitation among III year B.Sc nursing students.

Criteria	Adequate		Moderately adequate		In adequate	
Level of knowledge	f	%	f	%	f	%
	16	53%	11	37	3	10%

Table-1: Shows that the level of knowledge of regarding cardio pulmonary resuscitation among III year B.Sc nursing students 16 (53%) had adequate knowledge, 11 (37%) had moderately adequate knowledge and 3 (10%) had in adequate knowledge.

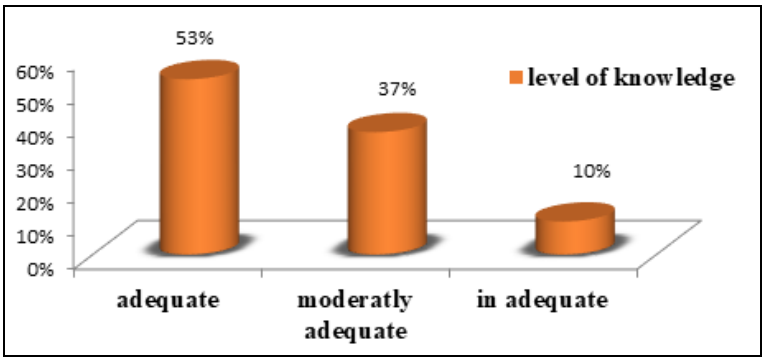

Fig 1: Percentage distribution of level of knowledge regarding cardio pulmonary resuscitation among III year B.Sc nursing students.

Table 2: Mean and standard deviation of level of knowledge regarding cardio pulmonary resuscitation among III year B.Sc nursing students.

s.no.	Criteria	Mean	Standard deviation
1.	Level of knowledge	10.74	3.27

Table-2 shows that level of knowledge regarding cardio pulmonary resuscitation among III year B.Sc nursing students mean value is 10.74 with standard deviation of 3.27.

Association between the level of knowledge regarding cardio pulmonary resuscitation among III year B.Sc nursing students with their selected socio demographic variables.

There is a significant association between the level of knowledge regarding cardio pulmonary resuscitation among III year B.Sc nursing students with their selected socio demographic variables like, source of information and experience at the level of $P<0.05$.

Recommendations

- The study can be replicated in a large sample in different urban and rural community settings.
- An experimental study can be conducted using control and experimental group.
- A study can be conducted to assess the knowledge and practice of adolescent girls.
- The similar study can be done with the different settings with large sample.

Conclusion

The findings of the study concluded that majority of the III year B.Sc student had adequate knowledge on cardio pulmonary resuscitation. This study result suggests that there is a need to improve advance techniques regarding cardio pulmonary resuscitation, to save the life of the people in critical situation.

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