A STUDY TO ASSESS THE EFFECTIVENESS OF CARDIOPULMONARY RESUSCITATION DEMONSTRATION ON KNOWLEDGE, ATTITUDE AND PRACTICE AMONG RELATIVES OF CARDIAC PATIENTS IN GKNM HOSPITAL, COIMBATORE

Reg. No: 301212307

A DISSERTATION SUBMITTED TO THE TAMIL NADU Dr.M.G.R MEDICAL UNIVERSITY, CHENNAI, IN PARTIAL FULFILLMENT OF REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

April 2014

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CERTIFICATE

This is to certify that the dissertation entitled **A STUDY TO ASSESS THE EFFECTIVENESS OF CARDIOPULMONARY RESUSCITATION DEMONSTRATION ON KNOWLEDGE, ATTITUDE AND PRACTICE AMONG RELATIVES OF CARDIAC PATIENTS IN GKNM HOSPITAL, COIMBATORE** is submitted to the Faculty of Nursing, The Tamil Nadu Dr. M.G.R Medical University, Chennai. It is the bonafied work done by **Reg. No:301212307** in partial fulfilment of the requirement for the award of the degree of Master of Science in Nursing, Branch-I Medical Surgical Nursing, Sub Specialty-Cardio Vascular and Thoracic Nursing, during academic year 2013-2014.

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"Trust in the Lord with all your heart, and lean not on your own understanding. In all your ways acknowledge Him and He shall direct your paths."

Proverbs 3:5

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ABSTRACT

A quasi experimental study was conducted to "Assess the Effectiveness of Cardiopulmonary Resuscitation Demonstration on Knowledge, Attitude and Practice among Relatives of Cardiac Patients in GKNM Hospital, Coimbatore". **Objectives: 1**.To assess the level of knowledge, attitude and practice regarding cardiopulmonary resuscitation among relatives of cardiac patients. **2**. To assess the effectiveness of CPR demonstration among relatives of cardiac patients. **3.** To determine the association between knowledge, attitude and practice score to selected demographic variables. **Research design**: Quasi pre experimental one group pretest posttest design. **Setting**: GKD auditorium of G. Kuppuswamy Naidu Memorial Hospital, Coimbatore. **Samples**: 30 subjects were selected who fulfilled the criteria. **Conceptual framework**: Ludwig Bertalanffy's General System Theory was adopted**. Method**: Semi structured interview questionnaire was used to asses knowledge, attitude scale to assess attitude and checklist was used to assess practice during the pretest. Cardiopulmonary resuscitation demonstration was conducted followed by the post test. Outcomes were evaluated by descriptive and inferential statistics**. Results:** The mean difference of knowledge was 9.73, with combined SD of 5.51 and't' value of 15.35. Paired't' test showed that there was a significant difference in pretest and posttest level of knowledge at 0.05 level. The calculated attitude't' value (5.56) was higher than table value. The calculated practice 't' value (85.57) was higher than table value.The study concluded that there was a significant difference in pretest and posttest levels of knowledge, attitude and practice levels. **Conclusion:** Demonstration of cardiopulmonary resuscitation was effective in improving knowledge, attitude and practice of cardiopulmonary resuscitation among relatives of cardiac patients.

CHAPTER-I

INTRODUCTION

“All that is worth cherishing begins in the heart”.

Suzanne Chapin

Human heart beats about 1,00,000 times a day,70-80 times a minute, surges 2000 gallons of blood through 60,000 miles of blood vessels which feeds the body organs and tissues. This hollow muscular organ pumps blood to various parts of the body by repeated, rhythmic contractions. Heart receives its blood supply from the right and left coronary arteries which originates from aorta. **(WebMD, 2009)**

Any damage to the coronary artery reduces the pumping power of heart. When the heart fails to contract effectively; cardiac arrest occours.Arrested blood circulation reduces the delivery of oxygen to the body. Decreased oxygen supply to the brain causes loss of consciousness, which results in abnormal or absent breathing. Cardiac arrest if untreated can damage brain or can lead to a sudden death. **(News Medical, 2013)**

Globally, cardiac arrest causes 17.3 million deaths annually. As per World health organization statistics, mortality due to cardiac diseases has overtaken cancer mortality rates. According to American Heart Association in the US, over 359,400 persons developed cardiac arrest outside the hospitals; and around 209,000 cases were affected within the hospital. In the United States and Canada, approximately 3,500,00 people per year suffered a cardiac arrest and received attempted resuscitation. (**Nadkarni VM, 2010)**

Nearly 383,000 out-of-hospital cardiac arrests occur every year, out of which eighty eight percent arrests occur at home. Out of all cardiac deaths, about one third cardiac patients die within twenty eight days after the onset of symptoms and about two-thirds die before reaching hospital. Many victims of cardiac arrest appear healthy with no known cardiac disease or other risk factors. According to business studies done during 2013 it was estimated that by the year 2020 cardiac diseases will be the

cause of over 40 per cent deaths in India as compared to 24 percent during the year 1990. Approximately 4280 people out of every one lakh population die of cardiac arrest everyday in India. **(Business Standard, 2013)**

Cardiac arrest remains a serious public health problem and a leading cause of death all over the world. In 90% of cases, defibrillation and other life support measures are not immediately available. In modern settings, an average of ten minutes is required for the professional help to arrive. During this period victims can only depend upon the resuscitation provided by the trained bystanders. Therefore the responsibility lies on educators who need to transfer their knowledge and skills of cardiopulmonary resuscitation to their trainees in a simple way to be remembered during a challenging situation. It has been proven that appropriate performance of bystander cardiopulmonary resuscitation will strongly influence the survival of cardiac arrest victims. **(Alan Sustic, 2010)**

The practice of cardiopulmonary resuscitation dates a way back to 1740, but even today it remains a nightmare to the majority of the population. Cardiopulmonary resuscitation can save lives if given correctly and immediately to the sudden cardiac arrest victims. This highlights the need for early recognition of the warning signs of cardiac arrest and also the need for early initiation of cardiopulmonary resuscitation**. (The Times of India, 2012)**

Cardiopulmonary resuscitation is a lifesaving technique useful in emergency situations, such as cardiac arrest or near drowning, in which someone's breathing or heartbeat has stopped. Cardiopulmonary resuscitation includes chest compressions and artificial respirations to maintain circulation and oxygenation during the cardiac arrest. Although survival rates and neurologic outcomes are poor for patients with cardiac arrest, appropriate resuscitation involving early defibrillation and proper implementation of post arrest care lead to improved survival and neurologic outcomes. **(Medscape, 2013)**

The purpose of cardiopulmonary resuscitation is not to "restart" the heart, but to maintain circulation of oxygenated blood, and to keep the brain alive until advanced care can be initiated. The current recommendations suggest performing

CPR on a cardiac arrest victim with absent breaths and unpalpable pulse. Studies had shown that immediate cardiopulmonary resuscitation followed by defibrillation within 3–5 minutes of sudden cardiac arrest improves survival in much higher rates. In the United States where the cardiopulmonary resuscitation training is widespread and followed by emergency medical system personnel, the survival rate is about thirty percent. But in South Africa, such advantages are not available so the survival rate is lesser than two percentage. **(Wikipedia, 2013)**

The American Heart Association (AHA) recommends that everyone including untrained bystanders and medical personnel alike should begin cardiopulmonary resuscitation with chest compressions. It's better to do something than do nothing. Anyone can learn cardiopulmonary resuscitation – and everyone should! Sadly, 70 percent of population may feel helpless during an emergency situation due to lack of knowledge of cardiopulmonary resuscitation or their training has significantly missed. This alarming statistic could hit close to out of hospital cardiac arrests occurring at home, because home is exactly where eighty percent of cardiac arrests occur. The life one tries to save through cardiopulmonary resuscitation might be their loved one. **(AHA, 2013)**

According to AHA, in the absence of cardiopulmonary resuscitation, a victim's chance of survival drops seven to ten percent for every minute that lapses between cardiac arrest and medical care. Every year, there are around 294,851 cardiac arrest cases gets treated outside of the hospitals in the United States. When an individual encounters an out-of-hospital cardiac arrest, his chances of survival depends greatly on receiving immediate cardiopulmonary resuscitation. Less than one-third of these individuals received the help they needed, because most bystanders were unaware of cardiopulmonary resuscitation and were afraid of committing a mistake**. (AHA, 2012)**

NEED FOR THE STUDY

“Our role is to develop techniques that allow us to provide emergency life saving procedures to injured patients in an extreme, remote environment without the presence of a physician.”

Each year in the United States, nearly 360,000 people of all ages encountered sudden cardiac arrest with nine out of ten victims losing their lives. Sudden cardiac arrest remains the most leading cause of death among the young adults aged more than forty in America and in other countries. According to the American Heart Association statistics, about ninety percent of cardiac arrests occur at home. The most important survival predictor is whether or not the victims had received the cardiopulmonary resuscitation.

Effective bystander cardiopulmonary resuscitation can double or triple survival rate. The American Heart Association noted that nearly 70 percent of lay people may feel unable to respond during a cardiac emergency because they do not know how to provide cardiopulmonary resuscitation. Cardiopulmonary resuscitation is a manual procedure that ensures that heart is still beating and the lungs are delivering oxygen to the blood in the event of absent beats. This procedure makes sure that the heart and brain are receiving adequate supply of oxygen. **(Wabi TV 5, 2013)**

Cardiopulmonary resuscitation is an extremely useful procedure that can help in saving someone's life. In situations where someone has encountered a cardiac arrest, their survival rates are much higher if they receive cardiopulmonary resuscitation immediately. It is an essential skill that must be taught to more people and every individual should begin to take cardiopulmonary resuscitation training. Although it is not a common skill, it can be learnt and performed by an untrained lay person. **(Chicago Cardiopulmonary resuscitation, 2012)**

Cardiopulmonary resuscitation can be an emergency life-saving technique and improves the person's chances of survival if performed immediately after the cardiac arrest. If cardiopulmonary resuscitation is not performed, it takes hardly four minutes for the victim to develop brain death due to decreased oxygen. By performing cardiopulmonary resuscitation the blood circulation is restored, the body maintains oxygenation, so that the brain and other organs stay alive until advanced support

arrives. Cardiopulmonary resuscitation does not assure that the person will survive, but it increases the people's chance of survival**. (Better health channel, 2013)**

A survey was conducted in 2001 at Queensland to ascertain current knowledge and training levels and to target cardiopulmonary resuscitation training. The results emphasized the need to increase cardiopulmonary resuscitation training in those aged 40 and over, particularly females, and to increase the awareness of the emergency telephone number amongst older people. **(Michele., et al 2002)**

In April 2008, the American heart association adopted steps to simplify cardiopulmonary resuscitation by introducing "hands only" cardiopulmonary resuscitation. About two third of people who suffer non traumatic cardiac arrest at home or at a public place actually doesn't receive help. Bystanders are afraid to initiate cardiopulmonary resuscitation due to the fear of committing a mistake or may not know what to do. Others were reluctant to perform mouth to mouth breathing due to the fear of contracting an infection. The new guidelines which was proposed by the American heart association allows the bystanders to perform cardiopulmonary resuscitation who are untrained or who may fear performing cardiopulmonary resuscitation.**(Melissa Conrad Stöppler, 2013)**

University of Camplans at Brazil conducted a study and concluded that the lay population had incomplete knowledge regarding cardiopulmonary resuscitation. Even though 75% knew how to check the respiratory movements, only 10 % were knowledgeable about mouth to mouth respiration. Lack of knowledge was expressed regarding performance of external chest compressions. Without adequate understanding and information on basic life support, laypeople would render incorrect assistance to victims, thus causing the damages. **(Aline., et al 2008)**

Hallym University in the US suggested that basic life support training increases laypersons confidence and willingness to perform bystander cardiopulmonary resuscitation. But the study concluded that the majority of respondents declined to perform cardiopulmonary resuscitation due to the fear of acquiring illness**. (Chi., et al 2010)**

Indians remains far behind in the global surge to learn about cardiopulmonary resuscitation. Many countries across the world are educating the lay people, in schools, universities and in work places, regarding cardiopulmonary resuscitation to save the life of cardiac arrest victims. The World Heart Federation reports that less than one percent Indians would presently know how to provide cardiopulmonary resuscitation to a cardiac arrest victim. The disclosure is stark since eight lakh people die every year due to sudden cardiac arrests in India.Morethan 85% of sudden death occurs outside a hospital setting. Irreversible brain damage occurs, within four minutes after the cardiac arrest and if no cardiopulmonary resuscitation is administered. If the cardiac arrest victim has not been resuscitated, his chances of survival drop to 5-10%. An effective cardiopulmonary resuscitation from a bystander cans double the victim's chances of survival after a cardiac arrest**. (The Times of India, 2012)**

Being trained to perform cardiopulmonary resuscitation can make a difference in life and death of a person. If more people are aware of cardiopulmonary resuscitation, more lives could be saved. In the light of the above, the investigator found it desirable to conduct cardiopulmonary resuscitation demonstration among the bystanders to update their knowledge and improve their skill. The preferred way to learn cardiopulmonary resuscitation is to practice cardiopulmonary resuscitation. Educating the public and creating awareness will help them to gain knowledge and prevent death from cardiac arrests. Early initiation of cardiopulmonary resuscitation improves the chance of survival.

STATEMENT OF PROBLEM

A Study to Assess the Effectiveness of Cardiopulmonary Resuscitation Demonstration on Knowledge, Attitude and Practice among Relatives of Cardiac Patients in GKNM Hospital, Coimbatore

OBJECTIVES

1. To assess the level of knowledge, attitude and practice regarding cardiopulmonary resuscitation among relatives of cardiac patients.

2. To assess the effectiveness of cardiopulmonary resuscitation demonstration among relatives of cardiac patients.

3. To determine the association between knowledge, attitude and practice with selected demographic variables.

OPERATIONAL DEFINITIONS

Effectiveness: In this study, effectiveness refers to the extent to which the demonstration on cardiopulmonary resuscitation has improved the knowledge, attitude and practice.

Cardiopulmonary resuscitation: Cardiopulmonary resuscitation is an emergency life saving procedure consisting of external cardiac compression and artificial respiration given to a person who has collapsed with absent pulse and respiration, in order to restore circulation and to prevent death or brain damage due to lack of oxygen.

Demonstration: In this study, it refers to practical explanation and performance of cardiopulmonary resuscitation on a manikin.

Relatives: In this study, relatives refer to persons connected by blood or marriage.

Cardiac patients: In this study, cardiac patients refers to individuals who are admitted with heart problems such as myocardial infarction, congestive cardiac failure, coronary artery disease etc.

Knowledge: In this study, knowledge is the understanding of the subjects regarding cardiopulmonary resuscitation.

Attitude: In this study, attitude refers to settled way of thinking regarding cardiopulmonary resuscitation.

Practice: In this study, practice refers to actual application and performance of cardiopulmonary resuscitation.

HYPOTHESIS

H1: There will be a significant difference between pretest and posttest knowledge, attitude and practice regarding cardiopulmonary resuscitation.

H2: There will be a significant association between pre-test knowledge, attitude and practice with selected demographic variables.

ASSUMPTIONS

- Relatives may be unaware of the proper technique of cardiopulmonary resuscitation.
- Demonstration may enhance the knowledge,attitude and practice regarding cardiopulmonary resuscitation.

CONCEPTUAL FRAMEWORK

The conceptual framework for this study is based on general systems theory with input, process, output and feedback, as introduced by Ludwig Von Bertalanffy (1968).

According to this theory, a system is a group of elements that interact with one another in order to achieve the goal. An individual is a system because he or she receives input from the environment. This input when processed provides an output. All living system is open, in that there is a continual exchange of matters, energy and information. The system is cyclical in nature and continuous to be so, as long as the four parts (inputs, process, output and feedback) keep interacting. If there is change in any parts there will be change in all the parts. Feedback from within the system or from the environment provides information, which helps the system to determine whether it is meeting its goal or not.

Input: Input consists of information, material or energy that enters the system. In the present study relatives is a system with input from self and those acquired from the environment. These inputs include relative's background like age, sex, education, religion, occupation, previous knowledge and previous witness of cardiopulmonary

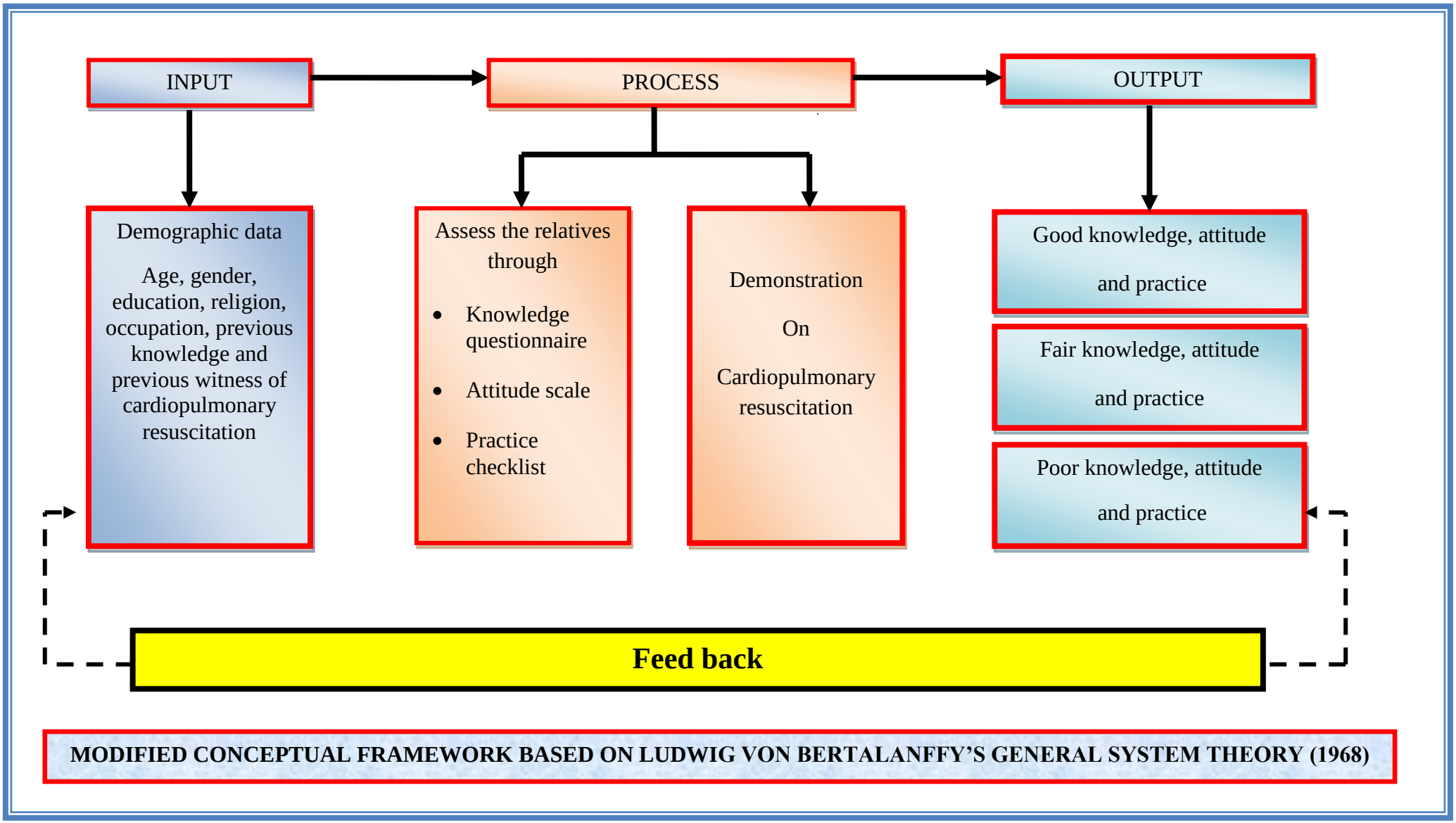
resuscitation which may influence the knowledge, attitude and practice of relatives towards cardiopulmonary resuscitation.

Process: After the input is absorbed by the system, it is processed in a way useful to the system. Here the researcher assessed the relatives through the knowledge questionnaire, attitude scale and practice checklist. A demonstration on manikin was performed about the cardiopulmonary resuscitation to attain the desired output.

Output: Output from a system is energy; matter of information disposed of by the system as a result of its process. In this study the output were depicted as follows:

Favourable outcome: Knowledge gain, favourable attitude and good practice regarding cardiopulmonary resuscitation.

Unfavourable outcome: Inadequate knowledge, unfavourable attitude and poor practice regarding cardiopulmonary resuscitation.



MODIFIED CONCEPTUAL FRAMEWORK BASED ON LUDWIG VON BERTALANFFY'S GENERAL SYSTEM THEORY (1968)

CHAPTER-II

REVIEW OF LITERATURE

A literature review involves systematic identification, location, scrutiny and summary of written material that contain information on research problems. Review of literature should be broad, systematic, and comprehensive and helps in evaluation. It also helps to plan and conduct the study in a systematic and scientific manner. **(Polit & Beck, 2003)**

An extensive review of literature relevant to the topic was done and presented under the following sections:

Section A: Literature related to knowledge on cardiopulmonary resuscitation.

Section B: Literature related to attitude on cardiopulmonary resuscitation.

Section C: Literature related to practice on cardiopulmonary resuscitation.

Section D: Literature related to effectiveness of cardiopulmonary resuscitation through bystanders.

Section E: Literature related to effectiveness of teaching programme on cardiopulmonary resuscitation.

SECTION A: LITERATURE RELATED TO KNOWLEDGE ON CARDIOPULMONARY RESUSCITATION

Rahman., et al (2013) performed a multicenter controlled trial to determine the level of knowledge and attitude about resuscitation after cardiopulmonary resuscitation(CPR) training. The intervention group received a lecture, demonstration, pamphlet and one hour practical session on cardiopulmonary resuscitation training. The control group was given a placebo in order to avoid the learning effect. The maximum knowledge and attitude scores were 72 and 28, respectively. Results showed that mean knowledge and attitude scores of the intervention and control groups had a significant difference with regard to time. The knowledge and attitude levels of secondary school children were shown to be better prior to the intervention. This proved that cardiopulmonary resuscitation training program had improved the

knowledge and attitude of trained samples significantly when compared with those who had never been trained.

Boddu., et al (2012) assessed the level of knowledge and experience about cardiopulmonary resuscitation among oral and maxillofacial surgeons. In this cross-sectional study, a total of 96 professionals were surveyed using a self-administered structured questionnaire and were pretested through a pilot survey.78% of oral surgeons had received training on cardiopulmonary resuscitation but only 52% had proper practical knowledge of performing it. Findings showed that practical knowledge on performing cardiopulmonary resuscitation remained low.

Wien,Klin., et al (2010) evaluated the extent of knowledge about cardiopulmonary resuscitation in lay population. A cross-sectional telephonic interview was performed. Nearly 70% of subjects had attended courses on cardiopulmonary resuscitation. Less than 50% of the subjects knew that cardiopulmonary resuscitation includes rescue breathing (47%) and chest compressions (44.6%). Appropriate site and strength for chest compressions were stated as 37.6% and 13%, respectively. The authors concluded that the lay public had poor knowledge on cardiopulmonary resuscitation. Knowledge was better in trained versus untrained individuals.

Marco., et al (2008) investigated the knowledge and opinions of the lay persons regarding cardiopulmonary resuscitation. Validated multisite community-based cross-sectional survey design was used. Among 1831 study participants mean of predicted chance for survival following cardiac arrest was 54%, and estimated duration of resuscitative efforts in the emergency department was 28 minute. The investigator concluded that inaccurate perceptions regarding resuscitation and survival rates existed among the lay public.

Pane., et al (1987) studied the knowledge of basic aspects of cardiopulmonary resuscitation practice, characteristics of training areas in need of improvement to increase cardiopulmonary resuscitation competence. Using a telephonic survey, 390 residents of large country were interviewed. Results proved a low prevalence of current training and lack of basic cardiopulmonary resuscitation knowledge. Results suggested the need for a standardized, widespread cardiopulmonary resuscitation program.

SECTION B: LITERATURE RELATED TO ATTITUDE ON CARDIOPULMONARY RESUSCITATION

Bogle, B., et al (2013) quantified knowledge and attitudes regarding cardiopulmonary resuscitation among students. Online survey was conducted. Two sixty seven students responded to the survey. Almost all respondents could identify cardiopulmonary resuscitation (98.5%). But only 46.1% could indicate the basic mechanism of cardiopulmonary resuscitation. This proves that knowledge and attitude regarding cardiopulmonary resuscitation was low.

Chen., et al (2010) investigated the awareness and attitudes of students towards cardiopulmonary resuscitation in China. 3500 students were selected randomly according to the stratified cluster sampling technique. 28% respondents reported that they had heard and 27% reported that they had studied about cardiopulmonary resuscitation and nearly 3% of the respondents had attended a cardiopulmonary resuscitation course. Most respondents expressed a desire to learn cardiopulmonary resuscitation (77%) and were willing to disseminate cardiopulmonary resuscitation (73%). The study concluded that the lack of effective training programme on cardiopulmonary resuscitation had decreased the knowledge and attitude of students.

Yousef, A., et al (2008) conducted a study to assess the knowledge and attitudes of students towards cardiopulmonary resuscitation. Cross sectional survey was done. Data was collected via self administered questionnaire. It was found out that the overall attitude towards cardiopulmonary resuscitation was positive and the knowledge on the topic was insufficient.

Zamperetti., et al (2007) performed a study to evaluate hospital health care workers attitudes towards cardiopulmonary resuscitation. A sample of 4903 health care workers participated in study. The result showed a great variation in responses among various health care workers; depending on profession, experienced area and working characteristics. The study concluded that communication among health care workers is essential, in order to take the appropriate decision for every patient, and also the need for continuous educational programs on cardiopulmonary resuscitation.

A study was conducted to assess attitudes towards the performance of bystander cardiopulmonary resuscitation. A total of 4223 individuals were assessed using structured

questionnaire, including high school students, teachers, emergency medical personnel's, nurses and medical students. Only 5-30% of high school students, teachers and medical personnel's were willing to perform chest compression plus mouth to mouth ventilation, especially on a stranger or on a trauma victim. The study result showed that most lay people and health care providers were unlikely to perform chest compression plus mouth to mouth ventilation, especially on a stranger or on a trauma victim. **Taniguchi., et al (2007)**

Parnell., et al (2006) assessed the attitude and knowledge towards cardiopulmonary resuscitation among high-school students in New Zealand. Questionnaires were administered to 494 students aged between 16 and 17 years. Findings suggested that although most high-school students were willing and motivated to learn cardiopulmonary resuscitation, a smaller percentage of students had a negative attitude towards cardiopulmonary resuscitation.

SECTION C: LITERATURE RELATED TO PRACTICE ON CARDIOPULMONARY RESUSCITATION

Baird., et al (2013) conducted a study on attitudes and practices regarding cardiopulmonary resuscitation in emergency departments. Survey method was used. Most respondents agreed that survival rates after cardiopulmonary resuscitation were poor. However, 41.2% of respondents had performed cardiopulmonary resuscitation more than 10 times in the past 3 years despite expected futility.

Savastano., et al (2011) investigated the number of lay rescuers, capable of performing cardiopulmonary resuscitation, and to analyse their impending fears. Data was collected using questionnaires. A total of 1000 questionnaires were analysed. This descriptive study demonstrated that the percentage that would really perform cardiopulmonary resuscitation was too low, particularly in case of a child.

Kuramoto., et al (2008) conducted a study on public perception of cardiopulmonary resuscitation and willingness to perform bystander cardiopulmonary resuscitation. A total of 1132 persons were selected randomly. Among this only 12% of the study participants were willing to attempt cardiopulmonary resuscitation for their families and friends, and 8% were willing to perform bystander cardiopulmonary resuscitation for strangers. The researcher concluded that the bystanders were willing to attempt cardiopulmonary resuscitation only in view of their family members.

Donohoe., et al (2006) conducted a study on lay persons perceptions and understanding of myocardial infarction, cardiac arrest and cardiopulmonary resuscitation. A quantitative interview survey was conducted with thousand samples. Result showed that only few participants had received cardiopulmonary resuscitation training, and most of them were hesitant to perform the procedure on a stranger. They concluded that awareness and knowledge of cardiopulmonary resuscitation, and reactions to cardiac emergencies, was improved by training on cardiopulmonary resuscitation.

Celenza., et al (2002) aimed to determine community competence in cardio pulmonary resuscitation. A cross sectional telephone survey for eight hundred samples was carried out. About 100 samples performed a practical demonstration of cardiopulmonary resuscitation within a simulated cardiac arrest scenario. Performance of cardiopulmonary resuscitation was evaluated by two evaluators using pre-determined criteria. Of all subjects, 64% had been trained in cardiopulmonary resuscitation. Thus study provided a comprehensive data that training on cardiopulmonary resuscitation would improve the practice.

SECTION D: LITERATURE RELATED TO EFFECTIVENESS OF CARDIOPULMONARY RESUSCITATION THROUGH BYSTANDERS

Bobrow., et al (2010) supported the effectiveness of cardiopulmonary resuscitation by investigating survival of patients with out-of-hospital cardiac arrest after compression-only cardiopulmonary resuscitation with conventional cardiopulmonary resuscitation. A five year observational cohort study of survival in patients with out-of-hospital cardiac arrest was done. The relationship between layperson bystander cardiopulmonary resuscitation and survival was evaluated using multivariable logistic regression technique. Among patients with out-of-hospital cardiac arrest, compression-only cardiopulmonary resuscitation was associated with increased survival compared with traditional cardiopulmonary resuscitation and no bystander cardiopulmonary resuscitation.

A study was conducted to characterize the quality of chest compressions performed by hospital personnel to determine the effects of audiovisual feedback on chest compression performance. Seven hundred and fifty four individuals participated in a cardiopulmonary resuscitation quality improvement challenges in 30 US hospitals. Participants performed 2 minute of chest compressions on a manikin. Real-

time audiovisual feedback was disabled. A subset of participants performed a second trial of chest compression with the audiovisual feedback prompts activated. They concluded that the quality of chest compressions could be improved with use of cardiopulmonary resuscitation feedback technologies. **Mary Ann., et al (2009)**

William., et al (2006) conducted a simulation trial of traditional dispatcher-assisted cardiopulmonary resuscitation versus compressions-only dispatcher-assisted cardiopulmonary resuscitation. Randomized-controlled simulation study used a convenience sampling technique. A cardiac arrest scenario was presented to study participants who were provided with one of two sets of telephonic cardiopulmonary resuscitation instructions. One group received traditional cardiopulmonary resuscitation instructions and the second group received compression only cardiopulmonary resuscitation instructions. Subjects performed cardiopulmonary resuscitation on a Laerdal Resusci-Anne cardiopulmonary resuscitation manikin and recording strips were analyzed for frequency and quality. Researcher concluded that bystander resuscitation may be more efficient when ventilations were excluded from the cardiopulmonary resuscitation sequence.

Herlit., et al (2005) studied on the efficacy of bystander cardiopulmonary resuscitation. This survey evaluated the impact on survival of no bystander cardiopulmonary resuscitation, lay bystander cardiopulmonary resuscitation and professional bystander cardiopulmonary resuscitation. Among persons suffering an out-of-hospital cardiac arrest, bystander cardiopulmonary resuscitation by lay persons (excluding health care professionals) was associated with an increased chance of survival. Furthermore, there was a distinction between lay persons and health care providers; survival was higher when the latter perform bystander cardiopulmonary resuscitation. Thus they concluded that patients who received lay bystander cardiopulmonary resuscitation and professional bystander cardiopulmonary resuscitation had an increased chance of survival than patients received no cardiopulmonary resuscitation.

A study was conducted to assess the relationship between effectiveness of cardiopulmonary resuscitation by bystander and survival rates following out-of-hospital cardiac arrest. Prospective observational cohort design was adopted. A total of 2071 consecutive samples participated in the study. Trained personnels assessed the quality of

bystander cardiopulmonary resuscitation on arrival at the scene. They concluded that the association between bystander cardiopulmonary resuscitation and survival rates in out-of-hospital cardiac arrest appears to be influenced by cardiopulmonary resuscitation quality. Effective cardiopulmonary resuscitation is independently associated with a quantitatively and statistically significant improvement in survival. **Gallagher., et al (1995)**

Wik., et al (1994) evaluated the effectiveness of quality bystander cardiopulmonary resuscitation on hospital discharge rates for patients after out-of-hospital cardiac arrests. The results showed a hospital discharge rate of 23% with good bystander cardiopulmonary resuscitation compared with a 1% discharge rate with bad bystander cardiopulmonary resuscitation and a 6% discharge rate with no bystander cardiopulmonary resuscitation. Thus they concluded that good bystander cardiopulmonary resuscitation was associated with a much higher discharge rate from hospital after prehospital cardiac arrest.

Van Hoeyweghen., et al (1993) conducted a study to evaluate whether long-term survival from cardiac arrest was negatively influenced by bad quality cardiopulmonary resuscitation compared to no bystander cardiopulmonary resuscitation. Results showed that patients given correct cardiopulmonary resuscitation had a better long term survival than patients received bad quality cardiopulmonary resuscitation.

SECTION E: LITERATURE RELATED TO EFFECTIVENESS OF TEACHING PROGRAMME ON CARDIOPULMONARY RESUSCITATION

A study was conducted to assess the effectiveness of various teaching techniques adopted for the practical session of cardiopulmonary resuscitation. Three groups were defined according to grade point average (GPA) and different teaching methods. Group one was taught using images and power point slides. Group two was taught using videos and power point slides. Group three was taught using power point slides with white boards and videos. Questionnaire was used to assess the students' understanding of cardiopulmonary resuscitation session. Data were analyzed using the, SPSS version 13. Twenty-eight students had participated in this study. Final evaluation revealed that students belonging to group three had a better knowledge of cardiopulmonary resuscitation than the other two groups. Note

taking during the lecture and using traditional chalkboard in teaching were found effective in improving the students' understanding and learning of cardiopulmonary resuscitation. **Reder., et al (2006)**

Roh., et al (2013) conducted a study to test out the efficacy of training students in cardiopulmonary resuscitation. Four different methods of teaching cardiopulmonary resuscitation on students were used. Cardiopulmonary resuscitation skills were tested on simulated manikin at the end of the initial course and again at the end of the semester in order to identify short and long-term retention of skills between the test group and the control group .The study concluded that demonstration and video assisted teaching were most effective methods of teaching cardiopulmonary resuscitation.

A study was conducted to assess the effectiveness of a 30-min cardiopulmonary resuscitation self-instruction program for lay responders. Randomized control design was used. Two hundred and eighty-six adults between 40 and 70 years who hadn't received cardiopulmonary resuscitation training within the past six years were included in an untrained control group. Basic cardiopulmonary resuscitation skills were evaluated by instructor assessment and by a manikin. Subjects received video self instruction had a better overall performance than heart saver subjects. Older adults learned the fundamental skills of cardiopulmonary resuscitation with this training program in a short period of time. Thus they concluded that if properly distributed, video self instruction training could produce a markable improvement in the number of lay responders who are able to perform cardiopulmonary resuscitation. **Lynch., et al (2005)**

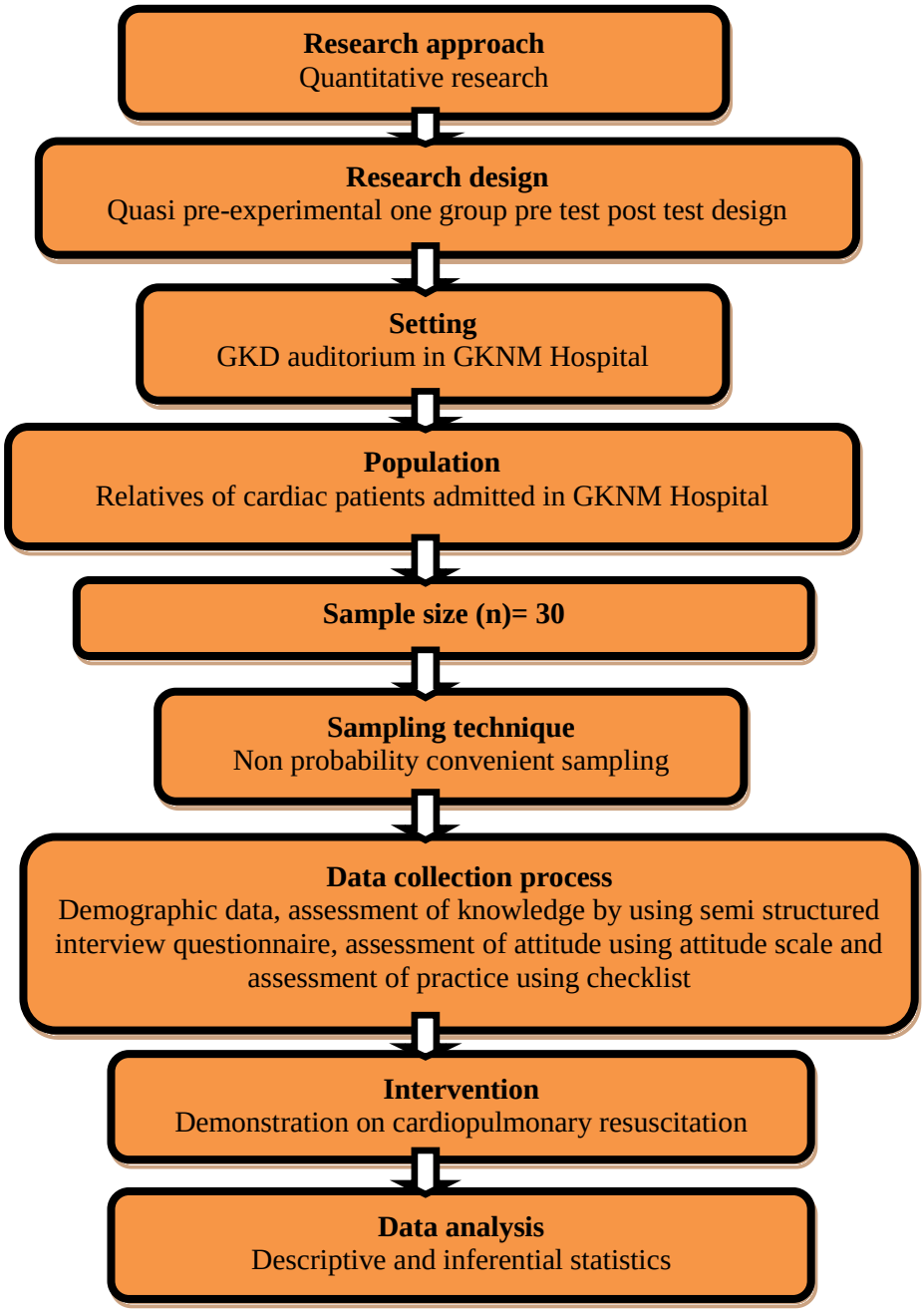
Leben., et al (2005) evaluated new instructional methods for teaching cardiopulmonary resuscitation. A cluster-controlled trial of 3 instructional interventions was carried out. Two instructional methods were examined. Computer training and computer training plus hands-on practice, which was compared with traditional classroom instruction along with video, teacher demonstration and hands-on practice of cardiopulmonary resuscitation, and with a control group. They assessed the knowledge and performance of cardiopulmonary resuscitation. It was evidenced that the computer based self instruction was sufficient to teach cardiopulmonary resuscitation.

CHAPTER-III

METHODOLOGY

Research methodology is the systematic way to solve the research problem. Methodology enables the researcher to project a blue print of the research undertaken.

FIGURE 3.1: SCHEMATIC REPRESENTATION OF THE RESEARCH METHODOLOGY



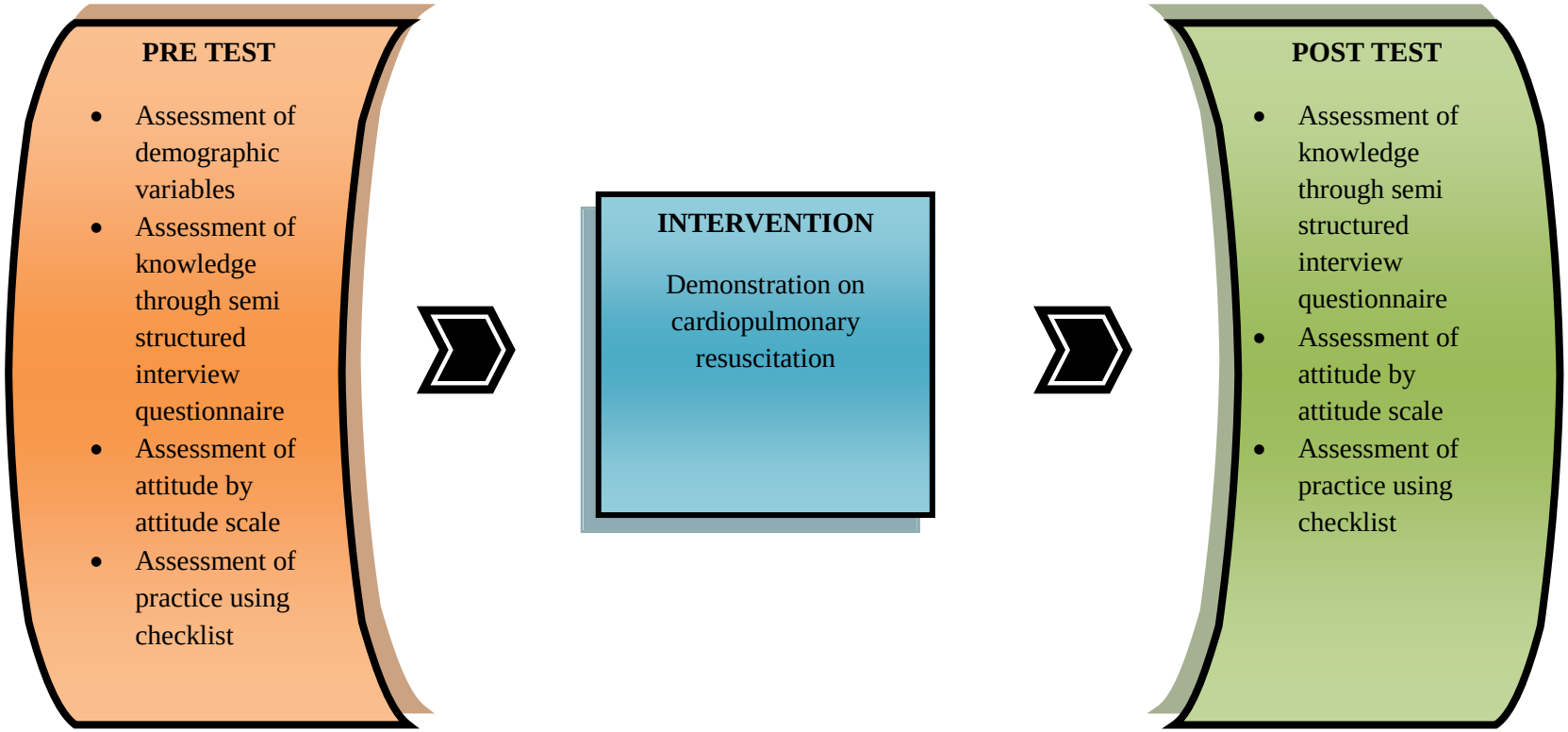
RESEARCH APPROACH

Quantitative research approach was selected to assess the effectiveness of cardiopulmonary resuscitation demonstration on knowledge, attitude and practice of relatives on cardiopulmonary resuscitation.

RESEARCH DESIGN

The research design provides an overall plan for conducting the study. Quasi pre-experimental one group pretest posttest design was used for this study. Knowledge; attitude and practice were assessed during pre test. The pre-test score was used as a base to compare with the post test score. The post test score represent the effectiveness of demonstration on cardiopulmonary resuscitation.

FIGURE 3.2: SCHEMATIC REPRESENTATION OF RESEARCH DESIGN



VARIABLES

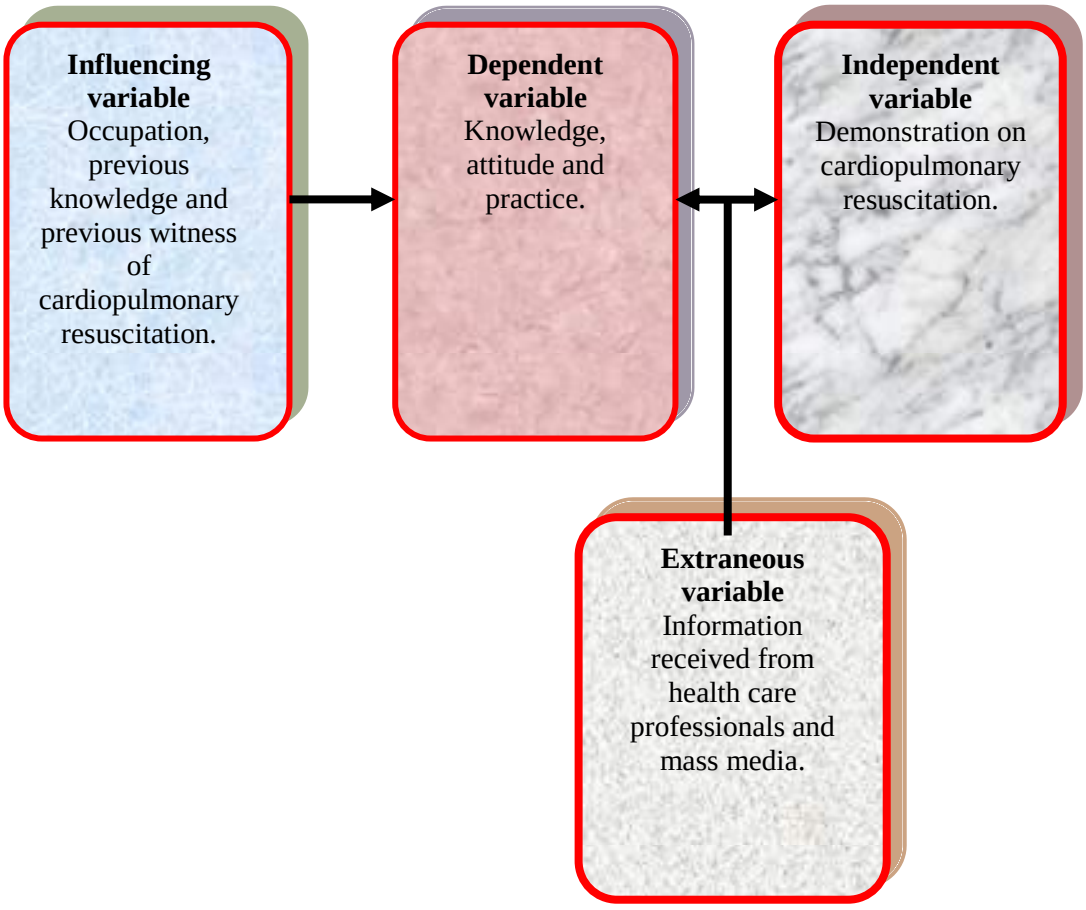
Influencing variable: Occupation, previous knowledge and previous witness of cardiopulmonary resuscitation.

Independent variable: Demonstration on cardiopulmonary resuscitation.

Dependent variable: Knowledge, attitude and practice.

Extraneous variable: Information received from health care Professionals and mass media.

FIGURE 3.3: SCHEMATIC REPRESENTATION OF VARIABLES



SETTING OF THE STUDY

This study was conducted in GKD auditorium of G. Kuppuswamy Naidu Memorial Hospital, Coimbatore, which is a super specialty tertiary care centre.

POPULATION

The population comprised of relatives of cardiac patients awaited in GKNM Hospital.

SAMPLE SIZE

The sample size was determined, by using **Mahajan's** formula

Sample size (n) = $4Pq/ L^2$

P = Percentage of population

q = 100 – P

L= Allowable error

P=450/5400×100 = 8.3

q=100-8.3 =91.7

L=10

Sample size (n)=4×8.3×91.7/100

=30.44

According to this formula, it was decided to select 30 samples for this study.

SAMPLING TECHINIQUE

Non probability convenient sampling technique was adopted for the study.

SAMPLING CRITERIA

Inclusion criteria

- Relatives of cardiac patients awaited in cardiac wards.
- Relatives who were willing to redemonstrate cardiopulmonary resuscitation procedure.
- Relatives of cardiac patients who understood Tamil or English

Exclusion criteria

- Relatives who were not competent to perform CPR.

- Relatives who may not be with patient on an emergency.

DESCRIPTION OF THE TOOL

The data collection tool consisted of four sections:

Section A: Demographic data

It comprised of demographic variables of subjects which included age, sex, education, religion, occupation, previous knowledge on cardiopulmonary resuscitation and previous witness of cardiopulmonary resuscitation.

Section B: Semi Structured interview questionnaire to assess knowledge regarding cardiopulmonary resuscitation

The knowledge questionnaire consisted of 20 questions. The correct answer was scored as '1' and the wrong answer as '0'.

Interpretation of knowledge scores

0-6 : Poor knowledge.

7-13 : Fair knowledge.

14-20 : Good knowledge.

Section C: Attitude scale to assess the relatives attitude on cardiopulmonary resuscitation

It consisted of ten statements, with five positive and five negative scores. The total attitude scale score was 50.

Interpretation of attitude scale

<50% : Unfavourable

50-75% : Moderately favourable

>75% : Favourable

Section D: Checklist to assess the practice of cardiopulmonary resuscitation

The practice checklist consisted of 15 steps.Score '1' was given for each right performance. '0' score was given if the steps went wrong.

Interpretation of practice scores

<4 : Poor

4-7 : Moderate

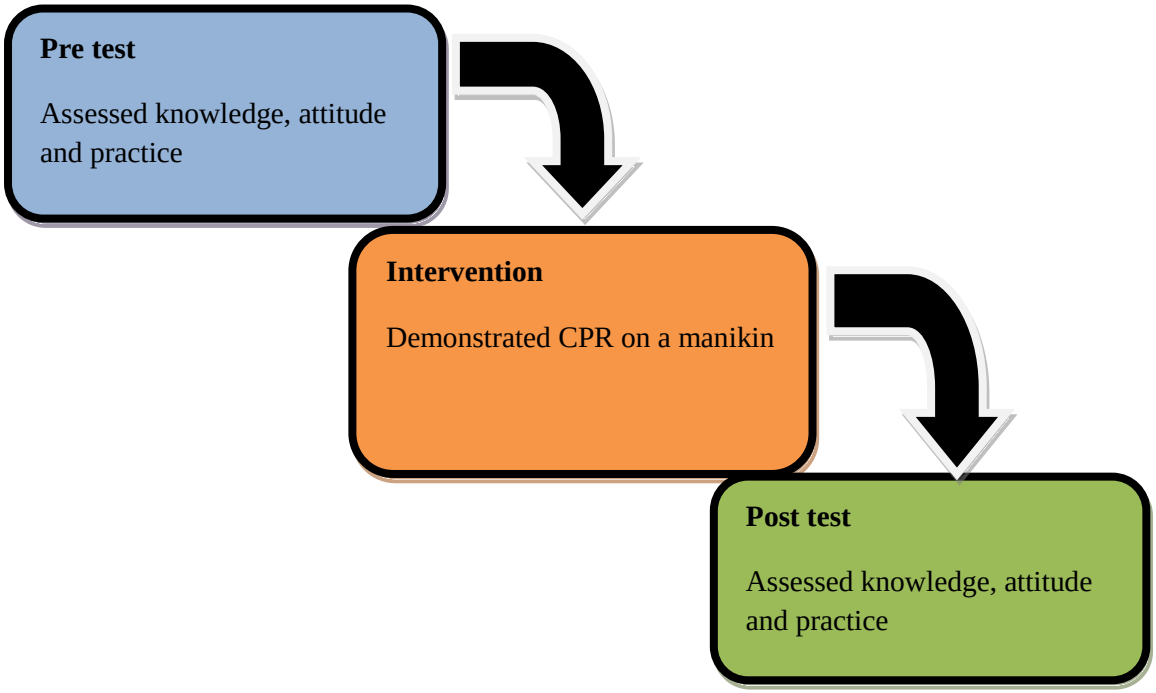
8-11 : Good

11-15 : Excellent

DESCRIPTION OF THE INTERVENTION

Demographic data was collected from the participants after obtaining the informed consent. Semi structured interview questionnaire was used to assess the knowledge, attitude scale for the attitude and a checklist was used to assess the practice. After the pretest, demonstration on cardiopulmonary resuscitation was performed. Post test was conducted immediately after the intervention on knowledge, attitude and practice regarding cardiopulmonary resuscitation.

FIGURE 3.4: SCHEMATIC REPRESENTATION OF INTERVENTION



VALIDITY

The tool was submitted for content validity to experts in the field of cardiology and medical surgical nursing departments in and around Coimbatore. Tamil version was also validated by the experts. Based on the suggestions and recommendations the tool was finalized.

RELIABILITY

Reliability of the research instrument is defined as the extent to which an instrument yields the same results on different measurements. It is then concerned with consistency, accuracy, precision, stability, equivalence and homogeneity (**Kothari CR., 1996).**

The reliability of the tool was determined by the Spearman Brown's Split-Half technique showing r=0.89 for knowledge questionnaire, r=0.99 for attitude scale and r=0.98 for checklist. Hence the tool was found highly reliable.

Reliability was computed by the following equation $r = \frac{\Sigma (X - \bar{X})(Y - \bar{Y})}{\sqrt{\Sigma (X - \bar{X})^2 (Y - \bar{Y})}}$

ETHICAL CONSENT

Consent to conduct the study was obtained from the research committee and the authorities concerned from the hospital administration. Informed oral consent was obtained from the study subjects. Confidentiality was maintained throughout the study.

PILOT STUDY

Pilot study was conducted in GKD auditorium for a period of two weeks from 15.07.2013 to 26.07.2013. Six samples were selected by convenient sampling technique. After obtaining the informed consent the demographic data was collected from the participants. Semi structured interview questionnaire was used to assess the knowledge, attitude scale to assess attitude and checklist was used to assess the practice. The result showed that demonstration on cardiopulmonary resuscitation had improved the knowledge, attitude and practice of study participants regarding cardiopulmonary resuscitation. Upon the completion of pilot study the feasibility and practicability of the tool was assessed. Based on the pilot study results necessary changes were made.

DATA COLLECTION PROCEDURE

Data were collected every day during data collection period from 29.07.2013 to 24.08.2013 in GKD auditorium of G. Kuppuswamy Naidu Memorial Hospital, from 8am to 4pm, among the relatives of patients awaited near ICCU and in ward 14. Cardiopulmonary resuscitation was demonstrated to study participants after administering pretest. Posttest was conducted immediately after the intervention.

PLAN FOR DATA ANALYSIS

Descriptive and Inferential Statistics were used for analyzing the data

- Frequency and percentage distribution were used to assess the demographic variables.
- Paired ‘t’ test was used to compare the pretest and posttest knowledge, attitude and practice levels.
- Chi-square test was used to assess the association between the level of knowledge, attitude, practice and demographic variables.

CHAPTER-IV

ANALYSIS AND INTERPRETATION

Analysis is defined as the process of systematically applying statistical and logical techniques to describe, summarise and compare the data. **(Suresh K Sharma, 2011).**This chapter deals with the analysis and interpretation of data collected from 30 samples. The findings were based on descriptive and inferential statistics and described as follows:

Table 4.1: Distribution of demographic variables among relatives of cardiac patients.

Table 4.2: Distribution of pretest and posttest levels of knowledge on cardiopulmonary resuscitation (CPR) among relatives of cardiac patients.

Table 4.3: Distribution of pretest and posttest levels of attitude on cardiopulmonary resuscitation among relatives of cardiac patients.

Table 4.4: Distribution of pretest and posttest levels of practice on cardiopulmonary resuscitation among relatives of cardiac patients.

Table 4.5: Comparison between mean pretest and posttest levels of knowledge on cardiopulmonary resuscitation among relatives of cardiac patients.

Table 4.6: Comparison between mean pretest and posttest levels of attitude on cardiopulmonary resuscitation among relatives of cardiac patients.

Table 4.7: Comparison between mean pretest and posttest levels of practice of cardiopulmonary resuscitation among relatives of cardiac patients.

Table 4.8: Association of pretest levels of knowledge with selected demographic variables among relatives of cardiac patients.

Table 4.9: Association of pretest levels of attitude with selected demographic variables among relatives of cardiac patients.

Table 4.10: Association of pretest levels of practice with selected demographic variables among relatives of cardiac patients.

TABLE 4.1: DISTRIBUTION OF DEMOGRAPHIC VARIABLES AMONG RELATIVES OF CARDIAC PATIENTS

n=30

SL no	Demographic variables		Frequency (f)	Percentage (%)
1	Age	a)20-30 b)30-40 c)40-50	7 8 15	23 27 50
2	Sex	a)Male b)Female	15 15	50 50
3	Education	a)Primary b)Secondary c)Higher secondary d)Undergraduate e)Postgraduate	5 6 6 10 3	17 20 20 33 10
4	Religion	a)Hindu b)Christian c)Muslim	25 1 4	83 3 13
5	Occupation	a)Medical/Paramedical b)Others	1 29	3 97
6	Previous knowledge on CPR	a)Present b)Absent	5 25	17 83
7	Previous witness of CPR	a)Present b)Absent	1 29	3 97

Table 4:1 reveals the distribution of demographic variables.

Age: It reveals that out of 30 samples 50% belonged to age group of 40-50 yrs, 8% belonged to age group of 30-40 years and 7% belonged to age group of 20-30 years.

Sex: It reveals that 50% of total samples were males.

Education: In this study samples 33% were undergraduates and 10% were post graduates.

Religion: With respect to religion 83% of them were hindus, 13% were muslims and 3% were Christians.

Occupation: 97% belonged to the non medical profession and 3% belonged to medical profession.

Previous knowledge on CPR: Among the 30 samples 83% had previous knowledge of cardiopulmonary resuscitation and 25% had never heard about CPR.

Previous witness of CPR: 97% had never seen cardiopulmonary resuscitation procedure.

FIGURE 4.1: DISTRIBUTION OF PREVIOUS KNOWLEDGE REGARDING CPR AMONG RELATIVES OF CARDIAC PATIENTS

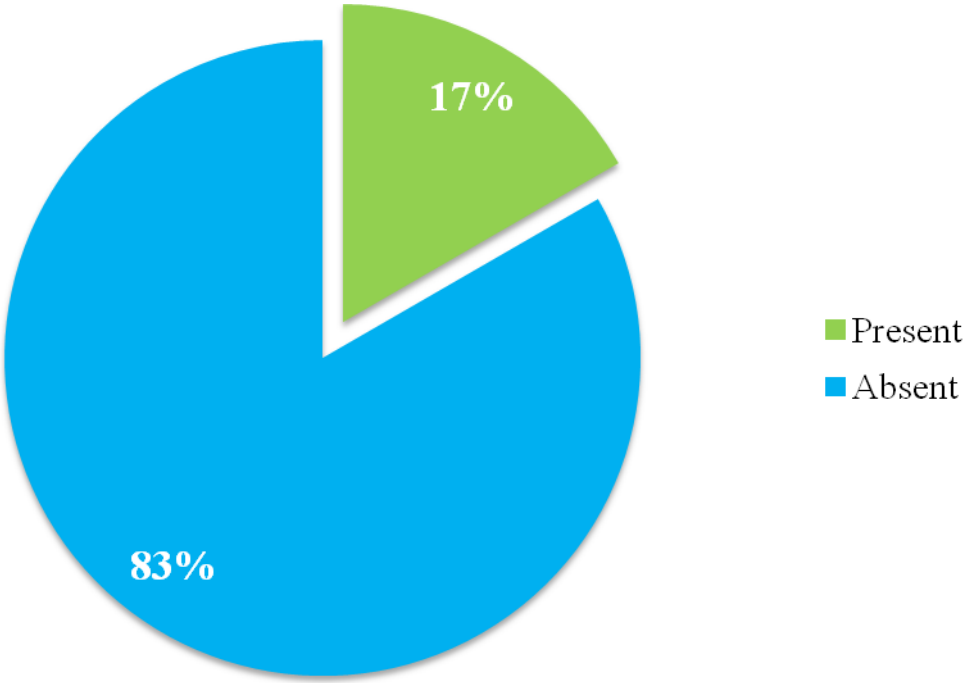


FIGURE 4.2: DISTRIBUTION OF PREVIOUS WITNESS OF CPR

AMONG RELATIVES OF CARDIAC PATIENTS

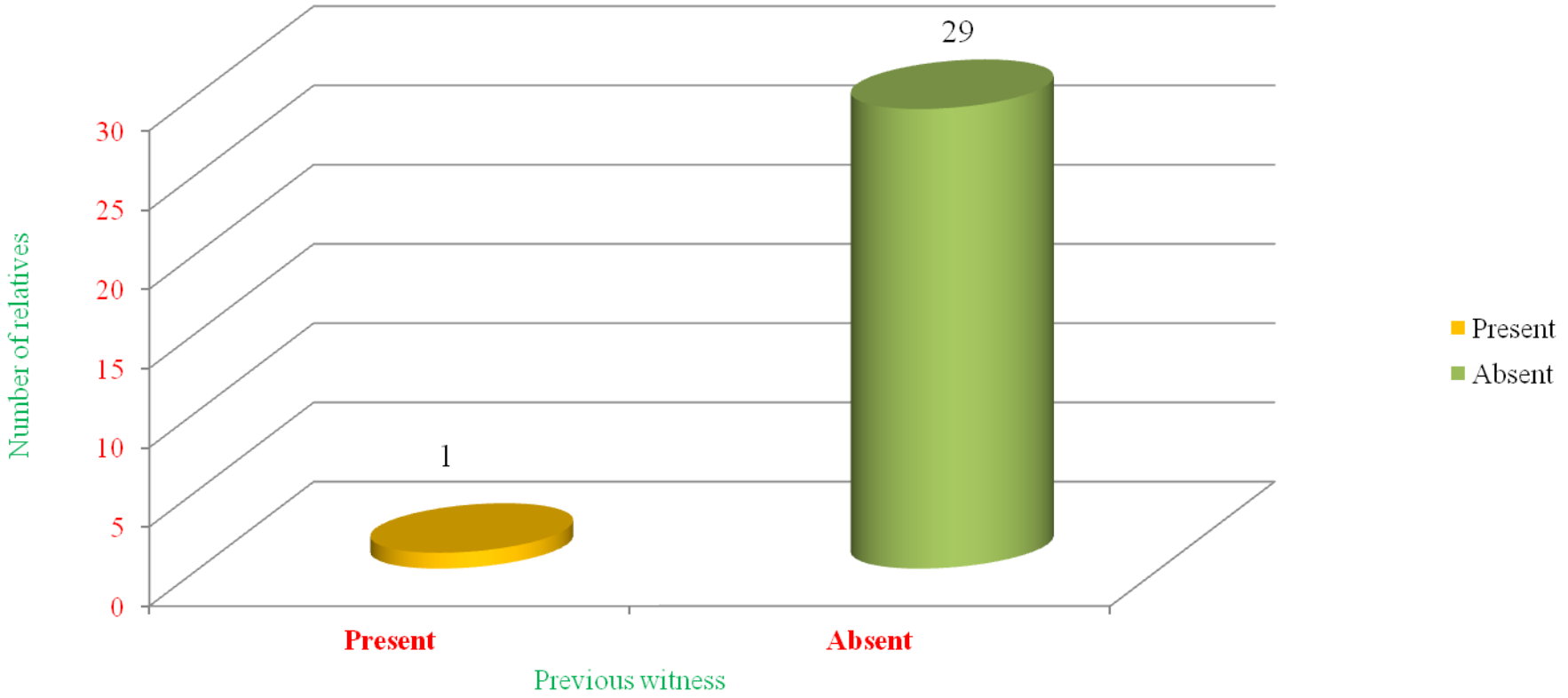


TABLE 4.2: DISTRIBUTION OF PRETEST AND POSTTEST LEVELS OF KNOWLEDGE ON CPR AMONG RELATIVES OF CARDIAC PATIENTS

n=30

Levels of knowledge	Pretest				Posttest			
	f	**%**	**Mean**	**SD**	**f**	**%**	**Mean**	**SD**
Poor knowledge (0-6)	14	47	6.97	3.36	0	0	16.7	2.15
Fair knowledge (7-13)	16	53			3	10		
Good knowledge (14-20)	0	0			27	90		

Table 4.2 reveals that in pretest 14 samples (47%) had poor knowledge and 16 (53%) of them had fair knowledge. Mean score was 6.97 with SD of 3.36.In posttest no samples (0%) had poor knowledge 3(10%) of them had fair knowledge and 27(90%) had good knowledge. Mean score was 16.7 with SD of 2.15.

TABLE 4.3: DISTRIBUTION OF PRETEST AND POSTTEST LEVELS OF ATTITUDE ON CPR AMONG RELATIVES OF CARDIAC PATIENTS

n=30

Levels of Attitude	**Pretest**				**Posttest**			
	f	**%**	**Mean**	**SD**	**f**	**%**	**Mean**	**SD**
Unfavourable attitude (<50%)	10	33	27.9	6.71	0	0	38	4.67
Moderately favourable attitude (50%-75%)	17	57			14	47		
Favourable attitude (>75%)	3	10			16	53		

Table 4.3: reveals that out of 30 samples 10(33%) of them had unfavourable attitude, 17(57%) of them had moderately favourable attitude and 3(10%) of them had favourable attitude.Mean score was 27.9 with a SD of 6.71. In posttest out of 30 samples 14(47%) of them had moderately favourable attitude, 16(53%) of them had favourable attitude. Mean score was 38 with a SD of 4.67.

TABLE 4.4: DISTRIBUTION OF PRETEST AND POSTTEST LEVELS OF PRACTICE OF CPR AMONG RELATIVES OF CARDIAC PATIENTS

n=30

Levels of Practice	**Pretest**				**Posttest**			
	f	**%**	**Mean**	**SD**	**f**	**%**	**Mean**	**SD**
Excellent practice (12-15)	0	0	0	0	29	97	13.7	0.86
Good practice (8-11)	0	0			1	3		
Moderate practice (4-7)	0	0			0	0		
Poor practice (<4)	30	100			0	0		

Table 4.4 reveals that in pretest 30(100%) samples had poor practice with a mean and standard deviation of 0. In posttest 29(97%) samples had excellent practice and 1(3%) had good practice. Mean score was 13.7 with a SD of 0.86.

TABLE 4.5: COMPARISON BETWEEN MEAN PRETEST AND POSTTEST LEVELS OF KNOWLEDGE ON CPR AMONG RELATIVES OF CARDIAC PATIENTS

Group	Mean of differences	Combined SD	't' value	df	Table value
Pretest	9.73	5.51	15.35*	29	1.699
Posttest					

Note: df-Degrees of freedom * Level of significance-0.05

Table 4:5 shows the comparison between pretest and posttest scores of knowledge among relatives of cardiac patients. In this mean difference was 9.73, with the combined SD of 5.51.The calculated 't' value (15.35) was higher than the table value (1.699) with the degrees of freedom 29.Therefore there was significant difference in pretest and posttest knowledge scores.

TABLE 4.6: COMPARISON BETWEEN MEAN PRETEST AND POSTTEST LEVELS OF ATTITUDE ON CPR AMONG RELATIVES OF CARDIAC PATIENTS

Group	Mean of differences	Combined SD	't' value	df	Table value
Pretest	10.1	11.38	5.56*	29	1.699
Posttest					

Note: df-Degrees of freedom *Level of significance-0.05

Table 4:6. In this mean difference was 10.1, with the combined SD of 11.38.The calculated 't' value (5.56) was higher than the table value (1.69) with the degrees of freedom 29.Therefore there was significant difference in pretest and posttest attitude scores.

TABLE 4.7: COMPARISON BETWEEN MEAN PRETEST AND POSTTEST LEVELS OF PRACTICE ON CPR AMONG RELATIVES OF CARDIAC PATIENTS

Group	Mean of differences	Combined SD	't' value	df	Table value
Pretest	13.7	0.86	85.57*	29	1.699
Posttest					

Note: df-Degrees of freedom * Level of significance-0.05

Table 4:7 shows the comparison between pretest and posttest scores of practice among relatives of cardiac patients. In this mean difference was 13.7, with the combined SD of 0.86.The calculated 't' value (85.57) was higher than the table value (1.699) with the degrees of freedom 29.Therefore there was significant difference in pretest and posttest practice scores.

FIGURE 4.3: COMPARISON BETWEEN MEAN PRETEST AND POSTTEST LEVELS OF KNOWLEDGE ON CPR AMONG RELATIVES OF CARDIAC PATIENTS

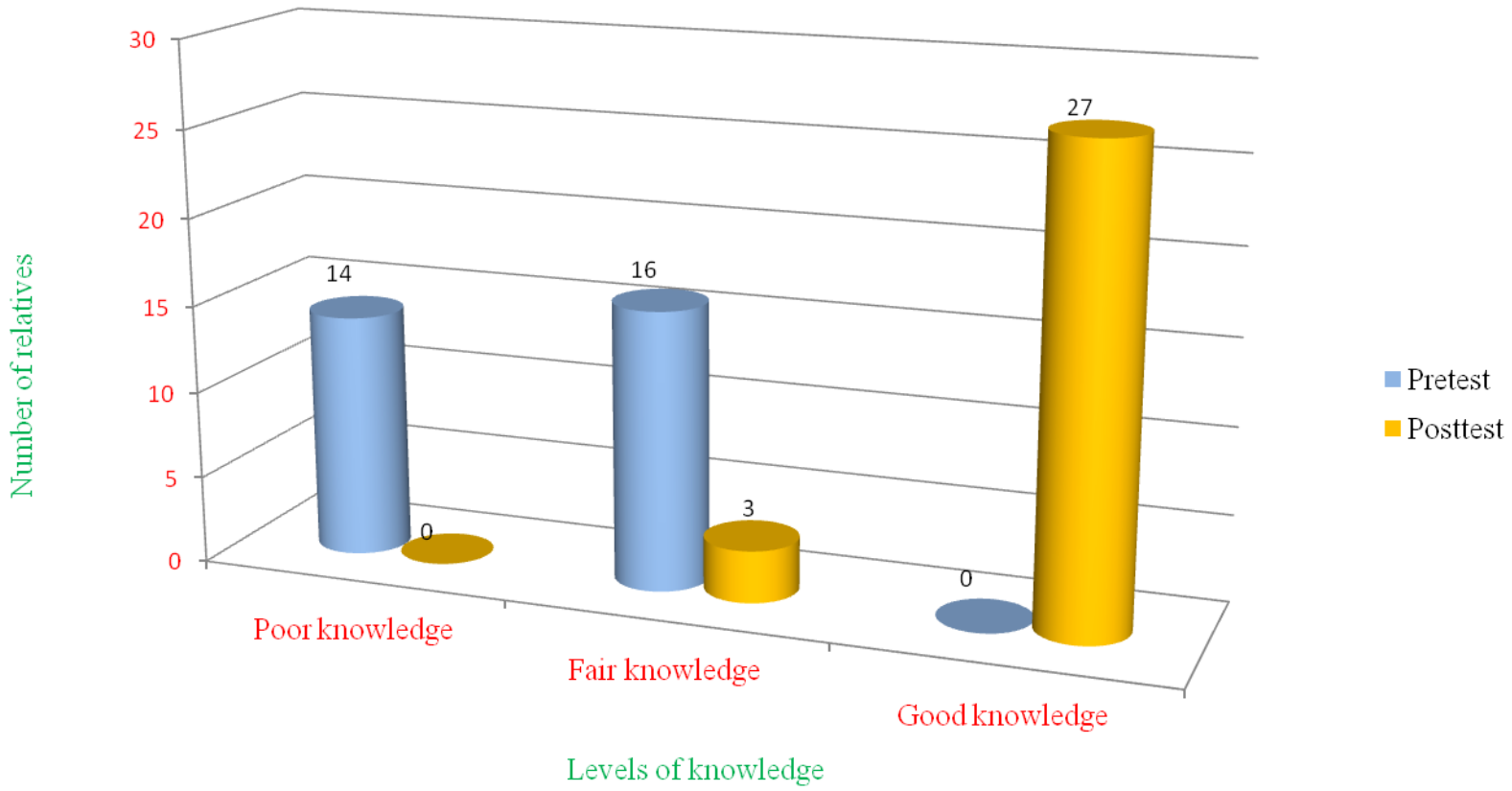


FIGURE 4.4: COMPARISON BETWEEN MEAN PRETEST AND POSTTEST LEVELS OF ATTITUDE ON CPR AMONG RELATIVES OF CARDIAC PATIENTS

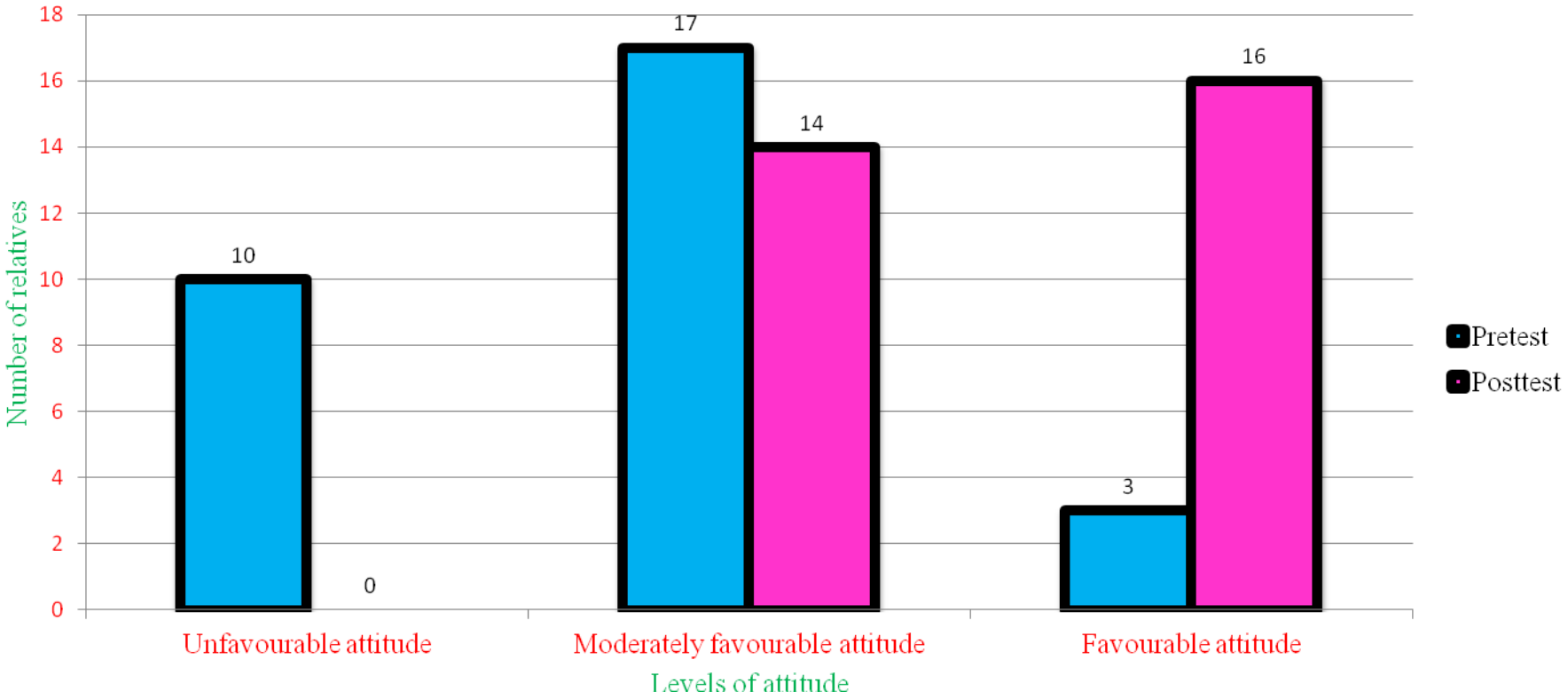


FIGURE 4.5: COMPARISON BETWEEN MEAN PRETEST AND POSTTEST LEVELS OF PRACTICE ON CPR AMONG RELATIVES OF CARDIAC PATIENTS

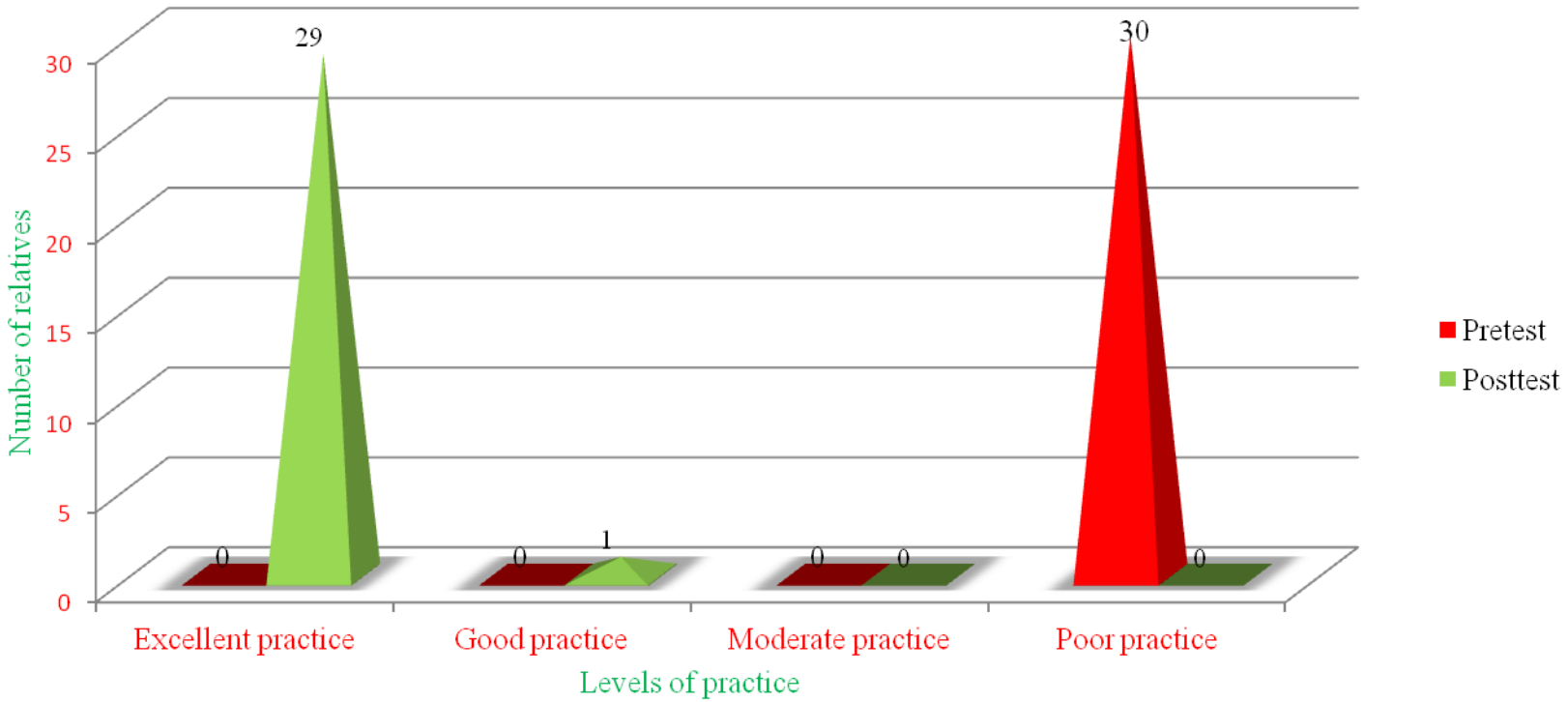


TABLE 4.8: ASSOCIATION OF PRETEST LEVELS OF KNOWLEDGE WITH SELECTED DEMOGRAPHIC VARIABLES AMONG RELATIVES OF CARDIAC PATIENTS

n=30

Sl. no	Demographic variables		Levels of knowledge			Chi square value	Table value (5%)
			Poor	Fair	Good		
1	Age	a)20-30 b)30-40 c)40-50	2 5 7	5 3 8	0 0 0	χ^2 =1.72 df=2	5.99 NS**
2	Sex	a)Male b)Female	7 7	8 8	0 0	χ^2=0 df=1	3.84 NS**
3	Education	a)Primary b)Secondary c)Higher secondary d)Undergraduate e)Postgraduate	4 2 2 5 1	1 4 4 5 2	0 0 0 0 0	χ^2=3.34 df=4	9.49 NS**
4	Religion	a)Hindu b)Christian c)Muslim	10 0 4	15 1 0	0 0 0	χ^2=5.89 df=2	5.99 NS**
5	Occupation	a)Medical/Paramedical b)Others	10 2	1 17	0 0	χ^2=0.68 df=1	3.84 NS**
6	Previous knowledge on CPR	a)Present b)Absent	2 12	3 13	0 0	χ^2=0.10 df=1	3.84 NS**
7	Previous witness of CPR	a)Present b)Absent	0 14	0 16	0 0	χ^2=0 df=1	3.84 NS**

NS** – Not Significant S*-- Significant

Table 4.8 shows the association of the pretest levels of knowledge with demographic variables among relatives of cardiac patients. Table reveals that age, sex, religion, education, occupation, previous knowledge of cardiopulmonary resuscitation and previous witness of cardiopulmonary resuscitation were not significant at 0.05.Therefore there was no association with pretest levels of knowledge among relatives of cardiac patients.

TABLE 4.9: ASSOCIATION OF PRETEST LEVELS OF ATTITUDE WITH SELECTED DEMOGRAPHIC VARIABLES AMONG RELATIVES OF CARDIAC PATIENTS

n=30

SL no	**Demographic variables**		**Levels of attitude**			**Chi square value**	**Table value (5%)**
			Unfavourable	**Moderately favourable**	**Favourable**		
1	Age	a)20-30 b)30-40 c)40-50	2 4 4	4 1 12	1 2 0	χ^2=8.88 df=4	9.49 NS**
2	Sex	a)Male b)Female	8 4	5 10	2 1	χ^2=3.33 df=2	5.99 NS**
3	Education	a)Primary b)Secondary c)Higher secondary d)Undergraduate e)Postgraduate	2 1 1 5 1	3 5 5 2 2	0 0 0 3 0	χ^2=11.84 df=8	15.5 NS**
4	Religion	a)Hindu b)Christian c)Muslim	7 0 3	15 1 1	3 0 0	χ^2=4.31 df=4	9.49 NS**

5	Occupation	a)Medical/Paramedical b)Others	0 10	0 17	1 2	χ^2=9.31 df=2	5.99 S*
6	Previous knowledge on CPR	a)Present b)Absent	1 9	3 14	1 2	χ^2=0.93 df=2	5.99 NS**
7	Previous witness	a)Present b)Absent	0 10	1 16	0 3	χ^2=0.79 df=2	5.99 NS**

NS** – Not Significant S*-- Significant

Table 4.9 shows the association of the pretest levels of attitude with demographic variables among relatives of cardiac patients.

The table shows the calculated chi square value of occupation was 9.31 with degrees of freedom of 2. The chi square value was higher than the table value (5.99).This was found to be statistically significant at 0.05.Therefore there was an association between the pretest levels of attitude and occupation among relatives of cardiac patients.

Table reveals that age, sex, religion, education, previous knowledge of cardiopulmonary resuscitation and previous witness of cardiopulmonary resuscitation were not significant at 0.05.Therefore there was no association with pretest levels of knowledge among relatives of cardiac patients.

TABLE 4.10: ASSOCIATION OF PRETEST LEVELS OF PRACTICE WITH SELECTED DEMOGRAPHIC VARIABLES AMONG RELATIVES OF CARDIAC PATIENTS

n=30

Sl. no	Demographic variables		Levels of practice				Chi square value	Table value
			Excellent	Good	Moderate	Poor		
1	Age	a)20-30 b)30-40 c)40-50	0 0 0	0 0 0	0 0 0	7 8 15	χ^2=0 df=6	12.6 NS**
2	Sex	a)Male b)Female	0 0	0 0	0 0	15 15	χ^2=0 df=3	7.81 NS**
3	Education	a)Primary b)Secondary c)Higher secondary d)Undergraduate e)Postgraduate	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	5 6 6 10 3	χ^2=0 df=12	21 NS**
4	Religion	a)Hindu b)Christian c)Muslim	0 0 0	0 0 0	0 0 0	25 1 4	χ^2=0 df=6	12.6 NS**
5	Occupation	a)Medical/Paramedical b)Others	0 0	0 0	0 0	1 29	χ^2=0 df=3	7.81 NS**
6	Previous knowledge on	a)Present b)Absent	0 0	0 0	0 0	5 25	χ^2=0 df=3	7.81 NS**

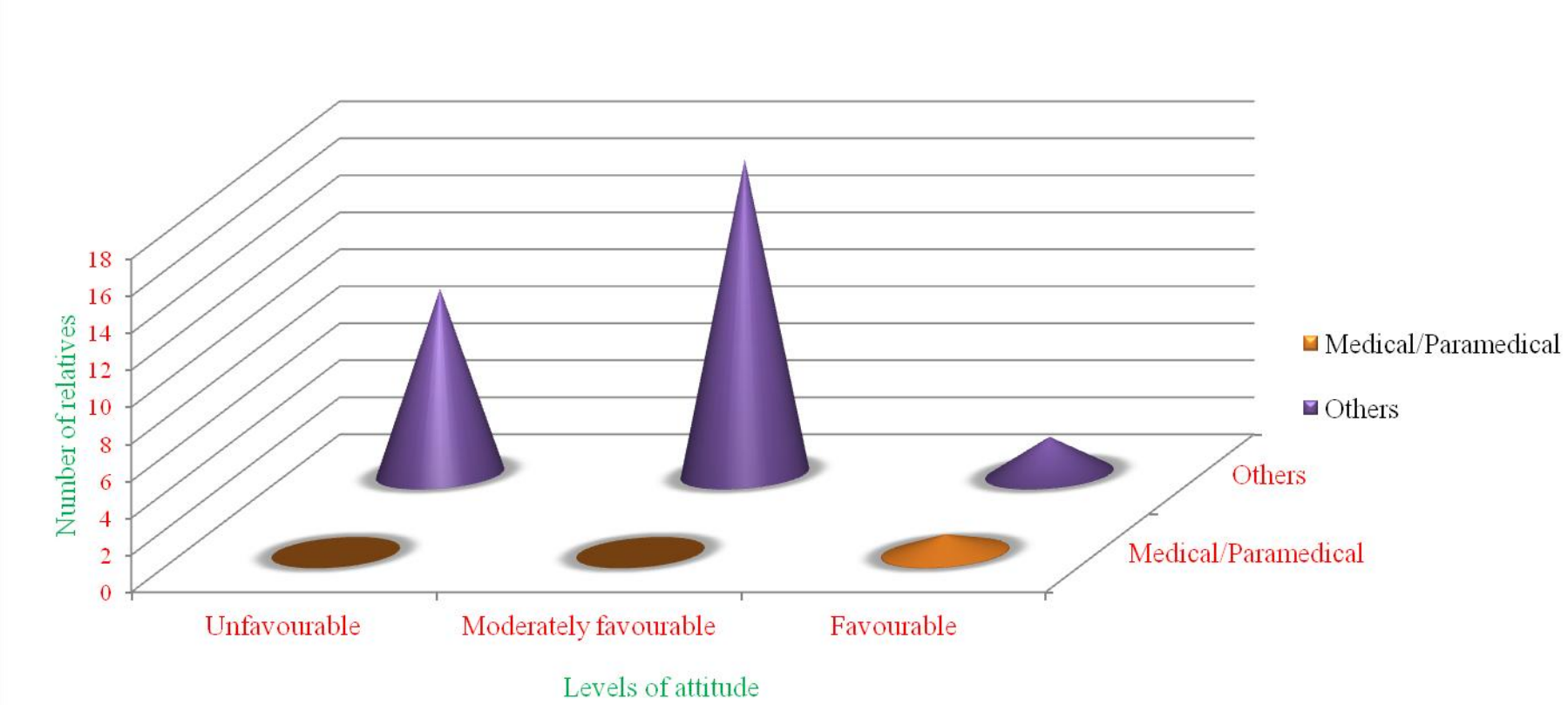
	CPR							
7	Previous witness of CPR	a)Present b)Absent	0 0	0 0	0 0	1 29	χ^2=0 df=3	7.81 NS**

NS** – Not Significant S*-- Significant

Table 4.10 shows the association of the pretest levels of practice with demographic variables among relatives of cardiac patients. Table reveals that age, sex, religion, education, occupation, previous knowledge of cardiopulmonary resuscitation and previous witness of cardiopulmonary resuscitation were not significant at 0.05.Therefore there was no association with pretest levels of practice among relatives of cardiac patients.

FIGURE 4.6:

ASSOCIATION OF PRETEST LEVELS OF ATTITUDE WITH OCCUPATION AMONG RELATIVES OF CARDIAC PATIENTS



CHAPTER-V

RESULTS AND DISCUSSION

The purpose of the study was to evaluate the effectiveness of cardiopulmonary resuscitation demonstration on knowledge, attitude and practice among relatives of cardiac patients.

The findings of the study have been discussed with reference to objectives as below:

1. To assess the level of knowledge, attitude and practice regarding cardiopulmonary resuscitation among relatives of cardiac patients.

Table 4.2 reveals that in pretest14 samples (47%) had poor knowledge 16 (53%) of them had fair knowledge. Mean score was 6.97 with SD of 3.36.

Table 4.3 reveals that in pretest out of 30 samples 10 (33%) had unfavourable attitude, 17 (57%) of them had moderately favourable attitude and 3 (10%) of them had favourable attitude.Mean score was 27.9 with a SD of 6.71.

Table 4.4 reveals that in pretest 30 (100%) samples had poor practice with a mean and standard deviation of 0.

Rajpakse., et al (2010) conducted a study to assess the knowledge of public regarding cardiopulmonary resuscitation. Telephonic survey regarding knowledge on cardiopulmonary resuscitation revealed that trained people had better knowledge on cardiopulmonary resuscitation than untrained people even though both of them had low knowledge levels.

Hisamuddin,Rahman., et al (2013) assessed the knowledge and attitude of public towards cardiopulmonary resuscitation. He found out that the knowledge and attitude of public was acceptable after an education programme on cardiopulmonary resuscitation.

2. To assess the effectiveness of cardiopulmonary resuscitation demonstration among relatives of cardiac patients.

Table 4.5 shows the comparison between pretest and posttest scores of knowledge among relatives of cardiac patients. In this mean difference was 9.73, with the combined SD of 5.51. The calculated‘t’ value (15.35) was higher than the table value (1.699) with the degrees of

freedom 29.Therefore there was significant difference in pretest and posttest scores of knowledge. This shows that demonstration on cardiopulmonary resuscitation was effective in improving knowledge on cardiopulmonary resuscitation.

Table 4.6 shows the comparison between pretest and posttest scores of attitude among relatives of cardiac patients. In this mean difference was 10.1, with the combined SD of 11.38.The calculated't' value (5.56) was higher than the table value (1.69) with the degrees of freedom 29. Therefore there was significant difference in pretest and posttest scores of attitude. This proves that demonstration on cardiopulmonary resuscitation was effective in improving attitude on cardiopulmonary resuscitation among relatives of cardiac patients.

Table 4.7 shows the comparison between pretest and posttest scores of practice among relatives of cardiac patients. In this mean difference was 13.7, with the combined SD of 0.86.The calculated 't' value (85.57) was higher than the table value (1.699) with the degrees of freedom 29. Therefore there was significant difference in pretest and posttest scores of practice. This concluded that demonstration on cardiopulmonary resuscitation was effective in improving practice on cardiopulmonary resuscitation among relatives of cardiac patients.

Stare., et al (2006) reported that education programme on cardiopulmonary resuscitation could provide both sound basic knowledge and adequate practice skill in cardiopulmonary resuscitation.

Robeiro., et al (2012) reported that hands on training on cardiopulmonary resuscitation was effective in improving knowledge and performance of cardiopulmonary resuscitation among school students.

Tahir, Mehmood, Khan., et al (2012) studied on different methods of teaching cardiopulmonary resuscitation. He concluded that demonstration of cardiopulmonary resuscitation was more effective in improving knowledge of people regarding cardiopulmonary resuscitation than lecture classes and video assisted teaching.

3. To determine the association between knowledge, attitude and practice score to selected demographic variables

Table 4.8 shows the association of the pretest levels of knowledge with demographic variables among relatives of cardiac patients. The variables such as age, sex, religion, education, occupation, previous knowledge of cardiopulmonary resuscitation and previous

witness of cardiopulmonary resuscitation were not significant at 0.05.Therefore there was no association with pretest levels of knowledge among relatives of cardiac patients.

Table 4.9 shows the association of the pretest levels of attitude with demographic variables among relatives of cardiac patients. The table shows the calculated chi square value of occupation was 9.31 with degrees of freedom of 2. The chi square value was higher than the table value (5.99).This was found to be statistically significant at 0.05.Therefore there was an association between the pretest levels of attitude and occupation among relatives of cardiac patients. Table reveals that age, sex, religion, education, previous knowledge of cardiopulmonary resuscitation and previous witness of cardiopulmonary resuscitation were not significant at 0.05.Therefore there was no association with pretest levels of attitude among relatives of cardiac patients.

Table 4.10 shows the association of the pretest levels of practice with demographic variables among relatives of cardiac patients. Table reveals that age, sex, religion, education, occupation, previous knowledge of cardiopulmonary resuscitation and previous witness of cardiopulmonary resuscitation were not significant at 0.05.Therefore there was no association with pretest levels of practice among relatives of cardiac patients.

CHAPTER-VI

SUMMARY, CONCLUSION, NURSING IMPLICATIONS AND RECOMMENDATIONS

Extensive review of literature and expert's guidance lead the researcher to design the methodology. Quasi pre experimental one group pretest posttest design was used in this study, by using convenient sampling.

SUMMARY OF THE STUDY

The objective of this study was to assess the effectiveness of cardiopulmonary resuscitation demonstration on knowledge, attitude and practice among relatives of cardiac patients in GKNM Hospital, Coimbatore.

Ludwig Bertalanffy's General system theory was adopted for conceptual framework. Quasi pre experimental one group pretest posttest design was adopted for this study. Pilot study was conducted for two weeks with six samples to assess the reliability and feasibility of tool.

The main study was conducted from 29.07.2013 to 24.08.2013.30 samples were selected by using convenient sampling technique. Data collection was done for a period of four weeks. A pretest was conducted using semi structured interview questionnaire to assess knowledge, attitude scale to assess attitude and practice checklist to assess practice. Cardiopulmonary resuscitation was done followed by the posttest on knowledge, attitude and practice. The collected data was analyzed using both descriptive and inferential statistics.

The findings of the study revealed that demonstration on cardiopulmonary resuscitation was effective in improving knowledge, attitude and practice regarding cardiopulmonary resuscitation.

CONCLUSION

Thus the study concluded that, demonstration on cardiopulmonary resuscitation was an eminent and effective method to improve knowledge, attitude and practice regarding cardiopulmonary resuscitation.

NURSING IMPLICATIONS

The findings of the study have implications for different fields of nursing practice, nursing education, nursing administration and nursing research.

Nursing Practice

- Demonstration on cardiopulmonary resuscitation can be introduced as a routine programme for relatives of cardiac patients in clinical areas.
- Nurses can develop a positive attitude towards performance of cardiopulmonary resuscitation among relatives of cardiac patients.
- Nurses can help in saving lives of people by teaching emergency lifesaving cardiopulmonary resuscitation.
- Nurses can develop Evidence Based Practice and include demonstration on cardiopulmonary resuscitation as a routine teaching programme.

Nursing Education

Findings of present study have an implication in nursing education.

- The nurse educator must be able to assess the student nurses knowledge regarding cardiopulmonary resuscitation.
- The nurse educator must create awareness to students regarding importance of cardiopulmonary resuscitation in improving knowledge and attitude.

Nursing Administration

The findings of present study will help nurse administrators to organize and plan for various programmes to provide immediate care for patients by providing cardiopulmonary resuscitation.

- Nurse administrator should implement out reach programs to make the public aware.
- Nurse administrator can plan in service education/CNE programs regarding cardiopulmonary resuscitation.

Nursing Research

The present study was an attempt to assess the effectiveness of demonstration in improving knowledge, attitude and practice on cardiopulmonary resuscitation.

- Nursing research on cardiopulmonary resuscitation would be a valuable reference material for further researchers.
- Qualitative study can be undertaken to assess the self report of the participants.

RECOMMENDATIONS

This study recommends the following for further research

- A similar study can be undertaken to a different population in different settings.
- A similar study can be done using a different method of teaching cardiopulmonary resuscitation
- A similar study can be conducted to compare different methods to teach cardiopulmonary resuscitation.

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APPENDIX – A

PERMISSION TO CONDUCT THE STUDY

Ms.Santra Baby II year M.Sc Nursing Student conducted a study on **"A Study to Assess the Effectiveness of Cardiopulmonary Resuscitation Demonstration on Knowledge, Attitude and Practice among Relatives of Cardiac Patients in GKNM Hospital, Coimbatore "** with the approval of the ethical committee during the academic year of 2013 – 2014 in GKNM Hospital, Coimbatore. This is the partial fulfillment of the requirement for award of the degree in Master of Science, Branch-I, Medical Surgical Nursing, subspecialty- Cardiovascular and Thoracic Nursing, by the Tamilnadu Dr. MGR Medical University.

Dr. Ramkumar Raghupathy, M.S., M.Ch., FIAPS., MBA.,
DEAN

APPENDIX – B

LIST OF EXPERTS

Dr. S. SUNDARARAJAN, MBBS,MPH
Head of The Department, Emergency Medicine,
G.Kuppusawamy Naidu Memorial Hospital,
Coimbatore-37.

Dr.S.MADHAVI, Ph.D (N).,
Principal,
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Prof. RAJI, MS.c (N), Ph.D (N).,
HOD, Department of Medical and Nursing,
KG College of Nursing,
Coimbatore- 641 018.

Prof. TAMILSELVI, M.Sc (N).,
HOD, Department of Medical and Nursing,
PSG College of Nursing,
Coimbatore- 641 004.

APPENDIX-C1

DATA COLLECTION TOOL IN ENGLISH

SECTION-A

DEMOGRAPHIC PROFILE

INSTRUCTIONS:

Please give appropriate information to the following questions asked. The information obtained will be kept confidential and is used only for the intended work.

Sample No:…….

1. Age

a) 20-30
b) 30 -40
c) 40-50

2. Sex

a) Male
b) Female

3. Education

a) Primary
b) Secondary
c) Higher secondary
d) Under graduate
e) Post graduate

4. Religion

a) a. Hindu
b) b. Christian
c) c. Muslim

6. Occupation

a) Medical /Paramedical
b) Others

7. Previous knowledge on cardiopulmonary resuscitation

a) Present
b) Absent

8. Previous witness of CPR in real life situation

a) Present
b) Absent

SECTION- B

STRUCTURED QUESTIONNAIRE TO ASSESS THE KNOWLEDGE REGARDING CARDIO-PULMONARY RESUSCITATION

INSTRUCTIONS

Kindly tick (√) against appropriate response. The following statements are related to knowledge on CPR.

1. What do the letters "CPR" stands for?
   a) Cardiac-Pulse and Respiration
   b) Controlling Pulse to Revive
   c) Cardiopulmonary Resuscitation

2. What is the order of giving CPR?
   a) Circulation, Airway, Breathing
   b) Airway, Breathing, Circulation
   c) Breathing, airway, circulation

3. Which function is restored immediately after giving CPR?
   a) Respiratory function
   b) Urinary function
   c) Digestive function

4. When will you provide CPR in an adult?
   a) When there is absence of response, pulse, respiration
   b) When there is dizziness
   c) When there is chest pain

5. How will you check the response of the victim?
   a) Gently shake his shoulders and ask loudly "are you alright"
   b) Call the person
   c) Sprinkle water on the victims face

6. Where will you place the victim for providing CPR?
   a) Flat,hard surface
   b) Mattress
   c) Chair

7. What is to be done before starting compressions?
   a) Head tilt, Chin lift
   b) Call for help
   c) Place the victim in side lying position

8. What is the rate of compressions you need to achieve in one minute of CPR?

a) 80-100 compressions
b) 100-120 compressions
c) 120-130 compressions

9. What is the optimum depth of chest compression?

a) Less than 1inch
b) More than 2 inches
c) More than 5 inches

10. What will you do if the victim is not breathing?

a) Provide mouth to mouth breathing
b) Initiate chest compression
c) Call for help

11. How will you open the victim's airway in case of head injury?

a) Head tilt ,chin lift
b) Jaw thrust method
c) Turn victim to one side

12. How many breaths per minute be given in a "mouth to mouth" respiration?

a) 10-12 breaths
b) 8-10 breaths
c) 16-18 breaths

13. What is the ratio of chest compression to "mouth to mouth" respiration?

a) 30:2
b) 15:2
c) 8:2

14. What is the ratio of chest compression to "mouth to mouth" respiration if you have an assistant?

a) 30:2
b) 15:2
c) 8:2

15. How to check for effectiveness of chest compressions?

a) Check pulse
b) Check temperature
c) Check BP

16. How to check for effectiveness of "mouth to mouth" respiration?

a) Look for chest rise and fall
b) Look for heart sounds
c) Look for inhaled air

17. What will you do if a casualty vomits during CPR?
    a) Stop CPR
    b) Continue as normal
    c) Quickly roll them to side, clear the vomitus and continue CPR

18. What does the crackling sound during chest compression indicate?
    a) Rib fracture
    b) Lung injury
    c) Chest infection

19. What should you do if you feel a rib break during chest compressions?
    a) Immediately stop CPR
    b) Check your hands are positioned correctly and continue CPR
    c) Do rescue breaths only

20. When is it acceptable to stop CPR?
    a) When medical team arrives
    b) When crowd arrives
    c) When police arrives

ANSWER KEY

1) c
2) a
3) a
4) a
5) a
6) a
7) b
8) b
9) b
10) c
11) b
12) a
13) a
14) a
15) a
16) a
17) c
18) a
19) b
20) a

Interpretation of knowledge scores

Scoring	**Interpretation**
0-6	Poor
7-13	Fair
14-20	good

SECTION –C

ATTITUDE TOWARDS CARDIOPULMONARY RESUSCITATION

INSTRUCTIONS:

Kindly tick (√) against appropriate actions. The following statements are related to attitude towards CPR.

Sl no:	**STATEMENT**	**SA**	**A**	**UC**	**DA**	**SD**
1	Saving the life of a person by giving CPR,I feel next to god**					
2	CPR can be given only by a trained personnel*					
3	Performing CPR will not cause legal troubles**					
4	I'm scared of developing diseases by giving mouth to mouth respiration*					
5	I feel uneasy to give CPR at public places*					
6	Performing CPR during an emergency is the responsibility of every individual**					
7	CPR can be promoted by novices**					
8	Performing CPR will hurt the victim*					
9	I can give effective CPR**					
10	I will be made responsible for the victim till he is hospitalized when giving CPR*					

KEYWORD

** -Positive statements

* -Negative statements

Scoring of statements

Statements	**Positive statements**	**Negative statements**
Strongly agree	5	1
Agree	4	2
Uncertain	3	3
Disagree	2	4
Strongly disagree	1	5

Interpretation of attitude scale

Scoring	**Interpretation**
<50%	Unfavorable
50-75%	Moderately favourable
>75%	Favorable

SECTION- D

CHECKLIST TO ASSESS CPR REDEMONSTRATION

INSTRUCTIONS:

Kindly tick (√) against appropriate actions. The following statements are related to demonstration on CPR

Sl.no	Behaviour	Yes	No	Remarks
1.	Assess environment for hazards			
2.	Checks for response-tap and call			
3.	Call for help			
4.	Place the patient on a flat surface			
5.	Check for pulse			
6	Exposes chest of patient			
7	Interlock the hands and place it on centre of sternum			
8.	Provide chest compressions at rate of 100/min			
9.	Open the victim's airway by head tilt chin lift method			
10.	Pinch the nose			
11.	Seal the moth			
12.	Provide mouth to mouth respiration			
13.	Provides ventilation and compression at a ratio of 30:2			
14	Provides 10-12 breaths/min			
15	Compress chest at least 2 inches			

Interpretation of practice scores

Scoring	Interpretation
< 4	Poor
4-7	Moderate
8-11	Good
11-15	Excellent

APPENDIX- C2

DATA COLLECTION TOOL IN TAMIL

பகுதி – ஆ

கார்டியோ பள்மொனரி ரிசர்சிடேசன் பற்றிய அறிவுத்திறனை அறிய வடிவமைக்கப்பட்ட வினாத்தாள்

குறிப்பு :

- அனைத்து வினாக்களுக்கும் விடையளிக்கவும்
- சரியான கருத்துக்கு நேராக (√) குறி இடுக

1. சி.பி.ஆர். என்ற சுருக்க எழுத்திற்கான விரிவாக்கம் என்ன?

   அ) கார்டியாக், பள்ஸ் ஆண்டு ரெஸ்பிரேசன்
   ஆ) கன்ட்ரோலிங் பள்ஸ் டூ ரிவைவ்
   இ) கார்டியாக் பள்மொனரி ரிசர்சிடேசன்

2. சி.பி.ஆர் கொடுப்பதற்கான வரிசைமுறை என்ன?

   அ) இரத்த ஒட்டம், சுவாசபாதையை சரிசெய்தல், சுவாசித்தல்
   ஆ) சுவாசபாதையை சரி செய்தல், சுவாசித்தல், இரத்த ஒட்டம்
   இ) சுவாசித்தல், சுவாசபாதையை சரிசெய்தல், இரத்த ஒட்டம்

3. உடலில் எந்த செயல்பாடு சி.பி.ஆர் கொடுப்பதன் மூலமாக உடனடியாக செயல்பட ஆரம்பிக்கிறது?

   அ) சுவாச செயல்பாடு
   ஆ) சிறுநீரக செயல்பாடு
   இ) உணவு செரிமான செயல்பாடு

4. நீங்கள் வயதுவந்தவர்களுக்கு சி.பி.ஆர் எப்பொழுது கொடுப்பீர்கள்?

   அ) எந்த மறுமொழியும், நாடித்துடிப்பும், சுவாசமும் இல்லாத போது
   ஆ) மயங்கிய நிலையில் இருக்கும்போது
   இ) நெஞ்சுவலி உள்ள போது

5. நீங்கள் எவ்வாறு பாதிக்கப்பட்ட நபரினுடைய உடல்செயல்பாட்டை கவனிப்பீர்கள்?

அ) பாதிக்கப்பட்டவரின் தோல்களை பிடித்து உலுக்கி அவரிடம் என்ன செய்கிறது என்று உரக்க சத்தமாக கேட்டு
ஆ) பாதிக்கப்பட்ட நபரின் பெயரை உரக்க அழைத்துப்பார்த்து
இ) பாதிக்கப்பட்ட நபரின் முகத்தில் தண்ணீரை தெளித்து

6. பாதிக்கப்பட்ட நபரை எந்த இடத்தில் வைத்து சி.பி.ஆர் கொடுப்பீர்கள்?

அ) சமமான மற்றும் உறுதியான பகுதி
ஆ) மெத்தை
இ) நாற்காலி

7. சி.பி.ஆர் துவங்கும் முன் என்ன செய்ய வேண்டும்?

அ) தலையை தூக்கி தாடையை உயர்த்துதல்
ஆ) உதவி வேண்டி அழைப்பு விடுதல்
இ) பாதிக்கப்பட்ட நபரை ஒரு பக்கமாக திருப்பி படுக்க வைத்தல்

8. நீங்கள் சி.பி.ஆர் கொடுக்கும் போது ஒரு நிமிடத்திற்குள்ளாக அடைய வேண்டிய மார்பு அழுத்த விகிதம் என்ன?

அ) 80-100 மார்பு அழுத்தம்
ஆ) 100-120 மார்பு அழுத்தம்
இ) 120–130 மார்பு அழுத்தம்

9. எவ்வளவு ஆழத்தில் மார்பு அழுத்தம் கொடுக்க வேண்டும்?

அ) 1 அங்குலத்திற்கும் குறைவாக
ஆ) 2 அங்குலத்திற்கும் மேலாக
இ) 5 அங்குலத்திற்கும் மேலாக

10. பாதிக்கப்பட்ட நபர் மூச்சு எடுக்காவிட்டால் நீங்கள் என்ன செய்வீர்கள்?

அ) வாய்மேல் வாய்வைத்து சுவாசம் கொடுத்தல்
ஆ) மார்பு அழுத்தம் கொடுக்க துவங்குதல்
இ) உதவி வேண்டி அழைப்பு விடுத்தல்

11. தலையில் காயம் ஏற்பட்ட நிலையில் பாதிக்கப்பட்ட நபரினுடைய நுரையீரலுக்கான சுவாசப்பாதையை எவ்வாறு சரிசெய்வீர்கள்?

அ)தலையை நிமிர்த்தி தாடையை உயர்த்துதல்
ஆ)கடைவாயின் இருபக்கமும் அழுத்தம் கொடுத்து சுவாசப்பாதையை சரிசெய்தல்
இ)பாதிக்கப்பட்ட நபரை பக்கவாட்டில் திருப்பி படுக்கவைத்தல்

12. வாய்மேல் வாய்வைத்து காற்றை ஊதும்போது ஒருநிமிடத்தில் எத்தனை முறை சுவாசம் கொடுக்க வேண்டும்?

அ) 10 – 12 முறை
ஆ) 8 - 10 முறை
இ) 16 – 18 முறை

13. மார்பு அழுத்தம் மற்றும் வாய்வைத்து சுவாசம் கொடுக்கும் விகிதம் என்ன?

அ) 30: 2
ஆ 15: 2
இ) 8: 2

14. ஊதவியாளர் உங்களுடன் இருக்கும் போது மார்பு அழுத்தம் மற்றும் வாய்மேல் வாய்வைத்து சுவாசம் கொடுக்கும் விகிதம் என்ன?

அ) 30: 2
ஆ 15: 2
இ) 8: 2

15. மார்பு அழுத்தம் கொடுப்பதற்கான பயனை எவ்வாறு சோதித்து அறிவீர்கள்?

அ) நாடித்துடிப்பை சோதித்துபார்த்தல்
ஆ) உடல் வெப்ப நிலையை சோதித்துபார்த்தல்
இ) இரத்த அழுத்ததை சோதித்துபார்த்தல்

16. வாய்மேல் வாய்வைத்து சுவாசம் கொடுப்பதற்கான பயனை எவ்வாறு கண்டறிவீர்கள்?

அ)மார்புக் கூடு உயர்வதையும், தாழ்வதையும் சோதித்தல்
ஆ)இதயத்துடிப்பை கவனித்தல்
இ)காற்று உட்செல்வதை கவனித்தல்

17.நீங்கள் சி.பி.ஆர் கொடுத்துக் கொண்டிருக்கும்போது பாதிக்கப்பட்ட நபர் வருந்தி எடுத்தால் என்ன செய்வீர்கள்?

அ)சி.பி.ஆர் கொடுப்பதை நிறுத்த வேண்டும்.
ஆ)தொடர்ந்து சி.பி.ஆர் கொடுக்க வேண்டும்.
இ)உடனடியாக பாதிக்கப்பட்டவரை பக்கவாட்டில் திருப்பி வாந்தியை வாயில் இருந்து முழுவதுமாக வெளியே எடுத்துவிட்டு சி.பி.ஆர்-ஐ தொடர வேண்டும்.

18. .நீங்கள் மார்பு அழுத்தம் கொடுத்துக் கொண்டிருக்கும்போது அழுத்தம் கொடுக்கும் பகுதியிலிருந்து சடசடவென்ற ஒலிகேட்டால் அது எதை குறிக்கிறது?

அ)விலாஎலும்பு முறிவு
ஆ)நுரையீரலில் காயம் ஏற்படுதல்
இ)மார்பு பகுதியில் நுண்கிருமி தொற்று ஏற்படுதல்

19. .நீங்கள் மார்பு அழுத்தம் கொடுத்துகொண்டிருக்கும்போது விலாஎலும்பு முறிவு ஏற்பட்டால் என்ன செய்வீர்கள்?

அ)உடனடியாக சி.பி.ஆர்.ஐ நிறுத்தவேண்டும்
ஆ)கைகள் சரியான நிலையில் உள்ளதா என்று சரிபார்த்து பின் சி.பி.ஆர்.ஐ தொடர வேண்டும்.
இ)சுவாசிக்க வைப்பதில் மட்டுமே கவனம் செலுத்துதல்.

20. .எப்பொழுது சி.பி.ஆர் கொடுப்பதை நிறுத்தவேண்டும்?

அ)மருத்துவக்குழு வந்தவுடன்
ஆ)பொதுமக்கள் வந்தவுடன்
இ)கவலர்துறை குழு வந்தவுடன்

பகுதி - இ

சி.பி.ஆர் பற்றிய கருத்து

அறிவுரை

தயவுகூர்ந்து கீழே கேட்கப்பட்டிருக்கும் கருத்துகளுக்கு சரியான விபரம் அளிக்கவும்.தங்களிடம் பெறப்பட்ட விபரங்கள் இரகசியமாக வைக்கப்பட்டு தேவையான வேலைக்கு மட்டுமே உபயோகப்படுத்தப்படும். சரியான கருத்துக்கு நேராக (√) குறி இடுக.

வ.எண்	கருத்து	உறுதியாக ஏற்றுக் கொள்கிறேன்	ஏற்றுக் கொள்கிறேன்	உடன்பாடு இல்லை	மறுக்கிறேன்	உறுதியாக மறுக்கிறேன்
1.	சி.பி.ஆர் கொடுப்பதன் மூலமாக ஒருவரின் உயிரை காப்பற்றுவதை நான் கடவுளுக்கு அடுத்ததாக நினைக்கிறேன்					
2.	பயிற்சி பெற்றவர்கள் மட்டுமே சி.பி.ஆர் கொடுக்க வேண்டும்					
3.	சி.பி.ஆர் கொடுப்பது சட்டபூர்வமான பிரச்சனைகளை விளைவிக்காது					
4.	வாய் மேல் வாய்வைத்து சுவாசம் கொடுக்கும் முறையில் எனக்கு நோய்தொற்று ஏற்படலாம் என்று பயப்படுகிறேன்.					
5.	பொது இடங்களில் சி.பி.ஆர் கொடுப்பது எனக்கு தயக்கமாக உள்ளது					
6.	ஆவசரகால நேரங்களில் சி.பி.ஆர் கொடுப்பது ஒவ்வொரு தனிப்பட்ட நபரின் கடமையாகும்.					
7.	ஆதிக அணுபவம் இல்லாதவர்களும் சி.பி.ஆர் கொடுக்கலாம்					
8.	சி.பி.ஆர் கொடுப்பது பாதிக்கப்பட்டவருக்கு எந்த ஊறுபாட்டையும் உண்டாக்காது.					
9.	என்னால் சிறந்த முறையில் சி.பி.ஆர் கொடுக்க முடியும்.					
10.	நான் சி.பி.ஆர் கொடுக்கும் நபர் மருத்துமனையில் அனுமதிக்கப்படும் வரை அவருடைய முழு பொறுப்பையும் ஏற்றுக்கொள்வேன்.					

APPENDIX-D1

INTERVENTION IN ENGLISH

DEMONSTRATION ON

CARDIOPULMONARY RESUSCITATION

Place : GKD Auditorium

Group : Relatives of cardiac patients

Method of Teaching : Lecture cum Demonstration

A.V Aids : Manikin

Educator : Ms.Santra Baby M.Sc., (N), II year

INTRODUCTION

Sudden cardiac arrest is rapidly becoming the leading cause of death. Once the heart ceases to function, a healthy human brain may survive without oxygen for up to four minutes without suffering any permanent damage.Unfortunately,a typical emergency medical response may take 6 min,8 min or even 10 minutes. It is during those critical minutes that CPR can provide oxygenation

What is CPR?

CPR refers to Cardio pulmonary resuscitation. It is an emergency life saving procedure used to revive heart beat or breathing in case of heart attack or near drowning.

Why CPR is important?

To ensure adequate blood circulation to brain and to restart and maintain proper functioning of heart, lungs and brain when the victim's pulse, respiration and response are absent.

When is CPR needed?

CPR is needed in case of

- Road traffic accidents(severe)
- Cardiac arrest
- Drowning
- Poisoning
- Choking
- Electric shock
- Gas fumes exposure

What to check before starting CPR?

- Assess the situation for any danger
- Check if the person is conscious or unconscious
- If the person appears unconscious, tap or shake his shoulder and ask loudly, "Are you OK?"
- Check for carotid pulse in neck
- If the person doesn't respond and if two people are available, one should call for help and the other should begin CPR. If you are alone call for help before beginning CPR — unless you think the person has become unresponsive because of suffocation. In this case begin CPR for one minute and then call for help.

How to give CPR?

The American Heart Association uses the acronym of CAB — circulation, airway, breathing — to help people remember the order to perform the steps of CPR.

Circulation: Restore blood circulation with chest compressions

1. Place the person on his or her back on a firm surface.
    - Flat
    - Hard
    - Hazard free

- Free from sharp objects

2. Kneel next to the person's neck and shoulders on right side.
3. Loosen victims clothes
    - Remove the tie
    - Remove collar button
    - Cut open if churidar
    - Remove buttons of a blouse
4. Place the heel of one hand over the centre of the person's chest, between the nipples. Place your other hand on top of the first hand. Keep your elbows straight and position your shoulders directly above your hands.
5. Use your upper body weight (not just your arms) as you push straight down on (compress) the chest at least 2 inches down (approximately 5 centimetres). Push hard at a rate of about 100-120 compressions a minute.
6. If a casualty vomits during CPR quick roll them to one side, clear the vomitus and then continue CPR

Airway: Clear the airway

1. After you've performed 30 chest compressions, open the person's airway using the head-tilt, chin-lift manuveres. Put your palm on the person's forehead and gently tilt the head back. Then with the other hand, gently lift the chin forward to open the airway.
2. Check for normal breathing, taking no more than five or 10 seconds. Look for chest movement, listen for normal breath sounds, and feel for the person's breath on your cheek and ear. Gasping is not considered to be normal breathing. If breathing is absent provide mouth to mouth respiration.

Breathing: Breathe for the person

Rescue breathing can be mouth-to-mouth breathing or mouth-to-nose breathing if the mouth is seriously injured or can't be opened.

1. With the airway open (using the head-tilt, chin-lift maneuver), pinch the nostrils shut for mouth-to-mouth breathing and cover the person's mouth with your mouth and make a seal.
2. Prepare to give two rescue breaths. Give the first rescue breath — lasting one second — and watch to see if the chest rises. If it does rise, give the second breath. If the chest doesn't rise, repeat the head-tilt, chin-lift maneuver and then give the second breath. Thirty chest compressions followed by two rescue breaths is considered one cycle.10-12 breaths should be given in a minute.Ventillation compression ratio should be 30:2
3. Resume chest compressions to restore circulation.Effectivness of compressions can be identified by return of pulse
4. Continue CPR until there are signs of movement of the client or emergency medical personnel take over.

What are the dangers of CPR?

- Rib break can occur while giving CPR
- Crackling sound occurring during CPR is an indicator of rib break
- If a rib break occurs during compressions check your hands immediately whether they are positioned correctly and then continue

When should I stop CPR?

You should stop CPR when

- The victim starts to move
- An AED arrives
- Trained help arrives and takes over
- You are too exhausted to continue or it’s dangerous for you to continue CPR
- Trained person tells you to stop
- Obvious signs of death becomes apparent ,

Can I get into legal trouble if I don’t do CPR perfectly?

Doing CPR to the best of your ability is what is expected of you. As long as you are trying to do the right thing and you are not trying to hurt the victim, Good Samaritan laws will protect you in most states.

If I find a victim on a bed, should I move her to the floor so that I have a hard surface under her back?

Move the victim to a firm surface to give CPR.Make sure you support the victims head and neck. If you are alone and can't move the victim, find something flat and firm. Slide it under the victims back to provide a hard surface while on bed.

How long can I stop CPR to move the victim in danger zone?

Try not to interrupt CPR for more than 10 seconds. If you have to move a victim to safety, move the victim as quickly as possible and then resume CPR.

Why don't we do a pulse check when giving CPR?

Most lay people and many health care providers are unable to accurately tell within 10 seconds if a pulse is present or absent. It is better to give CPR to a person who does not have a pulse

CONCLUSION

CPR can be life saving first aid and increases the person's chances of survival if started soon after the heart has stopped beating. If no CPR is performed, it only takes 3-4 minutes for the person to become brain dead due to lack of oxygen. So provide CPR.

APPENDIX-D2

INTERVENTION IN TAMIL

<u>கார்டியோ பல்மொனரி ரிசர்சிடேசன் பற்றிய செயல்விளக்கம்</u>

முன்னுரை:

தற்பொழுது நோய்களினால் ஏற்படும் மரணங்களுக்கு காரணமாக இருக்கும் நோய்களில் ஏராளமான மரணங்களுக்கு சாரணம் மாரடைப்பு நோய் ஆகும்.

இருதய துடிப்பு அறவே நின்றாலும் கூட ஒரு சராசரி மனிதனின் மூளை ஆக்சிஜன் இல்லாமலேயே '4' நிமிடங்கள் வரை செயல்படும். மேலும் உடனடி மருத்துவ உதவி பெற 6-ல் இருந்து 8 நிமிடங்களில் அதிகபட்சமாக 10 நிமிடங்கள் வரை செயல்படும். சி.பி.ஆர் கொடுக்கும் பொழுது ஆக்சிஜன் தொடர்ந்து மூளை அணுக்கள் மற்றும் இதர உடலின் முக்கியமான உறுப்புகளுக்கு கிடைக்கிறது.

சி.பி.ஆர் என்றால் என்ன?

சி.பி.ஆர் என்பதன் விரிவாக்கம் கார்டியோ பல்மொனரி ரிசர்சிடேசன் ஆகும். இது ஒரு அவசரகால உயிர்காக்கும் செயல்முறை மேலும் சி.பி.ஆர் மாரடைப்பின் போதும் மற்றும் தண்ணீரில் மூழ்கும் போதும் மற்றும் அறவே சுவாச மற்ற நிலையிலும் இருதயத்தை மீண்டும் சீராக இயங்கச் செய்யவும் உதவுகிறது.

சி.பி.ஆர் -ன் முக்கியதுவம் என்ன?

சி.பி.ஆர் கொடுப்பதன் மூலம் மூளைக்கு இரத்த ஒட்டம் சீராகும் மற்றும் ஒரு சராசரி மனிதனின் நாடித் துடிப்பு சுவாசம் மற்றும் சுயநினைவு அறவே அற்ற நிலையில் இருதயத்தை மீண்டும் துடிக்கச் செய்து இருதயம்,நுரையீரல் மற்றும் மூளை ஆகியவற்றை மீண்டும் சீராக இயங்கச் செய்கிறது.

சி.பி.ஆர் ஐ எப்பொழுது கொடுக்க வேண்டும்?

- சாலை விபத்து ஏற்படும் பொழுது
- மாரடைப்பு ஏற்படும் பொழுது
- நீரில் மூழ்கும் பொழுது.
- விஷம் குடித்தவர்களுக்கு
- மின்சார விபத்தின் பொழுது
- எரிவாயு மற்றும் விஷபுாகையினை சுவாசித்தவர்களுக்கு தேவைப்படுகிறது.

சி.பி.ஆர் தொடங்கும் முன் கவனிக்க வேண்டியவை என்னென்ன?

- சுற்றுப்புறத்தில் மேலும் ஏதாவது ஆபத்து உள்ளதா என்பதை கவனிக்க வேண்டும்.
- பாதிக்கப்பட்டவர் சுயநினைவில் உள்ளார அல்லது சுயநிணைவற்ற நிலையில் உள்ளார என்பதை கவனிக்க வேண்டும்.
- சுய நினைவற்ற நிலையில் இருந்தால், இருதோள்களையும் வேகமாக குலுக்கி, பாதிக்கப்பட்டவரின் பெயரை சத்தமாக அழைத்து நன்றாக உள்ளீர்களா என்று கேட்க வேண்டும்.
- கழுத்துப் பகுதியில் உள்ள கரோடிட் என்னும் நாடித்துப்பினை சோதித்து பாக்க வேண்டும்.
- பாதிக்கப்பட்டவர் எந்த வித மறுமொழியும் கொடுக்கவில்லை என்றால் இருவர் அச்சூழ்நிலையில் இருந்தால் ஒருவர் உதவிக்கு மற்றவரை அழைக்க வேண்டும்.
- இரண்டாம் நபர் சி.பி.ஆரை தொடங்க வேண்டும் அல்லது ஒரு நபர் மட்டும் இருந்தால் உதவிக்கு மற்றவர்களை அழைத்து விட்டு அவர்கள் வரும் வரை சி.பி.ஆர் ஐ தொடங்க வேண்டும் அப்படி இல்லாமல் நச்சுவாயு தாக்குதலினால் ஒரு நபர் சுயநினைவை இழப்பதாக கருதிக் கொண்டால் அச்சூழ்நிலையில் சி.பி.ஆர் ஐ ஒரு நிமிடம் கொடுத்து விட்டு பின்னர் உதவி கோர வேண்டும்.

சி.பி.ஆர் ஐ எப்படிக் கொடுப்பது?

அமெரிக்கன் ஹார்ட் அசோஷியேஷன் சி.பி.ஆர் என்று சுருக்கமாக கூறியுள்ளனார். ஆங்கிலத்தில் சர்குலேஷன் என்றால் இரத்த ஒட்டம், ஏர்வே – சுவாசப்பாதை, பீரித்திங் சுவாசம் இரத்த ஊயுடீ என்னும் சுருக்க எழுத்து ஊீசு கொடுப்பவர்கள் எளிதில் புரிந்து கொள்ளவே அவ்வாறு கூறியுள்ளனர்.

இரத்த ஒட்டம் நின்று போன இருதயத்தை நெஞ்சுபகுதியின் மையப்பகுதியில் அழுத்தம் கொடுப்பதன் மூலம் மீண்டும் இருதயத்தை துடிக்கச் செய்து இரத்த ஒட்டத்தை சீராக்குதல்.

1. பாதிக்கப்பட்ட நபரை ஒரு சமமான மற்றும் உறுதியான பகுதியில் கிடத்த வேண்டும்.
- தட்டையான அல்லது சமமான
- கடினமான
- ஆபத்து இல்லாத மற்றும்
- கூர்மையான பொருட்கள் இல்லாத இடமாக தேர்தெடுத்து பாதிக்கபட்ட நபரை அவ்விடத்தில் படுக்க வைக்க வேண்டும்.
2. பாதிக்கப்பட்ட நபரின் வலது பக்கத்தில் அவரது கழுத்து மற்றும் தோள் பகுதியின் அருகில் முழங்கால் படியிட்டு அமர வேண்டும்.
3. பாதிக்கப்பட்டவரின் உடைகளை தளர்த்தி விட வேண்டும்

- கழுத்துப்பட்டையை கழட்டி விட வேண்டும்.
- சுடிதார் அணிந்திருத்தால் தையல்களை வெட்டி உடையை தளர்த்தி விடவேண்டும்.
- சட்டை பட்டன்களை கழட்டி விட வேண்டும்.

4. ஒரு கையின் உள் அல்லது கடினமான பகுதியே பாதிக்கபட்டவரின் மார்ப்புக் கூட்டின் மையப்பகுதியில் அதாவது இரு மார்பகத்தின் இடையிலுள்ள மையப்பகுதியில் வைக்க வேண்டும். இரண்டாம் கையை முதலாவது கையின் மேல்புறத்தில் வைத்து முழுங்கைகளை நேராக வைத்து தோள்களின் பலத்தை கைகளின் மேல் செலுத்தும் வண்ணமாக வைக்க வேண்டும்.

5. உங்கள் மேல் உடல் பகுதியின் முழு பலத்தையும் செலுத்தி குறைந்தபட்சம் பாதிக்கப்பட்டவரின் மார்புக் கூடும் 2 இன்ச் (5.செ.மீ அளவிற்கு) உள்புறமாக செல்லும் அளவிற்கு அழுத்தம் வேண்டும். கடினமாக மற்றும் ஒரு நிமிடத்திற்கு 100-120 முறை என்ற விகிதத்தில் அழுத்த வேண்டும்.

6. பாதிக்கப்பட்டவர் சி.பி.ஆர் கொடுத்துக் கொண்டிருக்கும் போது வாந்தி எடுத்தால் உடனடியாக அவரை பக்கவாட்டில் திருப்பி வாந்தியை முழுவதுமாக வெளியேற்றிய பின் நேராக கிடத்தி சி.பி.ஆர் ஐ தொடர வேண்டும்.

சுவாசப்பாதை : சுவாசப் பாதையை சீராக்குதல்

1. 30 முறை மார்பில் அழுத்தம் கொடுத்தவுடன் பாதிக்கப்பட்டவரின் சவாசப்பாதையை திறக்க தலையை நிமிர்த்தி தாடையை உயர்த்தும் முறையை பயன்படுத்த வேண்டும். உள்ளங்கையை பாதிக்கப்பட்டவரின் நெற்றியில் வைத்து மெதுவாக தலையை பின்பக்கமாக நிமிர்த்த வேண்டும். பின் மற்றொரு கையினை பாதிக்கப்பட்டவரின் தாடையில் வைத்து முன்புறம் நோக்கி உயர்த்துவதன் மூலம் சுவாசப்பாதையை திறக்க வேண்டும்.
2. சுயமாக மூச்சு விடுகிறாரா என்று சோதித்து பார்க்க வேண்டும். சோதித்துப் பார்க்க 5லிருந்து 10 வினாடிகள் மட்டுமே எடுத்துக் கொள்ளவேண்டும்.
    - மார்புக்கூடு உயர்ந்து தாழ்கிறதா என பார்க்க வேண்டும்.
    - மூச்சு விடும் சத்தம் கேட்கிறதா என பார்க்க வேண்டும்.
    - சுவாசக்காற்று உங்களின் கன்னத்தில் படுகிறதா அல்லது காதுகளில் கேட்கிறதா என சோதிக்க வேண்டும். பாதிக்கப்பட்டவர் மூச்சு விட திணறினால் அவர் மூச்சுவிடுவதாக புரிந்துகொள்ளக் கூடாது. மூச்சு விடவில்லை என்ற பட்சத்தில் வாய்மேல் உங்கள் வாயை வைத்து ஊதிசுவாசம் கொடுக்க வேண்டும்.

சுவாசம் : சுவாசம் கொடுத்தல்

சுவாசம் கொடுப்பது வாய் மேல் வாய் வைத்து சுவாசம் கொடுக்கலாம் அல்லது மூக்கின்மேல் வாய் வைத்து சுவாசம் கொடுக்கலாம் (பாதிக்கப்பட்டவரின் வாயை திறக்க முடியாத போதும் அல்லது வாய் பகுதியில் அடிபட்டிருக்கும் போது மட்டும்).

1. சுவாசப்பாதையை திறந்தவுடன் தலையை நிமிர்த்தி, தாடையை உயர்த்தும் முறையை பயன்படுத்தி பிடித்துக்கொண்டு.பாதிக்கப்பட்டவரின் வாயின் மேல் வாயை வைத்து காற்று வெளியேறுமாறு வைத்துக்கொள்ள வேண்டும்.
2. இருமுறை சுவாசம் கொடுக்க வேண்டும். முதல்முறை சுவாசம் கொடுக்கம் போது ஒரு வினாடி கொடுக்க வேண்டும். பின் மார்புக் கூடு மேலே உயர்கிறதா என பார்க்க வேண்டும் உயர்கிறது என்றால் இரண்டாவது சுவாசம் கொடுக்க வேண்டும்.. மார்புக்கூடு உயரவில்லையெனில் மீண்டும் ஒரு முறை தலையை நிமிர்த்தி தாடையை உயர்த்தி விட்டு இரண்டாவது சுவாசத்தை கொடுக்க வேண்டும். அதை தொடர்ந்து இரண்டு முறை சுவாசம் கொடுக்க வேண்டும். இதுவே ஒரு முறை சுழற்ச்சியாக கருதப்படுகிறது. இதனை தொடர்ந்து ஒரு நிமிடத்திற்கு 10-12 சுவாசம் கொடுக்க வேண்டும். 30:2 விகிதத்தில் சி.பி.ஆர் கொடுக்க வேண்டும்.
3. மார்பு அழுத்தம் தொடர்ந்து கொடுக்கும்போது இரத்த ஓட்டத்தை சீராக்க முடிகிறது. மார்பு அழுத்ததின் பயனை நாடி துடிப்பு மீண்டும் வரும்போது உணரலாம்.
4. சி.பி.ஆர் ஐ பாதிக்கப்பட்டவர் ஏதேனும் அசைவு காண்பிக்கும் வரை இல்லையெனில் அவசர கால மருத்துவ குழு வரும் வரை தொடர வேண்டும்.

சி.பி.ஆர் கொடுப்பதன் மூலம் விளையும் தீமைகள் என்னென்ன?

- சி.பி.ஆர் கொடுக்கும் போது விலா எலும்புகளில் முறிவு ஏற்படலாம்.
- சி.பி.ஆர் கொடுக்கும் பொழுது உண்டாகும் எலும்பு உராய்வு சத்தம் விலா எலும்பு உடைந்ததற்கான அறிகுறியாகும்.
- விலா எலும்பு முறிவு மார்பினை அழுத்தும் போது ஏற்ப்பட்டால் உடனடியாக உங்களின் கைகளை சரியான இடத்தில் வைத்துள்ளீர்களா என சரிபார்த்து விட்டு பின் சி.பி.ஆர் ஐ தொடர வேண்டும்.

சி.பி.ஆர் கொடுப்பதை எப்பொழுது நிறுத்த வேண்டும்?

எப்பொழுது சி.பி.ஆர் நிறுத்த வேண்டும் என்றால்

- பாதிக்கப்பட்டவரில் ஏதேனும் அசைவு ஏற்படும் போது
- மருத்துவர் அல்லது பயிற்சி உள்ளவர் உதவிக்கு வந்தவுடன்.
- நீங்கள் களைப்படைந்து விட்டால் அல்லது சி.பி.ஆர் கொடுப்பது உங்களுக்கு ஆபத்தான சூழ்நிலையில்
- பயிற்சி பெற்றவர் நீங்கள் சி.பி.ஆர் கொடுப்பதை நிறுத்த சொல்லும் போது.

➢ பாதிக்கப்பட்டவர் இறந்து விட்டார் என உறுதியாக தெரிந்த பின்னர்

நான் சரியான முறையில் சி.பி.ஆர் கொடுக்காவிட்டால் என் மீது யாரேனும் சட்டப்படி குற்றம் சுமத்துவார்களா?

சி.பி.ஆர் கொடுப்பது ஒருவர் உயிரினை காக்க உதவுகிறது. எனவே நீங்கள் கொடுப்பதை அனைவரும் விரும்புகின்றனர் அல்லாமலும் உங்களால் முடிந்த வரை சரியான முறையில் சி.பி.ஆர் கொடுக்க முயற்சிக்க வேண்டும் அல்லாமல் பாதிக்கப்பட்டவரை கை விடுதல் கூடாது.

ஒருவர் கட்டிலின் மேல் மயங்கிய நிலையில் இருந்தால் நான் அவரை தரையில் கிடத்த வேண்டுமா அப்பொழுது தான் கடினமான உறுதியான பகுதி அவரின் முதுகின் கீழ்புறம் இருக்குமா?

- பாதிக்கப்பட்டவரை சமமான மற்றும் உறுதியான தறையில் சி.பி.ஆர் கொடுப்பதற்கு ஏதுவாக நகர்த்த வேண்டும் நகர்த்தும் போது பாதிக்கப்பட்டவரின் தலை மற்றும் கழுத்தினை தாங்கிப் பிடிக்க வேண்டும். நீங்கள் தனியாக இருந்தால் கடினமான பலகை போன்று ஏதாவது உள்ளதா என பார்க்க வேண்டும் அவ்வாறு ஏதேனும் கிடைத்தால் பாதிக்கப்பட்டவரின் முதுகு புறத்தில் நகர்த்தி கடினமான, உறுதியான பகுதியினை கட்டிலின் மேல் உருவாக்குங்கள்.

எவ்வளவு நேரம் சி.பி.ஆர் கொடுப்பதை நிறுத்தி விட்டு பாதிக்கப்பட்டவரை பாதுகாப்பான இடத்திற்கு மாற்றலாம்?

10 நொடிகளுக்கு மேல் சி.பி.ஆர் ஐ நிறுத்தக்கூடாது அதற்குள் பாதுகாப்பான இடத்திற்கு மாற்ற வேண்டும். பின் விரைவாக சி.பி.ஆர் ஐ தொடர வேண்டும்.

சி.பி.ஆர் கொடுக்கும் போது ஏன் நாடித்துடிப்பினை பரிசோதிக்கக் கூடாது?

சாதாரண மனிதனால் அல்லது முதல்நிலை மருத்துவ குழுவில் உள்ள பயத்தாலும் நாடித்துடிப்பு சீராக உள்ளதை 10 நிமிடங்களில் கண்டுபிடிக்க முடியாது. எனவே தொடர்ந்து சி.பி.ஆர் கொடுப்பது பாதிக்கப்பட்டவருக்கு நல்லது.

முடிவுரை :

சி.பி.ஆர் ஒரு உயிர்காக்கும் முதலுதவியாகும் சி.பி.ஆர் உடனடியாக கொடுக்கவில்லையென்றால் 3-4 நிமிடங்களில் பாதிக்கப்பட்டவரின் மூளை செல்கள் ஆக்ஸிஜன் பற்றாகுறையினால் சேதமடைந்து மூளை செயலிழப்பு ஏற்படுகிறது. ஆகையால் சி.பி.ஆர் கொடுப்போம் பல உயிர்களை காப்போம். மேலும் இருதய

துடிப்பு நின்று போன நிலையில் உடனடியாக சி.பி.ஆர் துவங்குவதன் மூலம் ஒரு மனிதனின் மரணத்திலிருந்து விடுவித்து அவரின் வாழ்நாளை அதிகரிக்க முடியும்.

APPENDIX – E

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APPENDIX-F

DEMONSTRATION ON CARDIOPULMONARY RESUSCITATION