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" A Study To Assess The Effectiveness Of Structured Teaching Programme On Crash Cart Management Among Second Year And Third Year Nursing Students In Selected Nursing College,Mumbai".

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“Always laugh when you can, it is cheap medicine.”

— Lord Byron

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CHAPTER -1

INTRODUCTION:

WRONG DECISION IN WRONG TIME IS DISASTER

BUT RIGHT DECISION IN RIGHT TIME IS SUCCESS

John.C.Maxwell

Crash cart is an essential part in hospital.. An organized crash cart brings a sense of structure to a potentially chaotic situation . crash cart are usually stock with emergency medication for almost all potential emergency situation .apart from emergency medications they contains various other equipment's like resuscitation set , organized into various drawers and modules like intubation module ,intravenous model etc[1]

A well organized crash cart can save more time during an emergency .which in turn can save a life .some crash carts are organized into drowers with colour code for different types of situation . Drug administration is a fundamental part of every day in nursing profession. No medication is completely safe and protected in this manner. Therefore, nurses need to have an intensive and broad knowledge of the medications and its method of organization in the compelling treatment of patients whose life lies in her grasp.[2]

Human life is very valuable. When any person is admitted to critical care unit, life is critical or dangerous situations. The nurses who face such complex should have expert skills, knowledge and judgment to manage such critical incidents. They need to be updated their knowledge according to modern nursing research and practices. They must be able to apply their knowledge in practice successfully. The nurse who monitor patient continuously in the critical care units acts as drugs administrator and is the coordinator and collaborator of services as well. But the prominent role in emergency situations is a drug administrator's role. [3]

Nurses and doctors are the first in line to provide life support and resuscitation. they should always be clearly aware of the placement of the emergency cart and their contents and their use. Staff must be familiar with the location of all resuscitation equipment within their working area A "Crash Cart" is a mobile, compact cart, equipped with various medical aid tool. The cart consists of items such as a defibrillator, medications, a suction pump, and other life-saving equipment. The function of crash carts is to provide a mobile station within the hospital that contains everything needed to treat a life threatening situation.[4]

The advantage of mobility is that it allows the treatment to come to the patient when

Needed It is often the nurse's role to undertake the routine checking of the resuscitation trolley and cardiopulmonary equipment. As nurses play a major role in the provision of health care, it is the nurses who frequently discover patient with cardiac arrest and it is necessary for them to restock the crash cart after every shift, verifying the presence and expiry date of every item Crash cart must be check by the senior nurse or sister incharge. Nurses play an integral role in the management in intensive care unit . In inpatient facilities, nurses are at the patient's bedside 24 hours/day and are likely to be the first to respond and manage initial treatment during an emergency.[5]

An organized crash cart can bring a sense of structure to a potentially chaotic situation. By standardizing every crash cart, time and confusion can be saved, which in turn may save a life during an emergency situation. This approach streamlined the process of restocking the medication component of the crash carts by the pharmacy department.[6]

Emergency Nursing is a nursing specialty in which nurse's care for patients in the emergency or critical phase of their illness or injury. In contrast to practically every other specialty of nursing, in which a patient arrives with a diagnosis applied by a physician and the nurse, must manage the patient's care according to that diagnosis, emergency nurses work with patients in whom a diagnosis has not yet been made and the cause of the problem is not known. Emergency nurses frequently contact patients in the emergency department before the patient sees a physician. In this situation, the nurse must be skilled at rapid, accurate physical examination, early recognition of life-threatening illness or injury, the use of advanced monitoring and treatment equipment, and in some cases, the ordering of testing and medication according to "advance treatment guidelines" or "standing orders" set out by the hospital's emergency physician staff. Emergency nurses most frequently are employed in hospital emergency departments, though they may also work in free-standing urgent care clinics.[7]

Crash cart is a specially designed trolley, used for transporting and dispensing medicines and equipment's at the emergency site for participating in life saving measures. Crash carts are located in areas of patient care in case of a life-threatening occurrence. Physicians, nurses, pharmacists, and respiratory therapists must become familiar with the contents of this cart. It contains necessary equipment's to handle an emergency. A crash cart is enabling healthcare providers to manage medical emergencies easily and confidently.[8]

The cart is characterized by being easily movable and readily accessible into all sides of the cart for quickly viewing and removing equipment and drugs during a crisis. The first cardiac crash cart was created at Bethany Medical Centre in Kansas City, Kansas. One of the doctor's fathers fabricated the first crash cart. It contained an Ambu-bag, defibrillator paddles, a bed board and Endo-tracheal tubes. A crash cart or code cart (crash trolley in UK medical jargon) is a set of trays/drawers/shelves on wheels used in hospital emergency rooms for transportation and dispensing of emergency medication/equipment at site of medical/surgical emergency for

life support protocols like Advanced Cardiac Life Support/Advance Life Support (ACLS/ALS), Paediatric Advanced life Support [PALS] to potentially save someone's life.[9]

BACKGROUND:

Thousands of an emergency departments operated in the United State, seeing millions of patients each year. In 2003 report in emergency department crowding .we reported on extent of crowding in metropolitan areas .Researchers have used three indicators-diversions wait time and boarding. In examining emergency department crowding between 2001 -2006 according to NCHS estimates, the number of emergency departments operating in the United State range from about to 4600 to 4900. During the same period the estimated number of visits to U.S emergency department exceedes107 millions visits each year ranging from about 107 million visits in 2001 to about 119 million visits in 2006.[31]

The hospital emergency departments are a major part of the health care safety net.of the estimated 119 million visits to the U.S emergency departments in 2006.over 40 percent paid for by federally supported programes.31

Background information identifies and describes the history and nature of a well-defined research problem with reference to the existing literature. The background information should indicate the root of the problem being studied, its scope, and the extent to which previous studies have successfully investigated the problem. The background of the study informs the readers about the main topic of your paper. Theresearch context generates the interest of the target audience by providing a detailed analysis of the problem.

The successful management of cardiopulmonary emergencies revolves around the optimum utilization of the golden hour, so that the patient gets the best possible advantage at survival. Aim of the study was to perform gap analysis of crash carts in the emergency of a tertiary care teaching hospital by comparing the salient parameters with standards listed by Resuscitation Council UK (for equipment) and National Accreditation Board of Hospitals and health care providers (for management of medication). Further, to assess the improvement in compliance with the simple intervention of educating staff regarding protocols.[32]

As the field of emergency medicine grows worldwide the importance of an Emergency Department Crash Cart (EDCC) has long been recognized yet there is paucity of relevant peer reviewed literature specifically discussing EDCCs or proposing detailed feature for an EDCC

suitable for both adult and pediatric patients.[7]

Crash Cart is an essential part of an emergency procedure in hospital. Organized crat can bring a sense of structure to potentially chaotic situation.[7]

The study with the aim of Emergency Department Crash Cart (EDCC).There were a total of 277 results, with 192 unique results and 85 duplicates. After careful review by two independent reviewers, all but four references were excluded. None of the four included articles described comprehensive contents of equipment and medications for both the adult and pediatric populations. This article describes in detail the final four articles specific to EDCC, and proposes a set of suggested contents for the EDCC. They conclude that systematic review shows the striking paucity of such a high impact indispensable item in the ED. They hope that their EDCC content suggestions help enhance the level of response of EDs in the resuscitation of adult and pediatric populations, and encourage the implementation of and adherence to the latest evidence-based resuscitation guidelines.[10]

The study with the aim of the successful management of cardiopulmonary emergencies revolves around the optimum utilization of the golden hour, so that the patient gets the best possible advantage at survival. Perform gap analysis of crash carts in the emergency. They found that the root causes of non-adherence to standardization were design of the area and of the cart, amount of workload which led to neglect of labelling, documentation protocols resulting in decreased accountability and inefficient monitoring. This impacted the adequate provision of content and functionality of the items in the crash carts. Human factor engineering in the form of customization of crash carts for cognitive ergonomic design, clarity and awareness of guidelines among the nursing staff i.e. ‘first responder’ went a long way in improving compliance to standards.[11]

Human factor engineering supplemented by usage of sub-trolleys, along with increasing sensitivity and awareness to standard protocols, can help achieve maximum compliance in terms of the effective functioning of crash carts in the emergency.[9]

The study was crash cart or code cart (crash trolley) or "max cart" is a set of trays/drawers/shelves on wheels used in hospitals for transportation and dispensing of emergency medication/equipment at site of medical/surgical emergency for life support protocols to potentially save someone's life. The cart carries instruments for cardiopulmonary resuscitation and other medical supplies while also functioning as a support litter for the patient. They concluded that this study was conducted to assess the effect of structured teaching programme on knowledge regarding crash cart system among staff nurses. The objectives of the study were to assess the level of knowledge of staff nurses regarding crash cart system, assess the effectiveness of structured teaching programme on crash cart system and to find the association between level of knowledge and selected demographic variables. So the structured teaching programme on crash cart system had effectiveness in imparting knowledge. Study findings also revealed that the total years of experience and age of subjects has significant association with knowledge level, which is significant.[13]

The aim of the study is to assess the effectiveness of structured teaching programme on knowledge regarding utilization of crash cart in hospitals among 4 th year b.sc nursing students of selected nursing colleges in Pune city. They have found that researcher applied paired t-test to check hypothesis. Corresponding p-value was 0.000, which is small (less than 0.05), null hypothesis is rejected. Fisher's exact test for association between knowledge and selected demographic variables since all the p-values are large (greater than 0.05), none, of the demographic variable was found to have significant association with knowledge of fourth year B.Sc. nursing students on utilization of Crash cart and concluded that Structured teaching programme is found effective to increase the knowledge score of 4th year B.sc nursing students regarding utilization of crash cart in hospital.[14]

The aim of study to assess the readiness of general emergency departments (EDs) in academic hospitals in the central region of the Kingdom of Saudi Arabia (KSA) to manage Pediatric patients using an international tool: The American Academy of Pediatrics ,American College of Emergency Physicians, and Emergency Nurses Association guidelines, which include facilities, personnel, safety, and other components .They found that 437,548 patient visits were recorded in 2015 in four academic EDs served by 176 beds. 193 parameters as well as basic demographic data were evaluated. The average travel time from an academic ED to an affiliated Pediatric ED was 4.2 min (standard deviation: 1.25). Only two centers had a dedicated pediatric resuscitation bed and none had a separate pediatric crash cart. Overall performance for all centers was 53% in all test parameters. Average scores were 75% for administration and staffing and 49.6% for equipment and medications. None of the centers had a weighing scale or a hypothermia monitor, and all centers neither had policies for family centered care nor care of children during disasters, and concluded that Evaluation of academic EDs in the central region of the KSA using an international tool revealed low overall scores with critical components needed for pediatric emergency care missing.[12]

NEED OF STUDY:

There is reason behind everything in nature

ARISTOTLE

It is well known that crash cart system is an integral part of system of emergency procedure in any hospital. but it is felt that this system is not used to its potential in most of the hospital. During emergency situation nurses are left with confusion and hurry in getting the emergency medications. A well organised crash cart can save more time and confusion during emergency which in turn can save the life. Some crash carts are organised into drawers with colour code for different type of situations.

Defibrillator goal is give shock to the heart and it will help for survival of person .In endotracheal intubation equipment the tube allows artificial respiration equipment to take over

the job of breathing for the patient of life saving equipment.

Here it is felt that study was needed to assess the knowledge about full potential of crash cart system among second year and third year nursing students in selected nursing collages. This would help in bringing out the need for organized crash cart system awareness in nursing students on the need and importance of crash cart system

The crash cart is characterized by being easily movable and readily accessible into all sides of 9the cart for quickly viewing and removing equipment and drugs during a emergency situation. It is often the nurse's role to undertake the routine checking of the resuscitation trolley and cardiopulmonary equipment. In many institutions the nurses do not play only a supportive role, but they also manage initial treatment while the patient's physician is in route to the location of the emergency.[4]

A "Crash Cart" is a mobile, compact cart, equipped with various medical aid tools (used mainly for cardiac emergencies). The cart consists of items such as a defibrillator, medications, a suction pump, and other life-saving equipment. Each floor of the Detroit VA has a "Crash Cart" that is used only in the event of a Code Blue Emergency. These days, the Cart is very organized, but not too long ago, this was not the case.[22]

In past years, there have been various issues with efficiency and organization of the "Crash Carts". The two main issues prior to its reinvention and revamping, were that (1) the materials on the cart were not easily found, and (2) there were no clear instructions on how to use critical items on the crash cart. There were also issues with over-stuffing of items, and the excessive shifting of various items when the cart was on the move, or even when the drawers of the cart were opened and shut. Knowing that the most critical aspects of the "Crash Cart" organization were time and access to materials, the Detroit VA's Systems Redesign Team was asked to help. The team lives by what they call the "5 S's": Sort, Strengthen, Shine, Standardize, and Sustain. The Detroit VA's Systems Redesign Team will take an issue or problem, break it down to its core elements, and then sort those elements. Once that is done, they figure out where exactly these elements can be improved upon, and become the most effective. Once that is developed, they then figure out how to organize it in the neatest and cleanest way. They then make the things they sorted, strengthened and shined, the more effective way of doing things, in other words, it becomes the new standard. Finally once the first "4 S's" are complete, it comes down to simply sustaining that standard, as well as always striving to better it, improve upon it and update it.[23]

In collaboration with Renee Peterson, Assistant Chief of Nursing Services, the Detroit VA's Systems Redesign Team revamped the cart to what it is today. They brought down the cumbersome number of 37 items to a more manageable 23. Using various bins within the medical drawers, the issue of sliding and the mixing up of various medical tools and medicine was addressed. They also made it significantly easier for the medical tools to be relocated by labelling. where every single item goes directly on the cart. The cart is also loaded with various

instruction books for first responders. Not only are the lives of clinicians made easier, but the improvements make for better care for our Veteran patients4.These improvements will make using the carts more effective, and more efficient. The Systems Redesign team says that when actually timed, nurses using the cart cut their action time drastically.[23]

Organizing a crash or code cart requires knowing the progression of the "Advanced Cardiac Life Support" process, established by the American Heart Association. Crash carts, found in most health care facilities, have five, seven or nine drawers containing supplies used when responding to a life-threatening emergency. Found in strategic locations throughout the hospital or health care facility, crash carts should be easily accessible to health care providers, inventoried, and restocked on a regular basis.[24]

The investigator had come across many incidents in his experience in nursing profession where many nurses were not having Knowledge regarding crash carts is very important that emergency nurses should develop the skills regarding organization, uses and care of crash carts in hospitals. Hence, from these instincts the investigator was motivated and planned for doing awareness programme with the help of a teaching material.[24]

TITLE:

Effect of structured teaching programme on crash cart management among second year and third year BSC Nursing students.

STATEMENT:

A study to assess the effectiveness of structured teaching programme on crash cart management among second year and third year nursing students in selected nursing college ,Mumbai.

OBJECTIVE:

1. To assess the knowledge regarding crash cart management among second year and third year nursing students before and after structure teaching programme

2. To administer the structure teaching programme on crash cart Management among second year and third year nursing students in selected nursing college, Mumbai.

3. To assess the effectiveness of structured teaching programme on crash cart Management among second year and third year nursing students in selected nursing college, Mumbai. by comparing pretest and post test score.

OPERATIONAL DEFINITION:

STUDY:

According to oxford dictionary, it means the activity of learning or gaining knowledge, either from books or by examining things in the world.

In this study, study means to assess the knowledge of the students.

ASSESS:

According to Oxford dictionary, it means to evaluate or estimate the nature, ability or quality.

In this study, assess means to estimate the effectiveness of students.

EFFECTIVENESS:

According to oxford dictionary, effectiveness means a result of an action or other cause.

In the context of this study, the meaning of effectiveness is the out come of structural teaching program which corresponds to the post test knowledge scores of the topic.

STRUCTURAL TEACHING PROGRAM:

According to oxford dictionary, it refers to a systematically developed instructional program using instructional aids, designed to provide in formation.

CRASH CART :

According to Oxford dictionary crash cart means a movable cart or similar conveyance carrying supplies and equipment for the management of medical emergencies.

In this study the meaning of crash cart is a movable cart in intensive care unit with equipment which helps at the time of emergency management in ICU.

STUDENT:

A person who is studying at school ,college or university.[30]

MANAGEMENT:

According to Oxford dictionary, management means the planning, decision ,organizing , leading, motivation and controlling the human resources, financial,physical and information resources of an organisation to reach its goals efficiently and effectively.

In this study the meaning of Management is arranging the crash cart in systematic order after every shift with emergency medical equipment, supplies and drugs for use by medical personnel during emergency situation.

ASSUMPTION:

1. The students able to understand the crash cart management.

2. The students will be able to gain knowledge about utilisation of organized crash cart system.

LIMITATIONS:

1. The study is limited to second year and third year nursing students in selected nursing college, Mumbai.

2 .The study is limited to students who are willingly to participate in crash cart Management.

ETHICAL ASPECTS:

1. The research problem was approved by research committee of collage.

2. The participants were informed about the purpose of study.

3. Confidentiality was assured.

4. Due permission from authorities was obtained.

5. The individual participant thad the liberty right to with draw from the study without assigning any reason to investigate.

CONCEPTUAL FRAMEWORK:

A conceptual frame work is defined as , "Asset of concepts and the statements that integrate in to a meaningful configuration.

A conceptual model deals with abstracts (concept) that are assembled because of the irrelevance to common theme .A conceptual model is derived from a synthesis of ideas. Which then from a unified and meaning full system in a study the frame work that has its meaningful system and its roots in a specific conceptual model is called conceptual frame work.

It serves three important function in the study.

- It clarifies the concepts in which the study is built.
- It identifies and states the assumptions, hypothesis of study.
- It specifies the relationship among the concepts.

A model is used to denote the symbolic representation of the concepts conceptual framework provides are optional for prediction about relationship among variables in the research study.

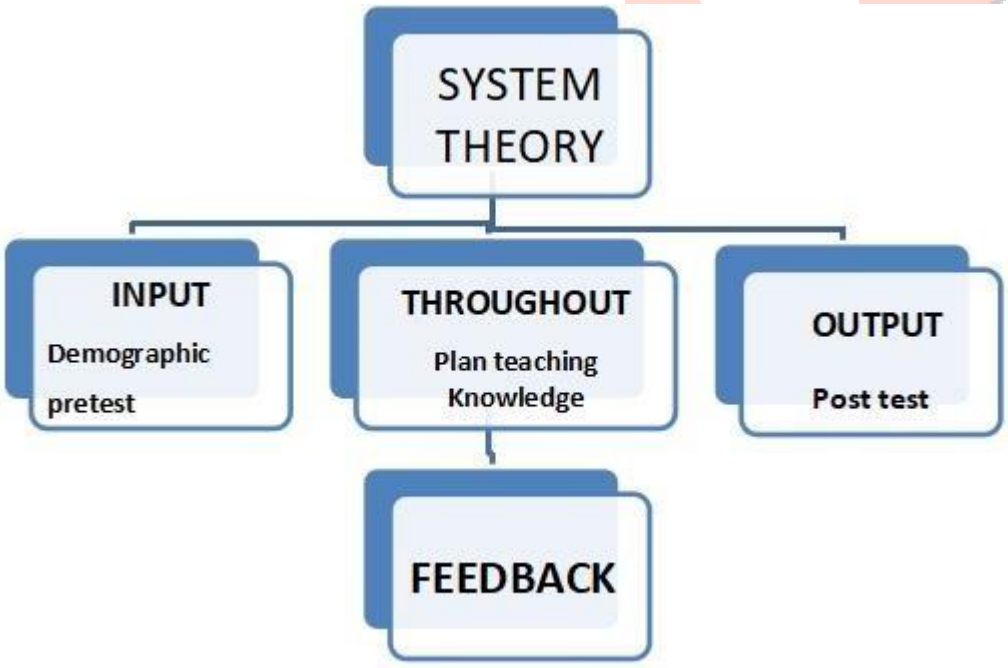


Fig no 1

General system theory has three components:

Input – Refers to material, energy or information that enters in to the system through its boundary.

In this study, input refers to the students, who have some knowledge regarding crash cart Management.

Process – Refers to transformation which enables the input to be transformed in such away that it can be used readily by the system.

In this study, process includes the planned teaching to the students after the pre-test & in post-test again giving the same questionnaire to check the knowledge score.

Output – Refers to energy, information or matter that is transformed to environment.

In this study, output is the improvement in the knowledge of the students regarding crash cart management.

Research Hypothesis:

1. H0 (Null Hypothesis)

There will be no significant effect of planned teaching programme on crash cart management among second year and third year nursing students in selected nursing college, Mumbai.

2. H1 (Research Hypothesis)

There will be significant effect of planned teaching programme on crash cart management among second year and third year nursing students in selected nursing college, Mumbai.

Summary:-

This chapter is a first step towards the solution of research problem. It has deal with introduction, background of the study, problem statement, and objectives of the study, operational definition, and scope of the study, assumptions, limitation, ethical aspects, and conceptual framework

CONCLUSION:

The first chapter of this study explains the introduction, background of the study,problem statement , objective of study , operational definition, scope of study ,assumption, limitations, ethical aspects and conceptual framework.

CHAPTER 2

REVIEW OF LITERATURE

Review of literature is an integral component of any study or research project. This chapter deals with the selected studies, which is related to the objectives of the proposed study. It enhances the depth into the crux of the problem. Literature review troughs light on the studies and their findings reported about the problems of the study. Review of literature is a systematic identification, location, scrutiny and summary of written materials that contain information on research problem.

Review of literature is an essential step in the research project. It provide basis for future investigation, justifies the need for the study, throws light on the need for the study, reveals constraints of data collection and relates the findings from one study to another with a hope to establish a comprehensive study of scientific knowledge in a professional discipline from which valid and pertinent theories may be developed**.**

SECTIN 1: Studies and literature related to the standardization of crash cart

SECTION 2: Studies and literature revealing the advantage of crash cart and its maintenance.

SECTION 1: Studies and literature related to the standardization of crash

This study is conducted by Telesca K narrated.., Hospital pharm in the year 1992 Dec; Data was collected through simple random sampling technique. 15 random observations per crash cart were made in the pre and post intervention phases each over a period of 3 months from (July 2015 to September, 2015),with a total of 180 observations made, covering all three duty shifts, as the emergency department should be ready24 x 7.The aim of the study was that an organized crash cart can bring a sense of structure to potentially chaotic situation. By standardizing every crash cart, time and confusion can be saved during an emergency situation.[11] The result of this study was article describes one hospital's solution to the designed and restocking of crash carts. This approach streamlined the process of restocking the medication component of the crash carts by the pharmacy department. No matter what time of day or night code was called, pharmacy could have the medications replaced within minutes.[32]

This research is conducted by Laufman H, Badner B, ZeinerL.,In the year March-april 1978; The study was carried out in sarvodaya hospital and trinity hoapital.110-113.The Aim of study was every item of which is visible and available without opening drawers for it, and be kept on every nursing station and every special care department of a hospital.[12] The RESULT of this

study was system study was made of the performance criteria of such a cart under conditions which require its use.[33]

This research is conducted by Adams B D, Shih H, Stuffel E, Robinson A .a video based training programme improves defibrillator inspection compliance. A.M. Cardiol in year 2006 FEB 15 ; 578 -579.The missed-inspection rate for defibrillators significantly improved from 8.9% to 6.9% (p= 0.037) after video training program implementation. The missed-inspection rate for crash carts, however, actually worsened from 2.7% before to 8.0% (p = 0.0001). Aim of the study to investigate whether a brief video of how to properly inspect crash carts and defibrillators would improve the quality and frequency of this inspections. The study was a before-after cohort design. The final RESULT was video-based training programme improved the frequency and quality of defibrillator inspections, but not crash cart inspections. It was felt that a short video training programme could be viewed on a ward computer at a convenient time[12]

This study is conducted by Agarwal S, Swanson S, Murphy A, Yaeger K, Sharek P, Halamek L. in year 2005 sept;116(3):326-33.., Aim of study was comparing the utility of a standard pediatric resuscitation cart based on a Broselow tape. It was found that despite less prior experience with the Broselow cart, subjects in the study found it easier to use and preferred it to the standard cart, they located intubation equipment, and naso-gastric tubes significantly faster.[14] The result of the study was 21 subjects, 62% found the broselow cart 'easy' or "very easy" to use vesus 33% for the standard cart. Of the 21 subjects, 67% preferred the broselowcrt, 10% preferred the standard cart, and 23% indicated no performance. Intubation supplies and nasogastric tubes were found significantly faster when using the Broselow cart (mean time: 29.1 and 20 seconds, respectively) versus the standard cart (mean time: 38.7 and 38.2 seconds, respectively). Correct equipment was provided a statistically significant 99% of the time with the Broselow cart versus 83% of the time with the standard cart. Ten percent of the subjects had prior experience with the Broselow cart versus 62% having experience with the standard cart.[29]

This study is conducted by Reynolds HN,Haunt MT, Carlson RW. A policy for louisianian state university health science centre. In year 1998, 260: 3446-3450. The overall mean practice score of the subject was 13.86 .out of 50 subjects 21(42 percent) have unsatisfactory level of practice. Aim of study to make a policy for Louisiana state university science health science center. RESULT:- Central Medical Supply should provide Crash carts on an exchange basis to all patient care areas to initiate emergency lif support measures.[15]

This study is conducted by De Caen AR, Berg MD, Chameides L, Gooden CK, Hickey RW, Scott HF.There were a total of 277 results, with 192 unique results and 85 duplicates. After careful review by two independent reviewers, all but four references were excluded. None of the four included articles described comprehensive contents of equipment and medications for

both the adult and pediatric populations. Pediatric Advanced Life Support in the year 2015 American Heart Association Guidelines Update for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. Circulation 2015;132(18 Suppl 2):S526–42. [34]

SECTION 2 : Studies and literature revealing the advantage of crash cart and its maintenance.

This study is conducted by Manouchehr Saljoughian Aim:-To study on medical emergencies. He states that in addition to supportive measures, quick therapeutic interventions are essential in most cases. Therefore, access to the right medication to resolve the problem is critical. A selection of drug that is most effective and appropriate in these situations are kept in a special cart known as "crash cart" in all hospital departments responsible for patient care. RESULT of the research was The pharmacy departments are responsible for providing these medications and regularly checking them for stability, replacement and expiration dates. The most important indications, contraindications, dosage, and administration of these drugs are reviewed as a reminder for the physicians, nurses and pharmacists who serve on cardiac arrest (code) teams or who are involved in other emergencies.[16]

This study is conducted by Colleen. J. O'Connor, **in the fourth quarter of 2001**, several staff members at St. Marks Hospital recognized the need to simplify and standardize the medications in the crash carts. Aim:- The crash carts contained many medications that were not being utilized and only served to clutter the carts and lead to the potential for medication errors. RESULT:-The medications were also placed in foam containers right side up so that you could not see the label on the container. In addition, Cordarone (aminodarone) was placed in a plastic bag along with a syringe, bottle of normal saline, filter needle and regular needle, which made this medication difficult to identify in a code situation.[35]

This study is conducted by Simon Phaneufet, Aim:- study on the accessibility of medical emergency treatment cart, which is of a generally rectangular configuration and has a pair of opposed sides and a pair of opposed ends, the cart having first and second modules at opposed ends of the cart. RESULT:-The first module may be classed as an airway module and includes means for storing an oxygen container and a plurality of storage drawers; a second module may be classified as a nursing station and has at least one storage drawer moveable into and out of a storage position and which is also mounted so as to be rotatable whereby access to the drawer may be had from a side or an end of the cart. An upper surface has turntable means for receiving a monitor and includes a medicament storage compartment. The cart provides ergonomic access for all members of medical emergency treatment team responding to emergencies such as cardiac arrest.[18]

This study is conducted by Watson conducted a study with the aim of to study the standardize a policy for maintenance of cart. The Hospital Pharmacy and Central Sterile Supply jointly maintain standardized emergency carts throughout the hospital and the Ambulatory Care

Center. The result of the study was all carts with intensive care units and the Emergency Department are standardized and are sealed with an integrity seal. Contents of the standardized cart will be determined on approval of the Patient Care Issues Committee.[19]

This study is conducted by Stewart Taylor conducted a study on crash cart exchange procedure. Anytime the Emergency cart is entered, the integrity seal must be broken. A broken seal signals the need to exchange the cart. Immediately after the cart is used, the staff on the Unit must put a patient label on a Charge Ticket. The unit then returns the used cart to Central Supply and exchanges it for a checked sealed cart.. At the time of exchange, the representative from the unit rechecks the cart with a representative from Central Supply to confirm that all supplies are present. A crash cart receipt slip is signed by both checkers. One copy stays with the cart and one stays in CSS.[20]

A study conducted by Troels Thim,1,2 Niels Henrik Vinther Krarup,1,4 Erik Lerkevang Grove,1 Claus Valter Rohde,3 and Bo Løfgren1 with the aim to use the **(A) Airway, (B) Breathing and, (C) Circulation** structured approach to the assessment of a sick child to provide an overview of the equipment used in resuscitation attempts involving children. It emphasizes that a working knowledge of the resuscitation equipment used in emergency situations is fundamental to the process of checking and preparing it. The article is aimed at students and newly qualified nurses, but may be also useful as revision for more experienced nurses. The result of study wasThe ABCDE approach is a strong clinical tool for the initial assessment and treatment of patients in acute medical and surgical emergencies, including both prehospital first-aid and in-hospital treatment. It aids in determining the seriousness of a condition and to prioritize initial clinical interventions. Widespread knowledge of and skills in the ABCDE approach are likely to enhance team efforts and thereby improve patient outcome.[21]

A study conducted by JB Rousek with the Aim to assess the usability testing and human factors engineering (HFE) principles to create efficient code cart medication drawer modifications to improve code blue medical emergency medication management. A total of 26 health care professionals (13 pharmacists and 13 nurses) were asked to locate items within a code cart medication drawer during two independent simulated code scenarios alternately using either a baseline medication drawer (control; Drawer 1) or a prototype medication drawer (prototype; Drawer 2), which was developed using HFE principles and usability testing. Overall medication retrieval time, wasteful actions, and survey responses were recorded. The results showed that the Drawer 2 had significantly faster trial completion times ($p = .005$) and fewer wasteful actions ($p < .001$) compared to Drawer 1. Participant survey results rated Drawer 2 (prototype) significantly higher (more favorable) for medication drawer visibility ($p < .001$), usability ($p = .011$), and organization ($p < .001$) compared to Drawer I (baseline). The findings demonstrate that HFE and usability applied to code cart design are effective,14 are customizable, and can affect patient safety by saving valuable time and reducing wasted motions (including errors) during code situations.[22]

A study conducted by H Laufman et al. Med Instrum. Mar-Apr 1978. The aim of the study wasto explain the shortcomings of the existing bedside emergency resuscitation carts, which interfere with the rapid, efficient care of the hospitalized patient in a catastrophic episode. A systems study was made of the performance criteria of such a cart under conditions which require its use. The primary result of the study was a new design for a bedside emergency resuscitation cart and a suggested list of emergency medications and equipment, every item of which is visible and available without opening drawers to search for it. It is suggested that such a cart, fully equipped, be kept on every nursing station and in every special care department of a hospital.[23]

Madhav Madhusudan Singh Indian Army conducted the study on EVALUATION OF AVAILABILITY AND EFFECTIVENESS OF CRASH CART IN PUBLIC AND PVT HOSPITALS February 2019. The aim of the study was To evaluate of availability and effectiveness of crash cart in Public and Pvt hospitals. The result was Five multispecialty hospitals were assessed three public and two pvt multispecialty hospital in Meerut and Dehradun. The crash cart of all these hospitals assessed as per crash cart checklist. None of the hospitals were following the standard checklist. The public hospitals were following crash cart policy only in ICU , PICU and OT were all the contents were kept but not in emergency dept and other wards. All the wards of public hospitals were having crash cart but items were missing. It was available in Acute medical, Surgical, PICU, ICU , OT with most of the contents . Both Pvt Hospitals have crash carts in all wards and departments. But completely maintained only ICU , OT , PICU and emergency dept.[24]

A study was conducted by S.Gaikwad in 2015 among 168among intensive care unit nurses on the knowledge of the Crash cart trolley. The investigator administered 31 multiple choices question to 168 intensive care unit nurses from 15 institutions. The mean score was 57%. Although 90%of intensive care unit nurses correctly identify the equipments and not measured it, only 61% were able to measure it correctly. The results of the study indicated that formal training, frequency and exposure to the Crash cart trolley and professional certification in critical care correlated with better score on the questionnaire. Crash cart trolley with its basic emergency medications is often utilized to guide therapeutic interventions, especially in critically ill patients. Critical care nurses practicing in various critical care specialties were invited to participate in a study on knowledge of crash cart trolley. The participants were asked to complete an 18-itemed questionnaire and total scores ranged from 11.1% to 61.1%. The response rate was 17.4% (n = 68). The study concluded that there is lack of knowledge related to essential Crash cart trolley with basic emergency medications.[25]

Amal Saied Taha Refaey conducted the experimental study was performed on among the critical care staff nurse working with critically ill patient, in Benha University, Cairo, Egypt to assess the impact of a designed teaching protocol about advanced cardiac life support. g. The aim of this study was to examine the impact of a designed teaching protocol on nurse's knowledge and practices as regards the advanced cardiac life support at the intensive care

&critical care units at Benha university hospital. Quasi-experimental design (pre-test/post-test)was used in this study; The critical care staff nurses [40] working with critically ill patients in both intensive care &critical care units at Benha university hospital were included in this study. Data were obtained through three main tools; A constructed interviewing questionnaire sheet, observational checklist and hospital resuscitation policy assessment sheet. Method; the program was divided into 23 sessions; it was given in an average of three days per week for eight months with pre-post implementation evaluation. The study was conducted at the critical care and intensive care units of Benha University Hospital. The critical care unit equipped by 22 nurse (9diploma degree nurses, 6 technical nursing school nurse and 7 bacclruate degree nurses), the admission rate to CCU in 2011- 2012 was (1905 patient) (Benha hospital statistics,2012). The intensive care unit equipped by 23 nurse (10diploma nurses, 8 technical nursing school nurse and 5 bacclruate degree nurses). Results of the study revealed the following: (a)The mean knowledge scores of nurses are increased immediately after implementation of the program with a significant statistical difference. This increased level slightly decreased post three months of program implementation. (b) As well, the mean practice scores of the study group subjects was higher immediately after the implementation of the program with a high significant statistical difference compared to the pre-program implementations, this increased level slightly decreased post three months of program implementation. (c) Also, a positive correlation was found between knowledge and practice scores of the study subjects therefore the 3 stated research hypothesis were supported. In conclusion, empowerment of critical care nurses knowledge and practices would have a positive impact upon their knowledge and performance.[26]

This study is conducted by jackychan bill chan, Hoi lam Ho, Kam Ming chan, pui Gay Kan, Hug S Lam. a crossover randomized control trial. Eur J Emerg Med. In year 2016 Aug; 23(4):258-262. Aim of the study wasThe neonatal resuscitation algorithm organized cart is more efficient than the airway-breathing-circulation organized drawer: a crossover randomized control trial. Although there is consensus on the resuscitation of newborns, there is no standardization on how resuscitation equipment should be organized. This might lead to difficulty and inefficiency in retrieval of the right equipment during resuscitation. The neonatal resuscitation carts organized in accordance with the American Academy of Pediatrics (AAP) Neonatal Resuscitation Program (NRP) algorithm might result in more efficient retrieval of resuscitation equipment. Result: A total of 55 individuals participated in this study. The mean length of time required for equipment retrieval from the NRP Cart was significantly less than that from the drawer ($Z=-3.90$, $P<0.01$, median=36.23 s, interquartile range=97 s). In general, the NRP Cart was 32% faster than the drawer when extensive resuscitation equipment was required. All the participants rated the NRP Cart as easier to use than the drawer, with a median score of 4 for NRP Cart and 3 for the drawer ($Z=-4.10$, $P<0.01$, interquartile range=2).[27]

This study conducted by Gabriella A jackette ,Bachar Hamade, Karim A Diab, RashaSawaya, Gilbertabou Dagher EvellineHitti , in the year 2018. The Aim: The Emergency Department Crash Cart: A systematic review and suggested contents ,As the field of Emergency Medicine

grows worldwide, the importance of an Emergency Department Crash Cart (EDCC) has long been recognized. Yet, there is paucity of relevant peer-reviewed literature specifically discussing EDCCs or proposing detailed features for an EDCC suitable for both adult and pediatric patients. The result of the study was There were a total of 277 results, with 192 unique results and 85 duplicates. After careful review by two independent reviewers, all but four references were excluded. None of the four included articles described comprehensive contents of equipment and medications for both the adult and pediatric populations. This article describes in detail the final four articles specific to EDCC, and proposes a set of suggested contents for the EDCC, systematic review shows the striking paucity of such a high impact indispensable item in the ED. We hope that our EDCC content suggestions help enhance the level of response of EDs in the resuscitation of adult and pediatric populations, and encourage the implementation of and adherence to the latest evidence-based resuscitation guidelines.[10]

This study is conducted by Namrata Makkar, Nirupam Maddan,in the year janaury 2016,Aim:The successful management of cardiopulmonary emergencies revolves around the optimum utilization of the golden hour, so that the patient gets the best possible advantage at survival. Aim of the study was to perform gap analysis of crash carts in the emergency of a tertiary care teaching hospital by comparing the salient parameters with standards listed by Resuscitation Council UK (for equipment) and National Accreditation Board of Hospitals and health care providers (for management of medication). Further, to assess the improvement in compliance with the simple intervention of educating staff regarding protocols Result : The root causes of non-adherence to standardization were design of the area and of the cart, amount of workload which led to neglect of labelling, documentation protocols resulting in decreased accountability and inefficient monitoring. This impacted the adequate provision of content and functionality of the items in the crash carts. Human factor engineering in the form of customization of crash carts for cognitive ergonomic design, clarity and awareness of guidelines among the nursing staff i.e. ‘first responder’ went a long way in improving compliance to standards, Human factor engineering supplemented by usage of sub-trolleys, along with increasing sensitivity and awareness to standard protocols, can help achieve maximum compliance in terms of the effective functioning of crash carts in the emergency.[11]

This study is conducted by Alhajjaj,Aldamigh ,in the year 1 st july 2017 with the aim of study to assess the readiness of general emergency departments (EDs) in academic hospitals in the central region of the Kingdom of Saudi Arabia (KSA) to manage pediatric patients using an international tool: The American Academy of Pediatrics, American College of Emergency Physicians, and Emergency Nurses Association guidelines, which include facilities, personnel, safety, and other components. Result: 437,548 patient visits were recorded in 2015 in four academic EDs served by 176 beds. 193 parameters as well as basic demographic data were evaluated. The average travel time from an academic ED to an affiliated pediatric ED was 4.2 min (standard deviation: 1.25). Only two centers had a dedicated pediatric resuscitation bed

and none had a separate pediatric crash cart. Overall performance for all centers was 53% in all test parameters. Average scores were 75% for administration and staffing and 49.6% for equipment and medications. None of the centers had a weighing scale or a hypothermia monitor, and all centers neither had policies for family-centered care nor care of children during disaster. Conclusion : Evaluation of academic EDs in the central region of the KSA using an international tool revealed low overall scores with critical components needed for pediatric emergency care missing.[12]

This study is conducted by Gaikwads,Suresh j ,DrswapnilBhirange, in the year 2019,Aim of the study was crash cart or code cart (crash trolley) or "max cart" is a set of trays/drawers/shelves on wheels used in hospitals for transportation and dispensing of emergency medication/equipment at site of medical/surgical emergency for life support protocols to potentially save someone's life. The cart carries instruments for cardiopulmonary resuscitation and other medical supplies while also functioning as a support litter for the patient. conclusion: This study was conducted to assess the effect of structured teaching programme on knowledge regarding crash cart system among staff nurses. The objectives of the study were to assess the level of knowledge of staff nurses regarding crash cart system, assess the effectiveness of structured teaching programme on crash cart system and to find the association between level of knowledge and selected demographic variables.So the structured teaching programme on crash cart system had effectiveness in imparting knowledge. Study findings also revealed that the total years of experience and age of subjects has significant association with knowledge level, which is significant.[13]

This study is conducted by Aechalakhemnar ,Manishakharkar,YevandgeNagin ,in the year 2017 with the aim of the study is to assess the effectiveness of structured teaching programme on knowledge regarding utilization of crash cart in hospitals among 4 th year b.sc nursing students of selected nursing colleges in Pune city. Result: researcher applied paired t-test to check hypothesis. Corresponding p-value was 0.000, which is small (less than 0.05), null hypothesis is rejected. Fisher's exact test for association between knowledge and selected demographic variables since all the p-values are large (greater than 0.05), none, of the demographic variable was found to have significant association with knowledge of fourth year B.Sc. nursing students on utilization of Crash cart. Conclusion: Structured teaching programme is found effective to increase the knowledge score of 4th year B.sc nursing students regarding utilization of crash cart in hospital.[14]

This study is conducted by Justine B rousek,msussanhallbeck,in the year 2011 with the aim of the studyImproving medication management through the redesign ofthe hospital code cart medication drawer , Effective access to medications during a code is a key component in delivering optimal care and has been found to be a major problem among health care organizations; however, little research has been conducted to improve the efficiency of medication management during a code, Result:Drawer 2 had significantly faster trial completion times ($p = .005$) and fewer wasteful actions ($p < .001$) compared to Drawer 1. Participant survey results rated Drawer 2 (prototype) significantly higher (more favorable) for

medication drawer visibility ($p < .001$), usability ($p = .011$), and organization ($p < .001$) compared to Drawer I (baseline), Conclusion: The HFE redesign concepts incorporated into Drawer 2 (consisting of visibility, grouping, and organization) produced successful, low-cost, and generalizable modifications that can improve patient care.[16]

This study is conducted by JM Lavelle ,K N shaw,at 1993 with the aim of is emergency department cardiopulmonary resuscitation or intensive care unit cerebral resuscitation indicated,To report the neurologic outcome of a series of near-drowning victims treated with supportive management without aggressive cerebral resuscitation. to identify patient characteristics that indicate prognosis and guide therapy at the scene, the Emergency Department, and in the intensive care unit (ICU). Result: warm-water near-drowning patients, 56% survived neurologically intact, 32% survived in a persistent vegetative state, and the remaining 32% died. Unreactive pupils in the Emergency Department and a Glasgow Coma Score of < or = 5 on arrival to the ICU were the best independent predictors of poor neurologic outcome (odds ratio and 95% confidence intervals 374 [17 to 16,000] and 51 [5 to 2,200], respectively). However, no predictor was absolute and two nonhypothermic patients who arrived to the Emergency Department without vital signs, requiring cardiopulmonary resuscitation and cardiotonic medications, had full neurologic recovery. Conclusion: the cast further doubt on the utility of aggressive forms of cerebral monitoring and resuscitation and emphasize the need for initial full resuscitation in the Emergency Department.[17]

CHAPTER 3

RESEARCH METHODOLOGY

"Be active! Take on responsibility! Work for the things you believe in. If you do not, you are surrendering your fate to others."

— Dr. A.P.J. Abdul Kalam

Research methodology refers as a highly intellectual human activity used in the investigation of nature and matter and deals specifically with the manner in which data is collected analyzed and interpreted.

Research methodology deals with the methodology used in the present study which includes the research approach setting of the study, Plan for data collection, data gathering process and the plan for the data analysis.

The chapter deals with the description of methods and different steps use during data collection and organization of the data it includes research approach, research design, identification of target and accessible population, sampling techniques, sampling size inclusion and exclusion criteria for sample, tool preparation reliability and validity of the tool, feasibility of the study. Descriptive study data collection, method and plan for data analysis.

In this present study; the investigator intends to assess the effectiveness of structured teaching programme on crash cart management among second year and third year nursing students in selected nursing college,mumbai".

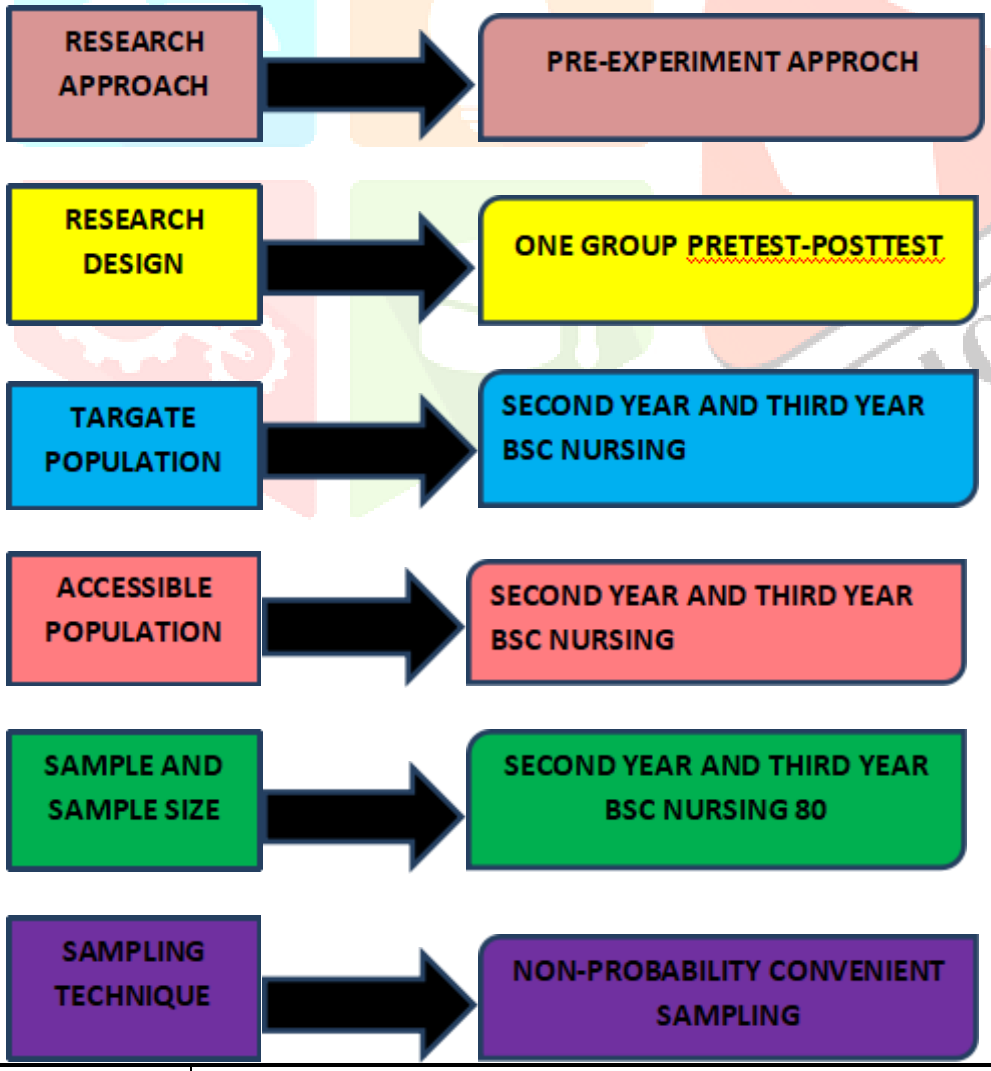
RESEARCH APPROACH

Research approach casts light on the nature and purpose of the study.

According to Pilot and Hungler, "Research approach refers to the way in which the researchers plan or structures the research process. It is a set of the flexible spot designed to keep the research in right direction. This scientific process helps to acquire dependable and useful information".

The research approach explains the basic procedure for the conduct of research enquiry. it involves the description of the plan to investigate the phenomenon under study in a structured (quantitative), unstructured (qualitative) or a combination of two methods (quantitative-qualitative integrated approach). Therefore, the approach helps to decide about the presence or absence as well as manipulation and control over variables.

In the present study, a quantitative-experimental approach was used to assess the effectiveness of planned teaching programme on knowledge regarding crash cart management among second year and third year nursing students



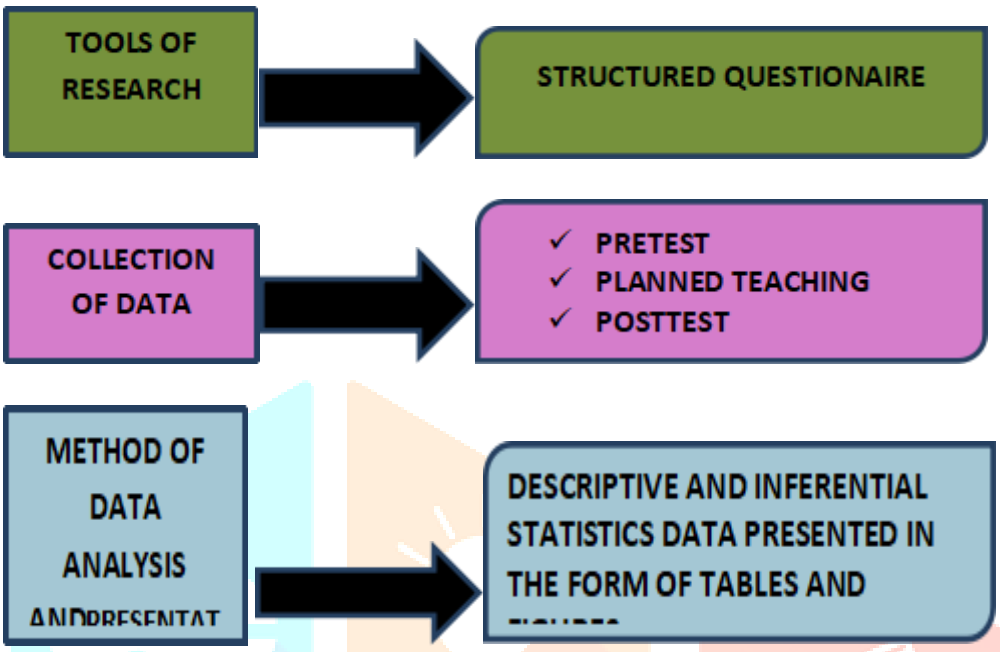


FIG.2 THE SCHEMATIC PRESENTATION OF STUDY

RESEARCH DESIGN:

Research design can be defined as a blue print to conduct a research study, which involves the description of research process, study setting, sample size, sampling technique, tool and method of data collection and analysis to answer a specific research question or for testing research hypothesis.

The investigator's overall plan for obtaining the answers to research questions for testing the hypothesis is referred to as research design.

Research design is the conceptual structure within which the research is conducted. It constitutes the blue print for collection, measurement and analysis of data. As such the design includes what researcher will do in order to test hypothesis its operational implication to final analysis.

The research design incorporates the most important methodology decisions that a researcher makes in conducting a research study. It depicts the overall plan for organization of scientific

investigation. It helps the researcher in selection of subject and observation of the type of programmed on knowledge regarding statistical analysis to be used to interpret the data.

In the present study a pre-experimental one group pre-test and post-test design was used to assess the effectiveness of structured teaching on crash cart management among second year and third year BSC nursing students.

Table 1. Schematic representation of pre-experimental one group pre-test and post-test design.

GROUP	PRE-TEST	TREATMENT	POST TEST
Second year and Third year BSC nursing students	Structured questionarre regarding crash cart management	Plan teaching programme on crash cart management	Structured questionare regarding crash cart management

Key:

O1: Pre-test

X: Treatment (Structured Teaching Programmed)

O2: Post-test

The pre-experimental one group pre-test and post-test is used in the following sequence:

Pre-test: By using structured teaching questionnaire of crash cart management.

Intervention: Conduction of structured teaching programmed on crash cart management among second year and third year bsc nursing students

Post-test: By using structured teaching questionnaire of crash cart management.

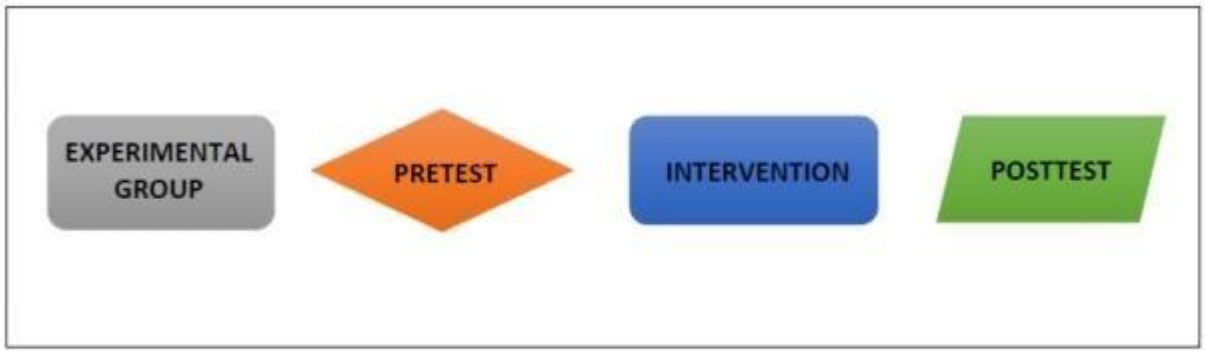


Figure: 3 Showing the Research Design Used in the Present Study

VARIABLES:

Variables are qualities, properties, or characteristics of person, things, or situation that change or vary. A variable is defined as 'a concept or abstract idea that can be described in measure able terms. In research, this term refers to the measure able characteristics, qualities, traits or attributes of a particular individual, object, or situation being studied'. Variables are classified based on their nature, actions and effects on the variables.

Following variables are used in this study:

1. An independent variable:

It is a stimulus or activity that is manipulated by investigator to create the effect on the dependent variable. In this study structured teaching programme is an independent variable.

2. A dependent variable:

It is the outcome or response due to the effect of the independent variable, which investigator wants to predict or explain.

In this study, knowledge regarding crash cart management among second year and third year BSC nursing students.

SETTING OF THE STUDY:

Setting refers to the area where the study was conducted. It may natural setting or laboratory setting depending upon the topic and investigator's choice.

The present study was conducted at the selected nursing college in mumbai.

IDENTIFICATION Of TARGET AND ACCESSIBLE POPULATION:

POPULATION:

Population is the entire aggregation of cases that meet a designed set of criteria. Population is a group whose members possess specific attributes that a researcher is interested for the study.

The population for the present study was second year and third year nursing students in selected nursing college.

TARGET POPULATION:

According to Pilot and Hungler (1999) 'the target population refers to the population that the researcher wishes to study and make generalization'.

In the present study the target population consisted of second year and third year BSC nursing srudents in selected nursing college.

ACCESSIBLE POPULATION:

It is the aggregate of cases that confirm to designated criteria and are also accessible as subjects for a study.

Selected Nursing colleges for present study was the Second Year and Third year B.Sc. Nursing Student at selected Nursing college, who were accessible as subjects to the investigator.

SAMPLE:

According to Pilot and Hungler 'A sample is the subset of a population selected Nursing college to participate in the study. In the present study the Second Third Year B.Sc. Nursing Student at selected Nursing collegethose had fulfilled the designated criteria were the samples for the study.

SAMPLE SIZE:

The sample size for the present study was 80.

Inclusion criteria:

Second Year and Third year B.Sc. Nursing Student

-Willing to participate in the study.

-Able to understand Hindi or English.

Exclusion criteria:

B.Sc. Nursing Student

- 1st year and Final year B.Sc. Nursing Students.

- Not willing to participate in the intended study.

SAMPLING TECHNIQUE:

Sampling is a process of selecting a subset of population in order to obtain information regarding a phenomenon in a way that represents the entire population. The process of sampling makes it possible to draw valid interferences on generalization based on careful observations of variables within a relatively small proportion of population.

In the present study the investigator used non-probability convenient sampling.

TOOL USED FOR THE STUDY:

A tool is an instrument or equipment used for collecting data. Data collection tools are the procedures and instruments used by the researcher to observe or measure the key variables in the research problem.

The technique used for data collection was self-report method with the help of structured questionnaire, a method of gathering self-report information from respondents through selfadministration of question in a paper and pencil format also referred to as self-administered questionnaire.

In this study structured questionnaire was used to measure knowledge regarding crash cart management.

DEVELOPMENT OF THE TOOL (TOOLPREPARATION):

A structured multiple choice questionnaire was developed/prepared to assess the knowledge of Second Year and Third year B.Sc. Nursing Student about Crash Cart Management.

The tool was prepared after discussion with experts and on the personal experience of the Investigation.

DESCRIPTION OF THE TOOL:

The aim of the study to assess the knowledge regarding crash cart management among Second year and Third year BSC nursing students.

Section- A: Demographic details of the Second Year and Third year B.Sc. Nursing students.

This section contains 4 items for obtaining the information of Second Year and Third year B.Sc. Nursing Student such as name, age, knowledge and source of information about Crash Cart Management.

Therefore the total score was 4.

Section B: Knowledge regarding crash cart management.

This section includes 20 questions regarding Crash Cart Management. Each Question in this section with correct answer scores 1 (one mark) and there is 0(zero mark) for wrong answer.

1. Explain the meaning of crash cart.

2. Explain the purpose of crash cart.

3. Explain the function of crash cart.

4. Explain the importance of crash cart checklist.

5. Explain the things are included in the crash cart.

6. Explain the policies of crash cart.

7. Explain how many times crash cart must be check?

8. Explain the crash cart must be check by?

9. Explain the whichequipments are present on the side of the cart.

10. Explain which equipments are present on the top shelf?

11. Explain the first drawer of crash cart contain?

12. Explain the emergency drugs are present in the first drawer.

13. Explain the second drawer of crash cart contains.

14. Explain the third drawer of crash cart contains.

15. Explain the fourth drawer of crash cart contains.

16. Explain how many times defibrillator(AED) must be check for expiry date?

17. Explain the pediatric equipments present in the crash cart.

18. Expainthe nursing responsibility of crash cart management?

19. Explain the nurses responsibility while arranging the medication in crash cart.

20. Explain the nursing consideration in crash cart.

Therefore the total score was 20.

VALIDITY :

Validity refers to the degree to which an instrument measures what it is supposed to measuring. Validation of the content of tool was done by obtaining responses from the experts. The experts were requested to give their opinion and suggestions regarding the relevance and appropriateness of the tool. Based on the inputs from the experts, statistician and in consultation with the guide the tool was modified to make the more appropriate for the intended purpose.

DEVELOPMENT OF STRUCTURED TEACHING PROGRAMME:

The main objective of the present study was to assess the effectiveness of structured teaching programmed on the level of knowledge among second year and third year BSC nursing students. Therefore, the structured teaching programed was developed by the investigators with a very keen attitude. Investigator referred various books, internet sites, libraries for collecting the relevant information to be put into the structured teaching programed.

The structured teaching programed covered the following major aspects in crash cart management.

- Definition of term crash cart
- Explain the functions of crash cart.
- Discuss the importance of checklist in crash cart.
- Describe the general checklist for mrdical supplies on crash cart.
- Enlist the policies of crash cart.
- Explain the purpose of crash cart.
- Describe the arrangement of crash cart.
- Discuss the nursing consideration.

RELIABILITY OF THE TOOL

Reliability concerns a measures accuracy. An instrument is reliable to the extent that it measures reflect true scores that is, to the extent that measurement errors are absent from obtained scores.

Reliability is considers with consistency, accuracy, precision, stability, equivalence and homogeneity.

PILOT STUDY

A pilot study is a small scale version or trial run designed to test the method to be used in a larger, more rigorous study that is main research study or parents study.

It is a small experimental designed to test logistics and gather information prior to a large study, in order to improve the latter's quality and efficiency. A pilot study can reveal deficiencies in the deficiencies in the design of a proposed experiment or procedures and these can then be addressed before time and resources are expended on large scale studies.

The requisite permission was taken from the concerned authorities.

The pilot study was conducted in the month of February. The period was from 09/02/2022 to 16/02/2022. The investigator conveniently selected 5 samples. Pre-test was administered following which the planned teaching program was conducted. After the weeks' time the subjects were administered with post-test.

The data gathered through the pilot study was analyzed, which showed that there was a significant effect of planned teaching programed on the knowledge regarding Crash cart management.

DATA GATHERING PROCESS:-

Methods of Data Collection:

The various steps and strategies used for gathering data and analyzing data in a research investigation are known as the methods of data collection.

The investigator used questioning (self-report) and multiple choice scale as a data collection method to collect data for the present study.

Duration of Data Collection:

The investigator did the data collection for the present study from 17/02/2022 to 23/02/2022.

Steps Followed During The Data Collection:

The investigator had been through the following steps to gather the data for the present study:

- Procuring the permission for conducting the research study
- The investigator took the permission from respective authorities to carry out the data collection at respective areas.
- Selecting the study samples:

The investigator, after getting information, selected the samples from selected areas in metropolitan city by convenient sampling method.

- Pre-test:

A pre-test in the form of 20 questionnaires was administered to the group.

Structured Teaching Programme:

The Investigator delivered the structured teaching programme to the same day that of pre-test.

- Teaching: structured teaching programme conducted on the Bsc Nursiing students
- Post-test:

The investigator carried out post-test following pre-test after 5 days.The data collection process ended with the data analysis and interpretation.

PLAN FOR DATA ANALYSIS:

Designing and implementing data analysis plan will be based on the specific objectives of the study. Investigator planned to analysis the data in the following way.

- ✓ Designing and implementing data analysis planed will be based on the specific objectives of the study.
- ✓ The demographic data of the participant was analyzed using the frequency and percentage method.

- ✓ The overall knowledge of second year and third year BSC nursing students regarding crash cart management in terms of frequency and percentage method.
- ✓ Pre-test and Post-test knowledge and practice was analyzed using post-test presentation in the form of table.

SUMMARY:

This chapter discuss about methodology used for the study. This chapter research methodology consists of research approach (quantitative), research design (pre-experimental one group pre-test and post-test), variables, setting of the study, target population, accessible population, sample, sample size, criteria for sampling, sampling technique, tool used for the study, development of tool, description of tool, validity and reliability of the tool, development of structured teaching programme, feasibility of the study, pilot study, data collection process, and the plan for data analysis.

CHAPTER 4

Dreams transform into thoughts
and thoughts result in action."
— Dr. A.P.J. Abdul Kalam

This chapter deals with the analysis of the sample and interpretation of data to asses the second year and third year BSC nursing students knowledge regarding crash cart management.

According to Pilot (2007) analysis helps a researcher to make a sense of quantitative information. Statistical procedure enable researcher to summarize, organize, evaluate, interpret and communicate numeric information.

In order to find a meaningful answer to the research questions, the collected data must be processed, analyzed in some coherent fashion, so that patterns and relationship can be discerned.

The present study, titled "A study to assess the effectiveness of planned teaching programmed on knowledge regarding crash cart management among second year and third year nursing BSc students in selected nursing college mumbai." was carried out on 80 subjects with a pre-experimental one group pretest-posttest research design. A structured questionnaire was used to assess the knowledge and multiple choice scale used for assess and a planned teaching programed was conducted for the experimental group followed by the posttest of the group. This chapter presents the analysis and interpretation of data collected for the present study. The data collected were organized, edited, coded, analyzed and interpreted using descriptive and inferential statistics.

The objectives of the study were as follows:

1. To assess the knowledge regarding crash cart management among second year and third year nursing students before and after structure teaching programme

2. To administer the structure teaching programme on crash cart Management among second year and third year nursing students in selected nursing college, Mumbai.

3. To assess the effectiveness of structured teaching programme on crash cart Management among second year and third year nursing students in selected nursing college, Mumbai. by comparing pre-test and post-test score.

The hypotheses of the study were as follows:

1. H0 (Null Hypothesis)

There will be no significant effect of planned teaching programme on crash cart management among second year and third year nursing students in selected nursing college, mumbai

2. H1 (Research Hypothesis)

There will be significant effect of planned teaching programme on crash cart management among second year and third year nursing students in selected nursing college, mumbai

DATA ANALYSIS AND INTERPRETATION ORGNIZATION OF FINDINGS:

The data of the present study was analysing, interpreted and were organized under the following:

Section A: Demographic details of the samples.

Section B: Knowledge regarding crash cart management.

Section A

Demographic details of the samples

This section deals with the analysis of the data related to the description of the subjects in frequency and percentage

Table no 2: distribution of subjects according to the age

Table 2 : Age in years

Demographic variable	Frequency	Percentage

Age in years		
18-19	0	0
19-20	3	3.61
20-21	29	34.94
21-22	51	61.45
Total	83	100%

Table 2 shows that the 0% of them had age 17 years of age. 3.61 of them had 19-20 years.34.94% had 20-21 years of age.61.45% of them had 21-22 years of age.

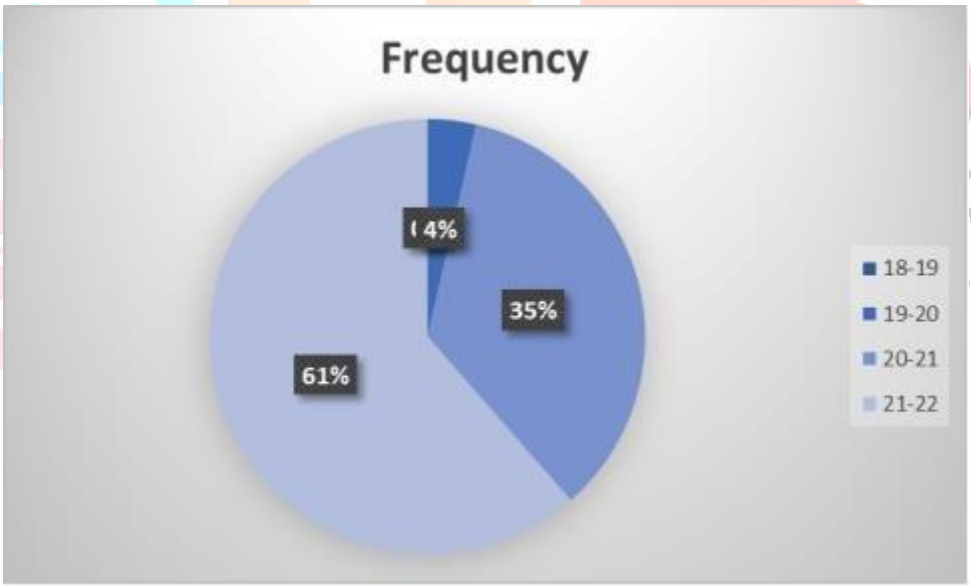


Fig 4

Table 3: Do you have any knowledge about crash cart?

Demographic variable knowledge	Frequency	Percenage

Yes	76	91.57
No	7	8.43
Total	83	100%

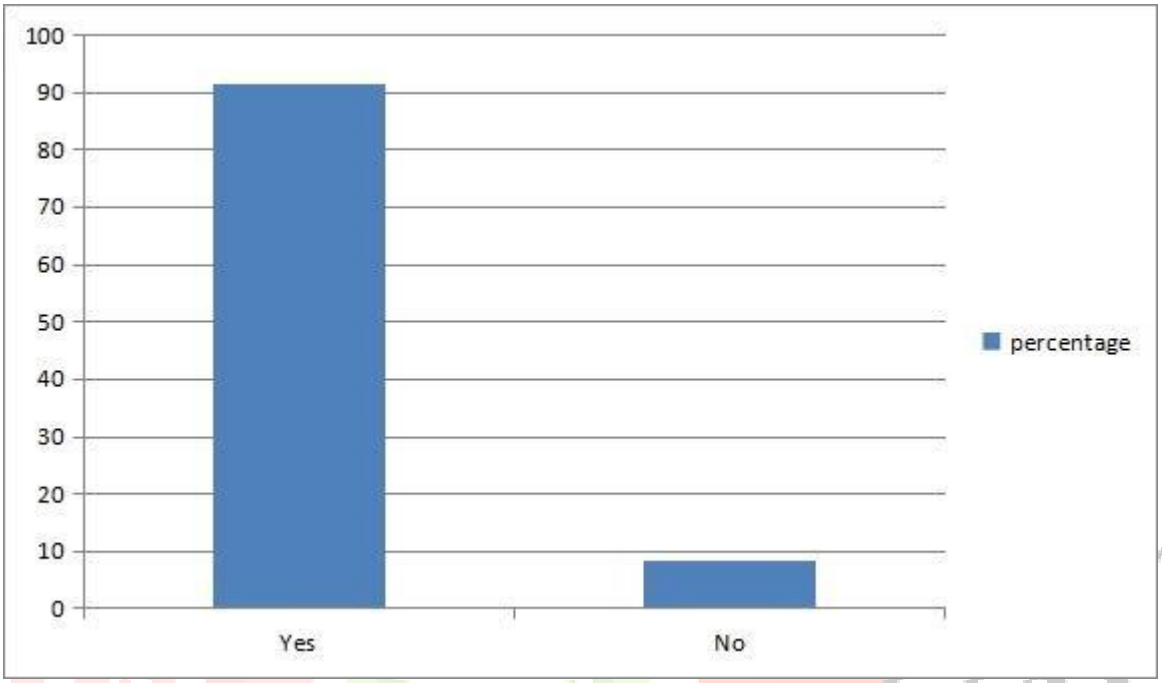


Fig 5

Table 3and figure no 5 shows that 91.57% had knowledge about the topic and 8.43% had no any knowledge about the topic.

Table 4 : Yes, then source of information ?

Demographic Variable	Frequency	Percentage
Social Media	4	4.82
During Clinicals	79	95.18
Mass media	0	0
Total	83	100%

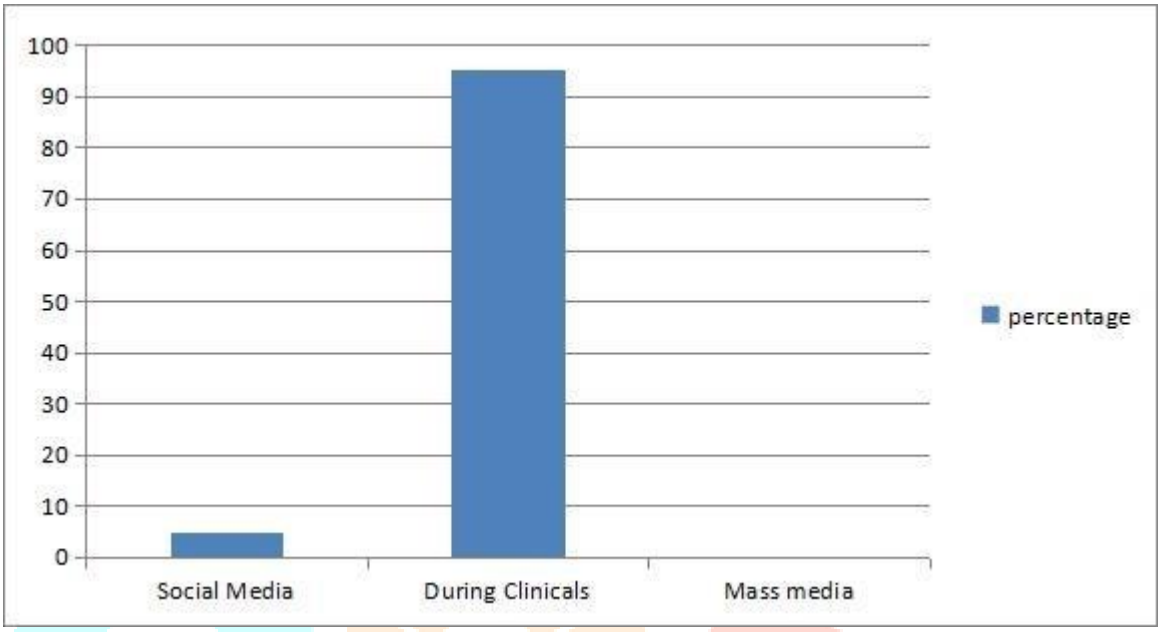


Fig 6

Table 4 and Fig no 6 Shows that the 4.82% had the knowledge about crash vart from social media.95.18 had gain the knowledge during clinicals.0% knowledge gain from the mass media.

Table no 5 : What is the meaning of crash cart?

Knowledge	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
It is storing and transporting vital equipments during emergency	77	92.78	83	100%
It is only for the drug storage	2	2.40%	0	0
It is only for equipment storage	0	0%	0	0
It is helpful for storing the drugs and equipments	4	4.82%	0	0
Total	83	100%	83	100%

Table.no 5 And figure no7 Shows that majority of 92.78% Second year and Third year BSC nursing students had answer the It is storing and transporting vital equipments during emergency.2.40% had the answer it is only for drug storage.0% had answer it is only for equality.4.82% had answer it is helpful for storing the drugs and equipments. In post test majority of 100% second year and third year BSC nursing students had answer the it is storing and transporting vital equipments during emergency.0% of them had answer the it is only for drug storage.0% of them had answer it is only for equipment storage.0% of them had answer it is helpful for storing the drugs and equipments.

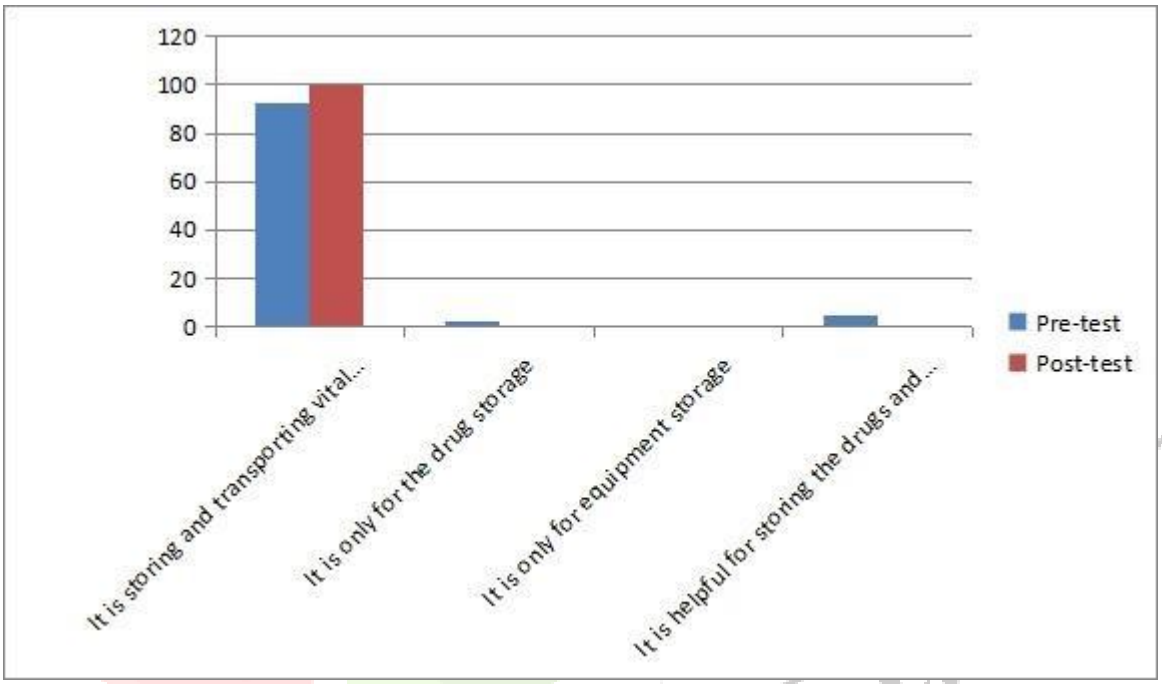


Fig no 7

Table no 6 :What is the purpose of crash cart?

Knowledge	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Save the valuable time and life of patients	9	10.84	0	0
Provide immediate access to the supplies and medications	7	8.43	0	0

Fascilitiate coordination of emergency equipments	4	4.82	0	0
All of above	63	75.9	83	100
Total	83	100%	83	100%

Table no 6 And figure 8 Shows that 10.84% had answer the save valuable time and life of patients.8.43% of them had answer the provide immediate access to supplies and medications. 4.82% of them had answer the fascilitate coordination of emergency equipments.75.9% of them had answer the all of above. In posttest majority of second year and third year BSC students had answer the all of above.0% of them had answer the save the valuable time and life of patients.0% of them had answer the provide provide immediate access to the supplies and medications.0% of them had answer the fascilitate coordination of emergency equipments.

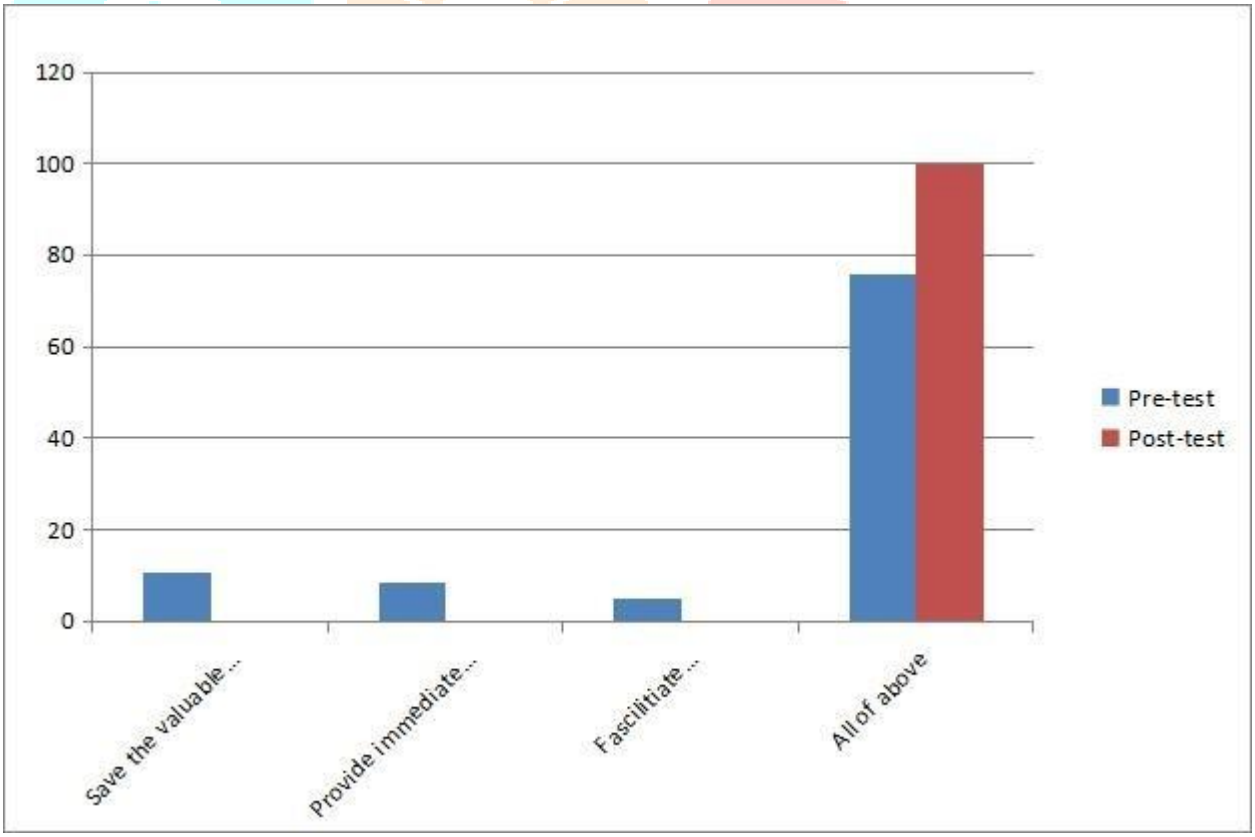


Fig no 8

Table no 7:What are the functions of the crash cart?

Knowledge	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
To provide mobile station in hospital which helps for emergency situation	19	22.89	0	0
It allows the treatment to come to the patient when needed	7	8.43	0	0
Arrangement of equipment in crash cart	3	3.63	0	0
All of above	54	65.06	83	100
Total	83	100%	83	100%

Table no 7 And figure no 9 Shows that in Pretest 65% majority of the second year and third year BSC students had answer the all of above 3.63% of them had answer the arrangement of equipment in crash cart.8.43% of them had it allows the treatment to come to the patients when in needed.22.89 of them had answer the to provide mobile station in hospital which helps for the emergency situation. In posttest majority of 100% second year and third year BSC nursing students had answer the all of above. 0% of them had answer the arrangement of equipment in crash cart.0% of them had answer the it allows treatment to come to the patients when in needed.0% of them had answer the to provide mobile station in hospital which helps for emergency situation.

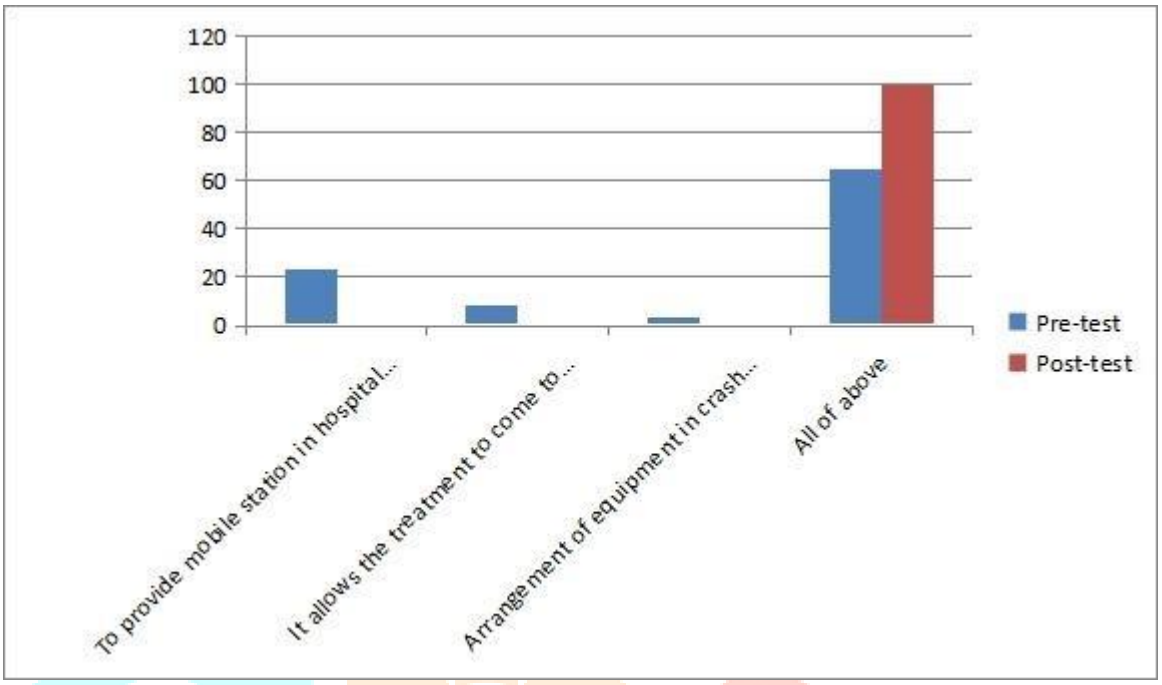


Fig no 9

Table no 8 : What is the importance of crash cart checklist ?

Knowledge	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Helps in keeping things organized and prioritizing the task	13	15.67	0	0
It provides details for every steps in process	2	2.41	0	0
Both a and b	27	32.53	83	100
To save valuable time at the time of emergency	41	49.39	0	0
Total	83	100%	83	100%

Table no 8 and figure no 10 Shows that in Pretest 49.39% of majority second year and third year BSC nursing students had answer the to save valuable time at the time of emergency.32.53% of them had answer the both a and b.2.41% of them had answer the it provides details for every steps in process.15.67% of them had answer the helps in keeping things organized and prioritising the task. In post test majority of 100% second year and third year BSC nursing students had answer the both a and b.0% of then had answer the to save the valuable time at the time of emergency.0% of then had answer the to provide details for every steps in process.0% of them had answer the helps in keeping things organized and prioritising the task.

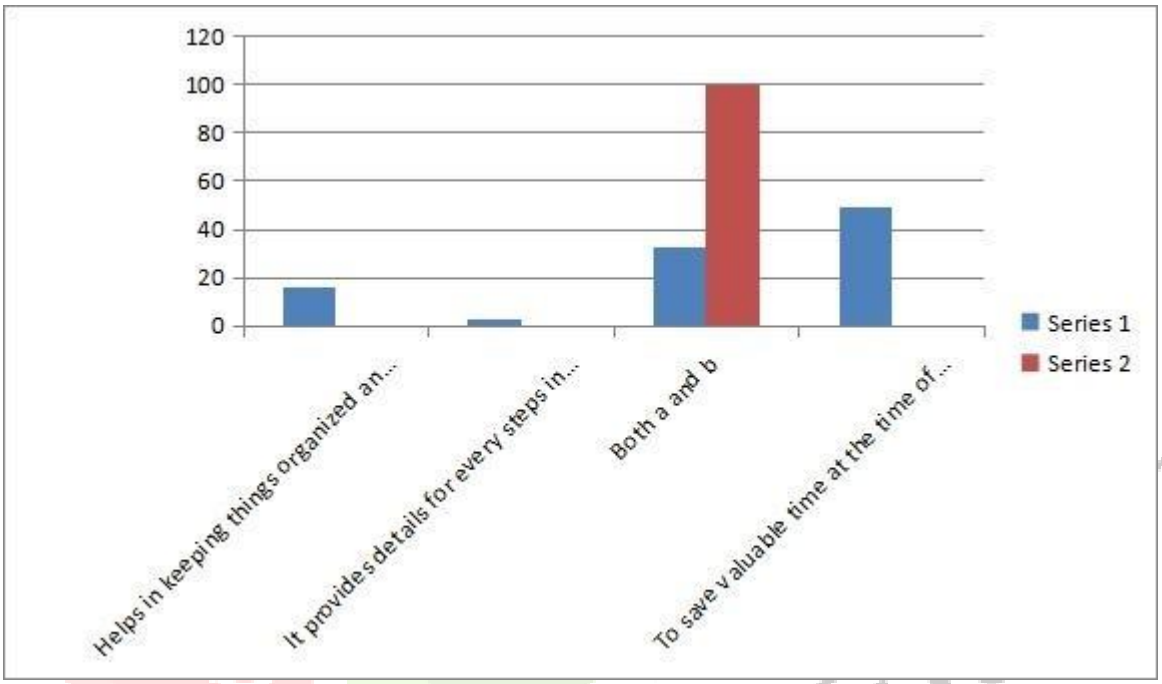


Fig No 10

Table no 9 : Which of the following things are included in the crash cart?

Knowledge	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Medications, IV fluids and tubing	6	7.23	0	0
Blood draw equipment, airway management supplies	4	4.82	0	0

Pediatric supplies and tubing	1	1.20	0	0
All of above	72	86.75	83	100
Total	83	100%	83	100%

Table no 9 Figure no 11 shows that majority of the 86.75% second year and third year BSC nursing students had answer the all of above.1.20% of them had answer pediatric supplies and tubing.4.82% of then had answer the blood draw equipment, airway management supplies.7.23% of them had answer medication,IV fluids and tubing.In posttest majority of 100% of second year and third year BSC nursing students had answer all of above .0% of them had answer pediatric supplies and tubing.0% of them had answer blood draw equipment, airway management supplies.0% of them had answer medication,aiV fluids and tubing.

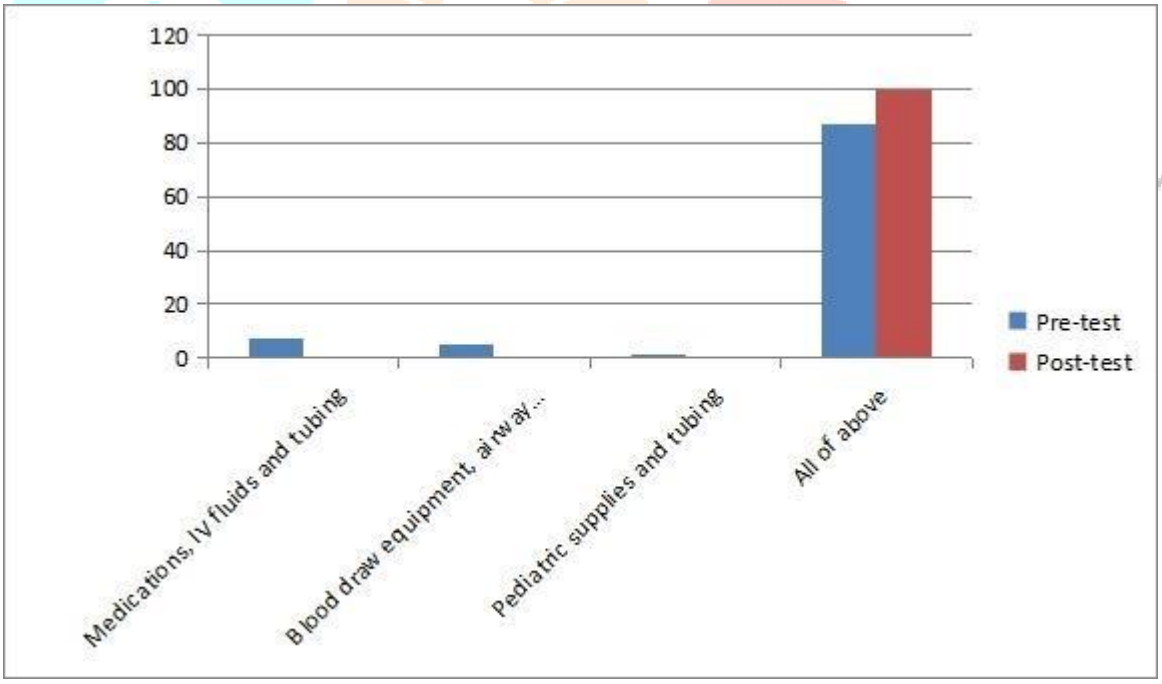


Fig No 11

Table no 10 :What are the policies of crash cart management?

Knowledge	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage

Crash cart must be checked every shift and standardization must be maintained	24	28.92	0	0
To provide mobile station in hospital	2	2.41	0	0
Arrangement of equipment in crash cart	3	3.61	0	0
All of above	54	65.06	83	100
Total	83	100%	83	100%

Table no 10 And figure No 12 Shows that 65.06% majority of second year and third year BSC nursing students had answer all of above.28.92% of them had answer the Crash cart must be checked every shift and standardization must be maintained.2.41% if th had answer to provide mobile station in hospital.3.61% of them had answer arrangements of equipment in crash cart.In posttest majority of 100% of second year and third year BSC nursing students had answer all of above.0% of them had answer arrangements of equipment in crash cart.0% of them had answer to provide mobile station in hospital.0%of them had answer Crash cart must be checked every shift and standardization must be maintained.

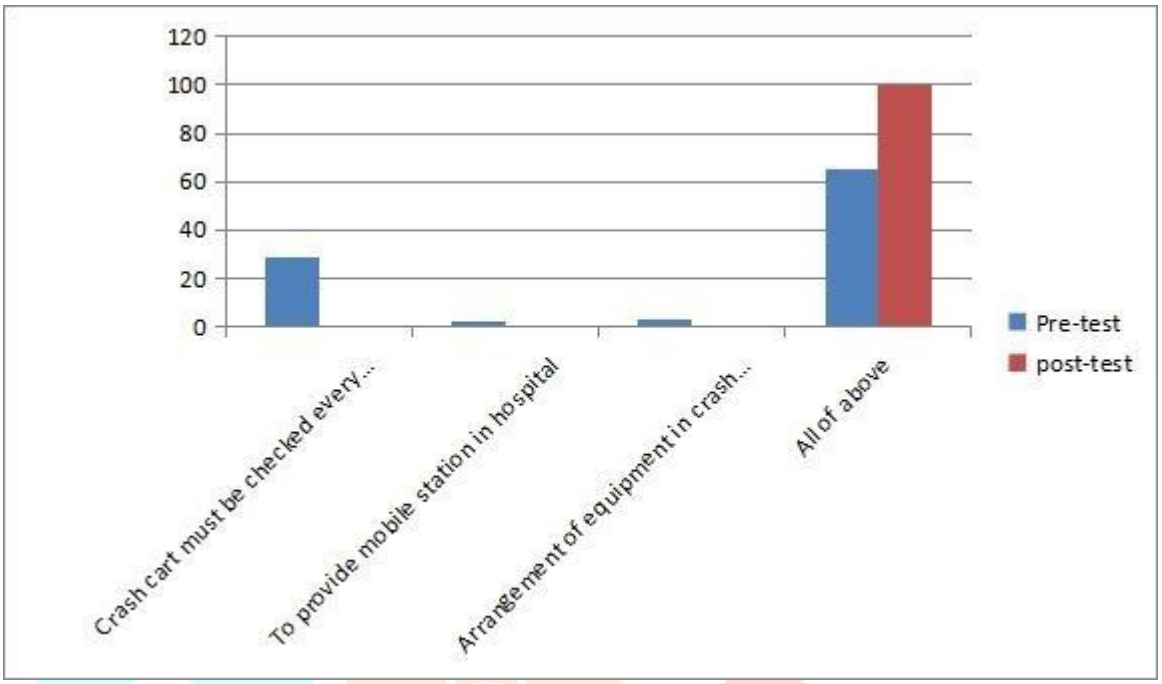


Fig No 12

Table no 11 : How many times crash cart must be checked?

Knowledge	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Every one hourly	0	0	0	0
ERvey two hourly	3	3.61	0	0
Every shift	77	92.78	83	100
Every three hourly	3	3.61	0	0
Total	83	100%	83	100%

Table no 11 And figure No 13 Shows that in Pretest majority of 92.78% of second year and third year BSC nursing students had answer every shift.3.61% of them had answer every three hourly.3.61% of them had every two hourly.0% of them had answer every one hourly.In

posttest majority 100% of second year and third year BSC nursing students had answer every shift.0% of them had answer every one hourly. Another 0% of them had answer every two hourly. 0% of them had answer every three hourly.

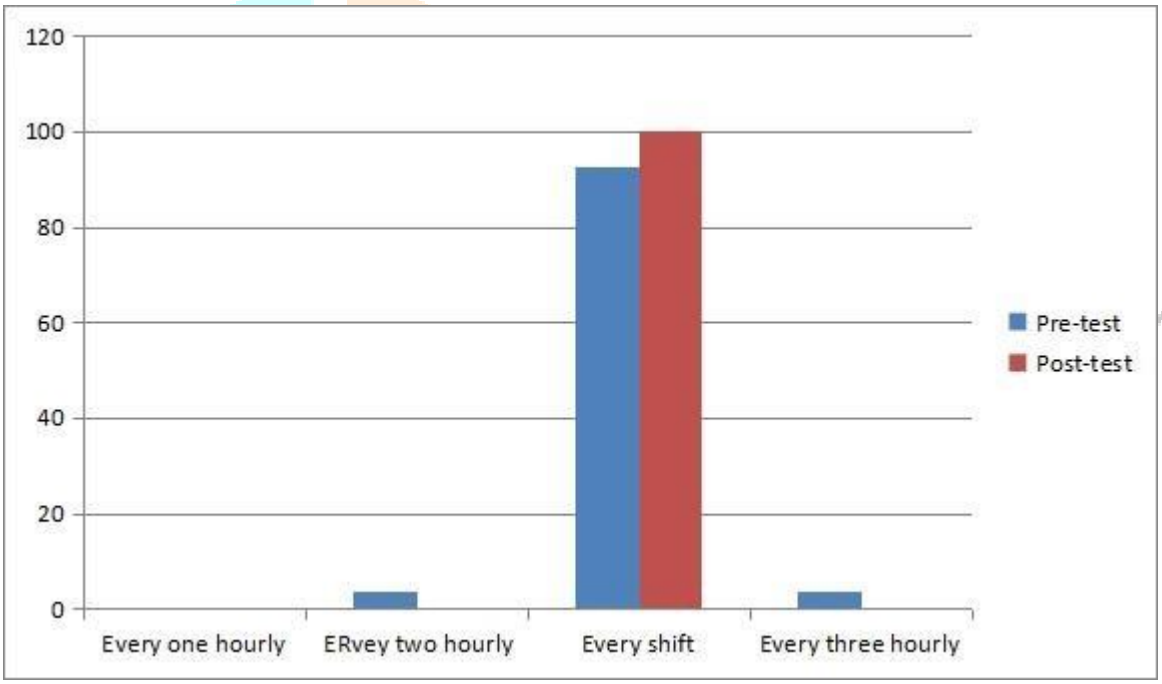


Fig No 13

Table no 12: Crash cart must be checked by ----------

Knowledge	Pre-test	Post-test

	Frequency	Percentage	Frequency	Percentage
Head nurse	5	6.02	0	0
Staff nurse	5	6.02	0	0
Both a and b	73	87.96	83	100
Assistant doctors	0	0	0	0
Total	83	100%	83	100%

Table no 12 and figure No 14 shows that in Pretest majority of second year and third year BSC nursing students had answer the both a and b.5% of them had answer head nurse. 5% of them had answer staff nurse and 0% of them had answer doctors assistant.in post test majority of 100% of second year and third year BSC nursing students had answer both a and b .0% of them had answer head nurse.0 % of them had answer staff nurse. 0% of them had answer doctors assistant.

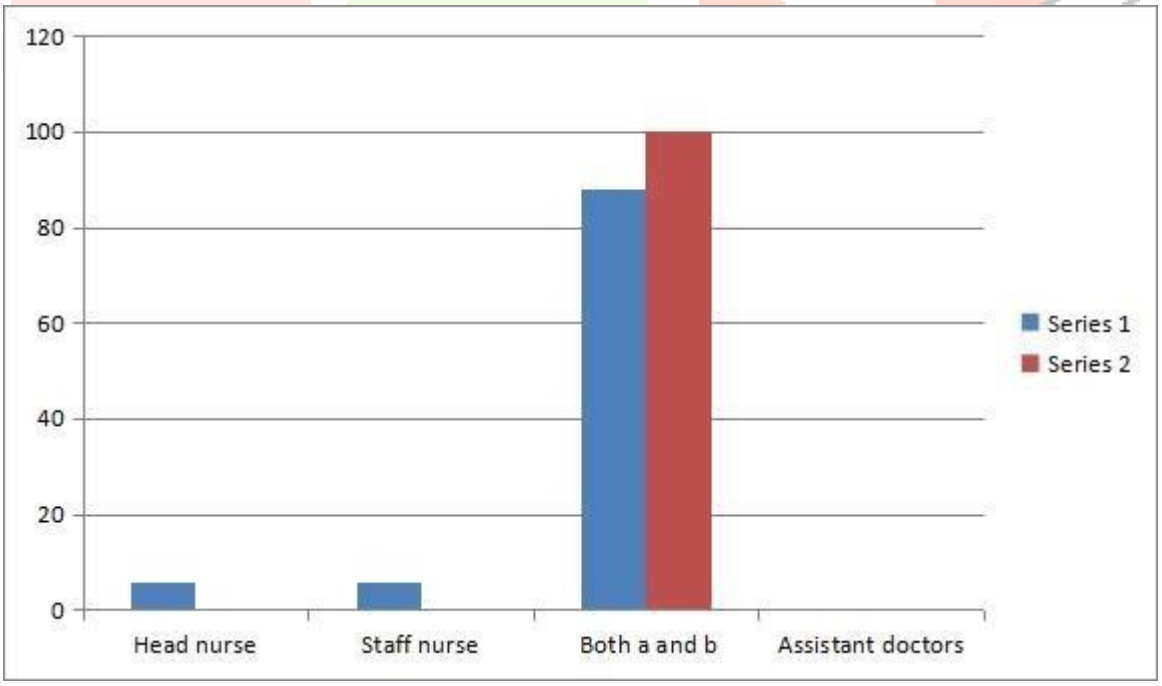


Fig No 14

Table no 13 :Which equipment present on the side of the crash cart?

Knowledge	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
O2 tank, rigid plastic, handled suction mechanism	55	66.27	83	100
SpO2 probe, ECG strips	13	15.66	0	0
Atropine, Dobutamine	12	14.46	0	0
Lidocaine, Dextrose	3	3.61	0	0
Total	83	100%	83	100%

Table no 13 And figure No 15 Shows that in the pretest 66.27% majority of the second year and third year BSC nursing students had answer the O2 tank,rigid plastic,handle suction mechanism.15.66% of them had answer spo2 probe and ecg strips.14.46% of them had answer the Atropine and dobutamine.3.61% of them had lidocaine and dextrose.In post test 100% majority of second year and third year BSC nursing students had answer O2 tank,rigid plastic,handle suction mechanism. 0% of them had answer spo2 probe and ecg strips.0% of them had answer atropine and dobutamine. 0% of them had answer lidocaine and dextrose.

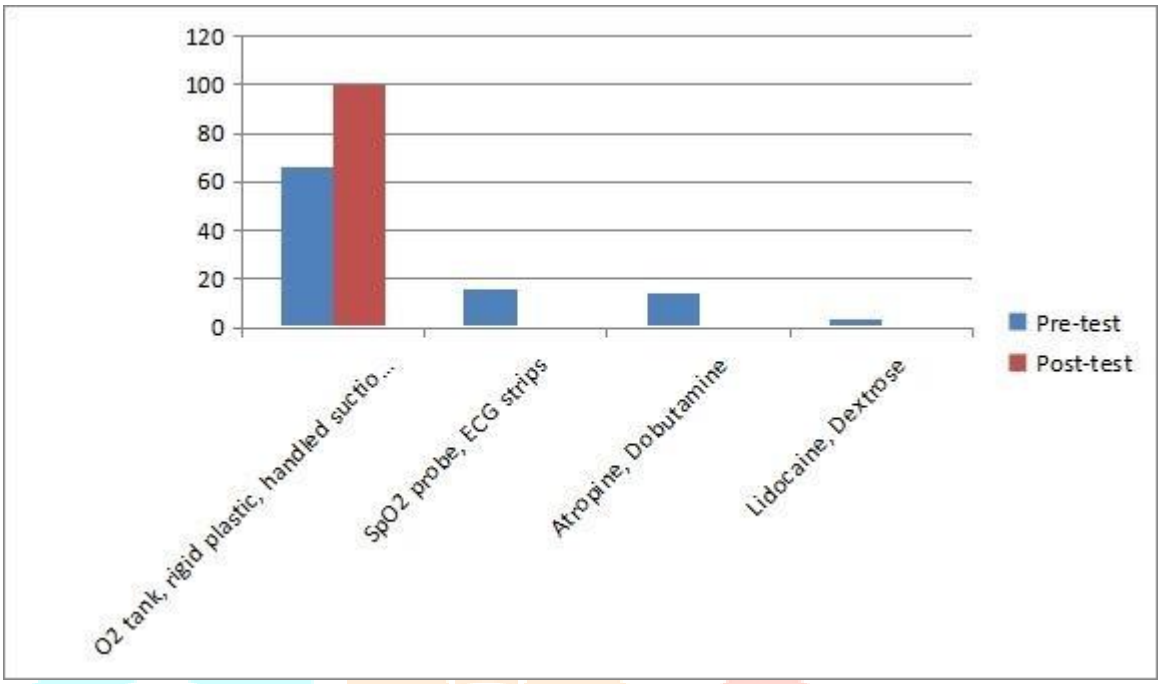


Fig No 15

Table no 14 :Which equipments present on the top of the shelf?

Knowledge	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Defibrillator, SPO2 probe, ECG strips	14	16.87	0	0
medicines and laryngoscope	17	20.48	0	0
Dextrose, Lidocaine	4	4.82	0	0
Defibrillator, SpO2 probe, ECG strips, USG jelly for DC shock, AMBU bag	48	57.83	83	100
Total	83	100%	83	100%

Table no 14 and figure No 16 Shows that in pretest majority of second year and third year BSC nursing students had answer the defibrillator,spo2 probe ,ecg strips,USG jelly for DC shock,AMBU bag.16.87% of them had answer defibrillator,spo2 probe,ecg strips.20.48% of them had answer medicines and laryngoscope.4.82% of them had answer dextrose and lidocaine.In post test 100% majority of second year and third year BSC nursing students had

answer the defibrillator,spo2 probe,ecg strips,USG jelly for DC shock,AMBU bag.0% of them had answer defibrillator,spo2 probe, ecg strips .0% of them had answer dextrose and lidocaine.0% of them had answer medicines and laryngoscope.

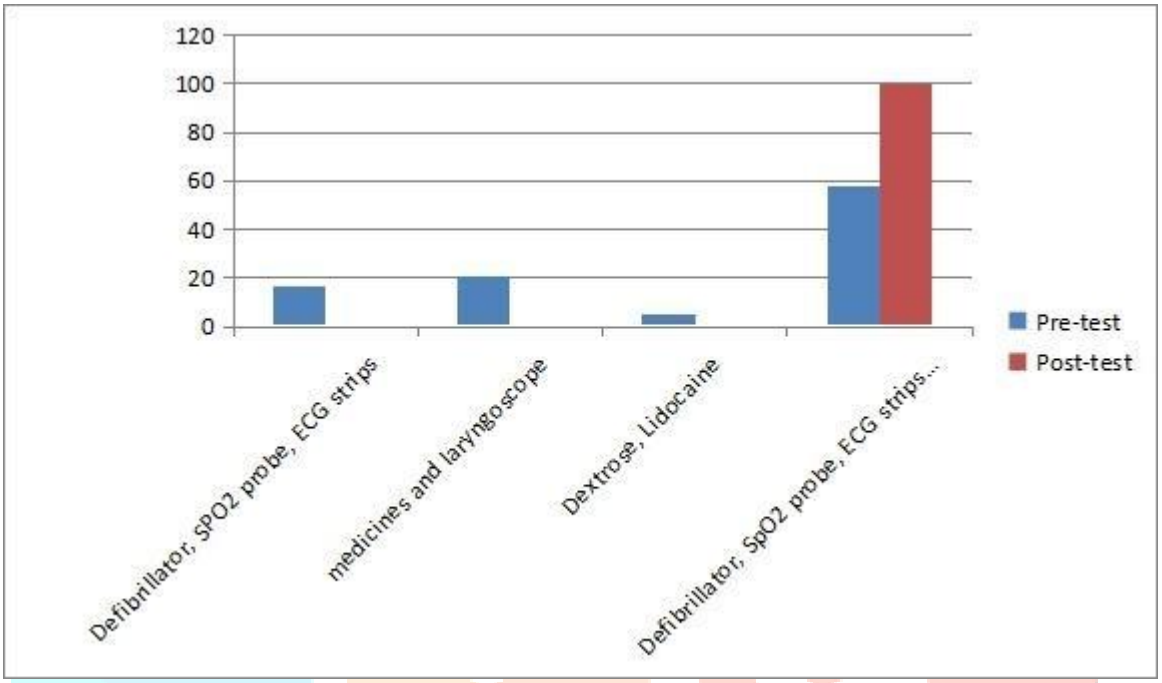


Fig No 16

Table no 15 : First drawer of crash cart contains ---

Knowledge	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
SPO2 probe	16	19.28	0	0
ECG strips	6	7.23	0	0
Dextrose	8	9.63	0	0
Medicines	53	63.86	83	100
Total	83	100%	83	100%

Table no 15 figure No 17 shows that in pretest 63.86% of second year and third year BSC nursing students had answer the medicines.19.28% of them had answer spo2 probe.7.23% of them had answer ECG strips.9.63% of them had answer dextrose.In posttest 100% majority of

second year and third year BSC nursing students had answer the spo2 probe.0% had answer ecg strips.0% of them had answer dextrose.

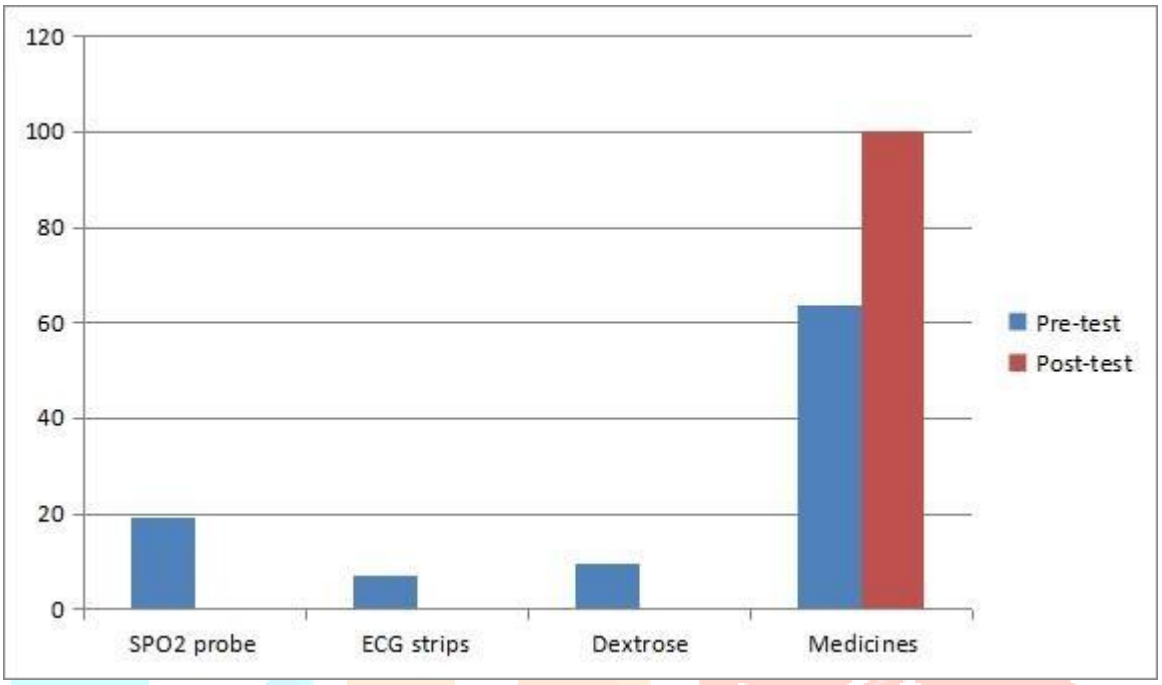


Fig No 17

Table no 16 : Which are the emergency drug present in the first drawer?

Knowledge	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Dextrose,Adrenaline,Atropine	10	12.05	0	0
Potassium chloride,Dopamine,Dobutamine	10	12.05	0	0
Adrenaline,Atropine,Digoxine,Dobutamine,Verapamile	62	74.69	83	100
Sodium carbonate,Lidocaine	1	1.21	0	0
Total	83	100%	83	100%

Table no 16 And fig no 18 shows that in Pretest 74.69% majority of second year and third year BSC nursing students had answer the adrenaline, atropine,digoxine, dobutamine.12.05% of them had answer potassium chloride, dopamine,dobutamine.12.05% of them had answer

dextrose, adrenaline, atropine.1.21% of them had answer sodium bicarbonate, lidocaine.In posttest 100% majority of the second year and third year BSC nursing students had answer the adrenaline, atropine, digoxine,dobutamine ,verapamile.0% of them had answer dextrose, adrenaline, atropine.0% of them had answer potassium chloride, dopamine, dobutamine.0% of them had answer sodium bicarbonate, lidocaine.

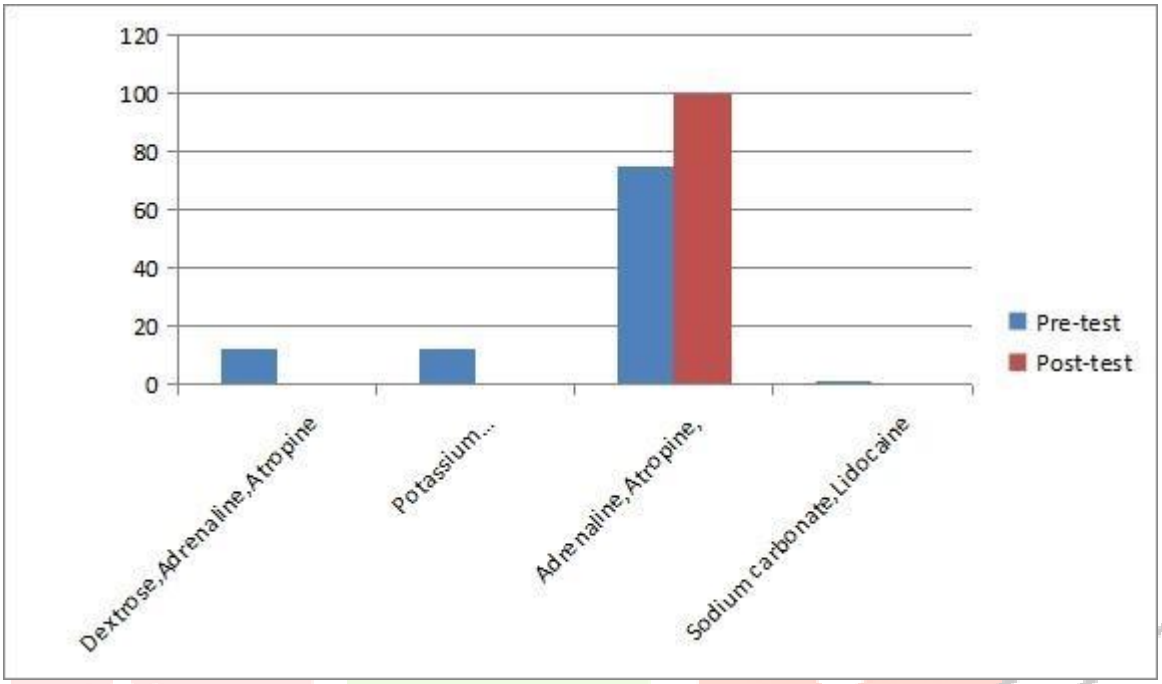


Fig No 1

Table no 17 : Second drawer of crash cart contains

Knowledge	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Adrenaline	9	10.87	0	0
Sodium bicarbonate	36	43.37	0	0
Dextrose,Dopamine	11	13.25	0	0
Dextrose,Lidocaine	27	32.54	83	100
Total	83	100%	83	100%

Table no 17 and figure No 19 Shows that in pretest 43.37% of majority of second year and third year BSC nursing students had answer the sodium bicarbonate.10.87% of them had answer adrenaline.13.25% had answer dextrose, dopamine.32.54% if them had answer dextrose, lidocaine.In post test 100% majority of second year and third year BSC nursing students had answer dextrose, lidocaine.0% of them had answer dextrose, dopamine.0% of them had answer sodium bicarbonate

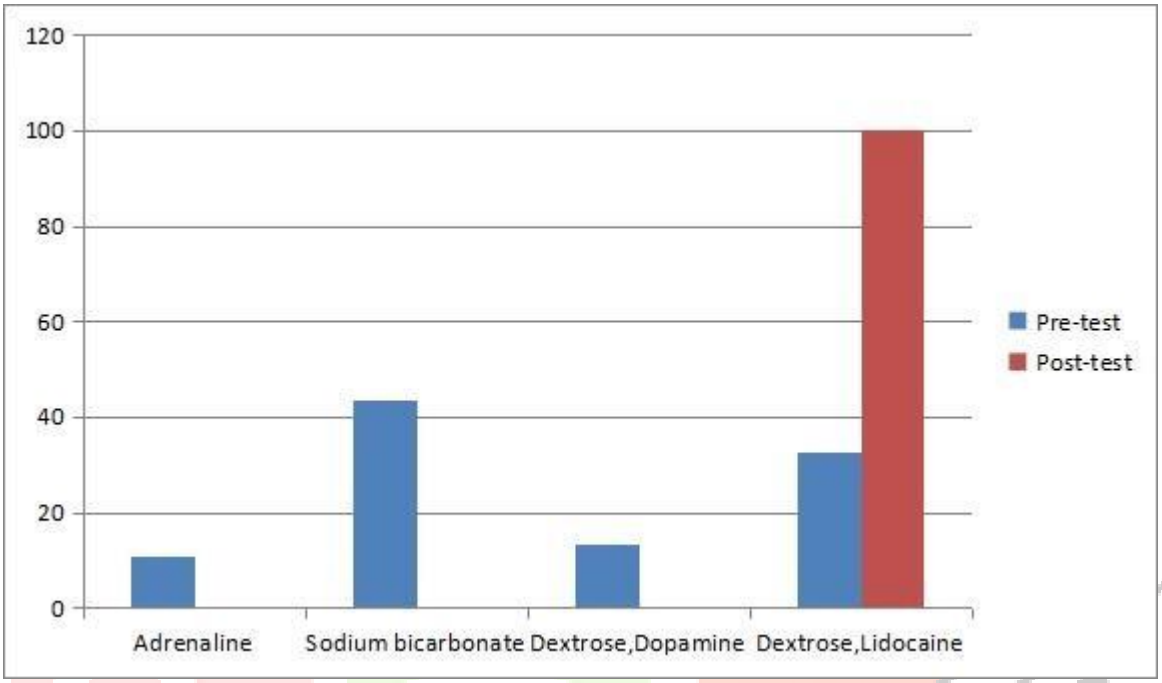


Fig No 19

Table no 18 : Third drawer of crash cart contains

Knowledge	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Laryngoscope, Gauze, stylete, electrodes	48	57.83	83	100
Endotracheal tube	23	27.71	0	0
Tracheostomy tube	11	13.25	0	0
Gloves	1	1.21	0	0
Total	83	100%	83	100%

Table no 18 and figure No 20 Shows that in pretest 57.83% majority of second year and third year BSC nursing students had answer the laryngoscope,gauze,stylete, electrodes.27.71% of them had answer endotracheal tube.13.25% of them had answer tracheostomy tube.1.21% of them had answer gloves.In post test 100% majority of second year and third year BSC nursing students had answer the laryngoscope, stylete,gauz, electrodes.0% if them had answer endotracheal tube.0% if them had answer tracheostomy tube.0% of them had answer gloves.

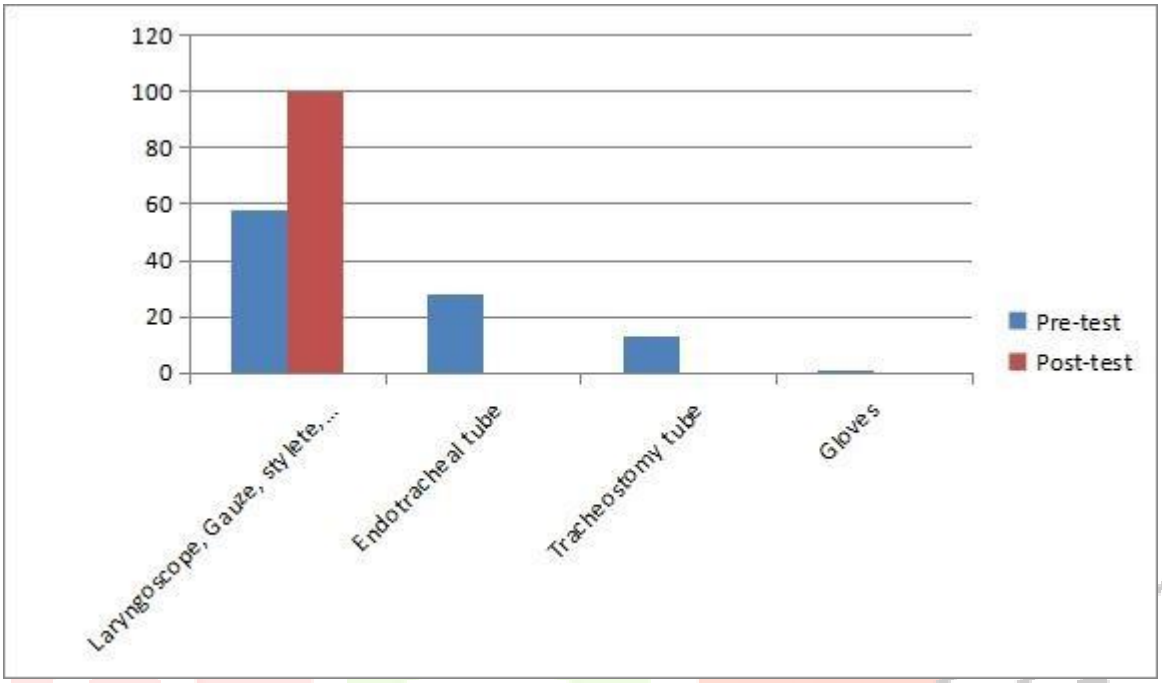


Fig No 2

Table no 19 : Fourth drawer of crash cart contains

Knowledge	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Atropine	7	8.43	0	0
ETT, tracheostomy, suction catheter, Airway	67	80.73	83	100
Xylocaine jelly	7	8.43	0	0
Plaster	2	2.41	0	0
Total	83	100%	83	100%

Table no 19 Figure No 21 Shows that 80.73% of them had answer ETT, tracheostomy, suction catheter,airway.8.43% of them had answer atropine.8.43% of them had answer xylocaine jelly.2.41% of them had answer plaster.In post test 100% majority of second year and third year BSC nursing students had answer the ETT, tracheostomy, suction catheter, airway.0% of them had answer atropne.0% of them had answer xylocaine jelly.0% of them had answer palster.

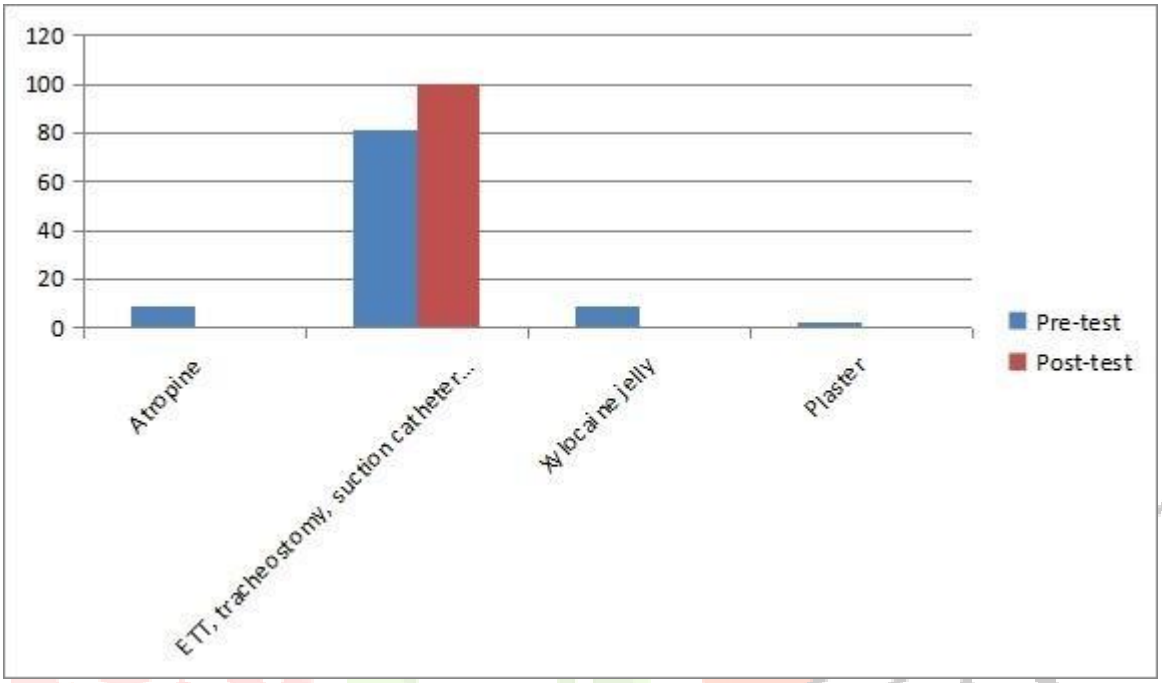


Fig No 21

Table no 20 : How many times defibrillator must be checked for expiry date?

Knowledge	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Every four month	5	6.02	0	0
Every month	66	79.52	83	100
Every two month	8	9.65	0	0
Every three month	4	4.81	0	0
Total	83	100%	83	100%

Table no 20 and Figure no 22 Shows that in pretest 79.52% majority of the second year and third year BSC nursing students had answer the every month.6.02% of them had answer every four month.9.65% of them had answer every two month.4.81% of them had answer every three month.In post test 100% majority of second year and third year BSC nursing students had answer the every month.0% of them had answer every four months.0% of them had answer every two months.0% of them had answer every three months.

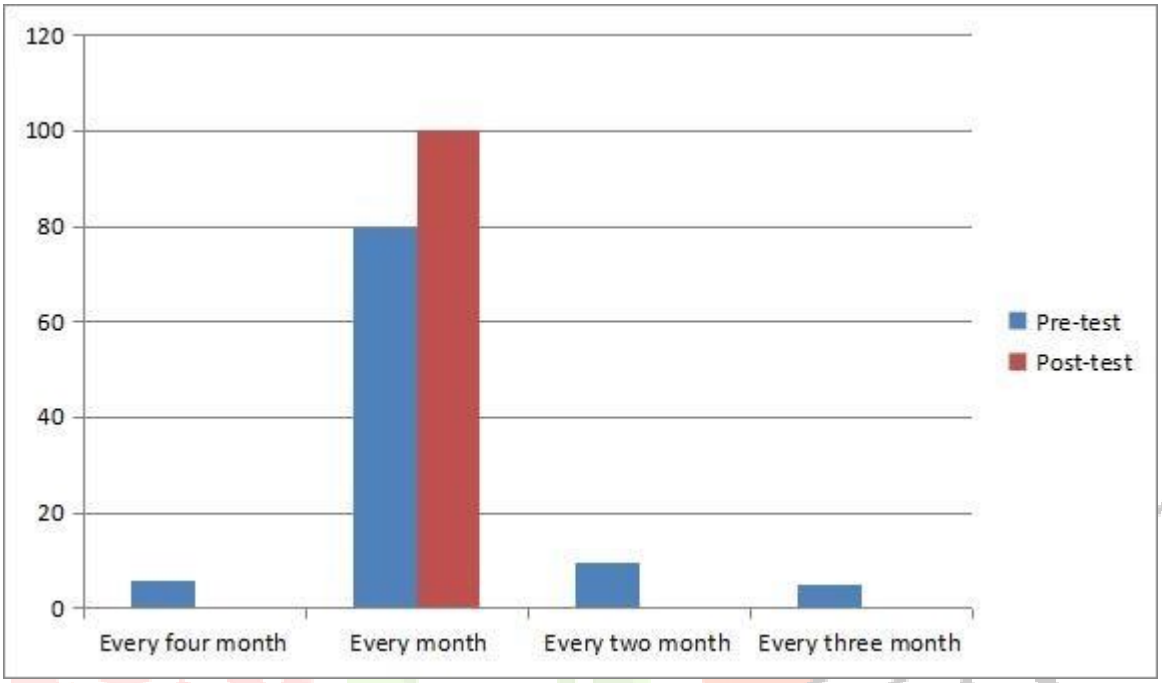


Fig No 22

Table no 21 : Pediatric equipments in crash cart includes

Knowledge	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Warmer device, pulse oximeter	9	10.84	0	0
pressure cuffs, femur splints	10	12.05	0	0
Restraint, weight scale	6	7.23	0	0

Warmer device, restraints, weight scale, measuring tools, SPO2 probe	58	69.88	83	100
Total	83	100%	83	100%

Table no 21 and figure No 23 Shows that in Pretest 69.88% of majority of second year and third year BSC nursing students had answer the warmer devices,restraints,weight scale, measuring tools,spo2 probe.10.84% of th had answer warmer device,pulse oximeter.12.5% of them had answer pressure cuffs,femur splints.7.23% of them had answer restraint and weight scale.In posttest 100% of majority of second year and third year BSC nursing students had answer the warmer device, restraints, weight scale, measuring scale, measuring tools, spo2 probe. 0% of them had answer warmer device,pulse oximeter.0% of them had answer pressure cuffs and femur splints.0% of them had answer restraint and weight. .

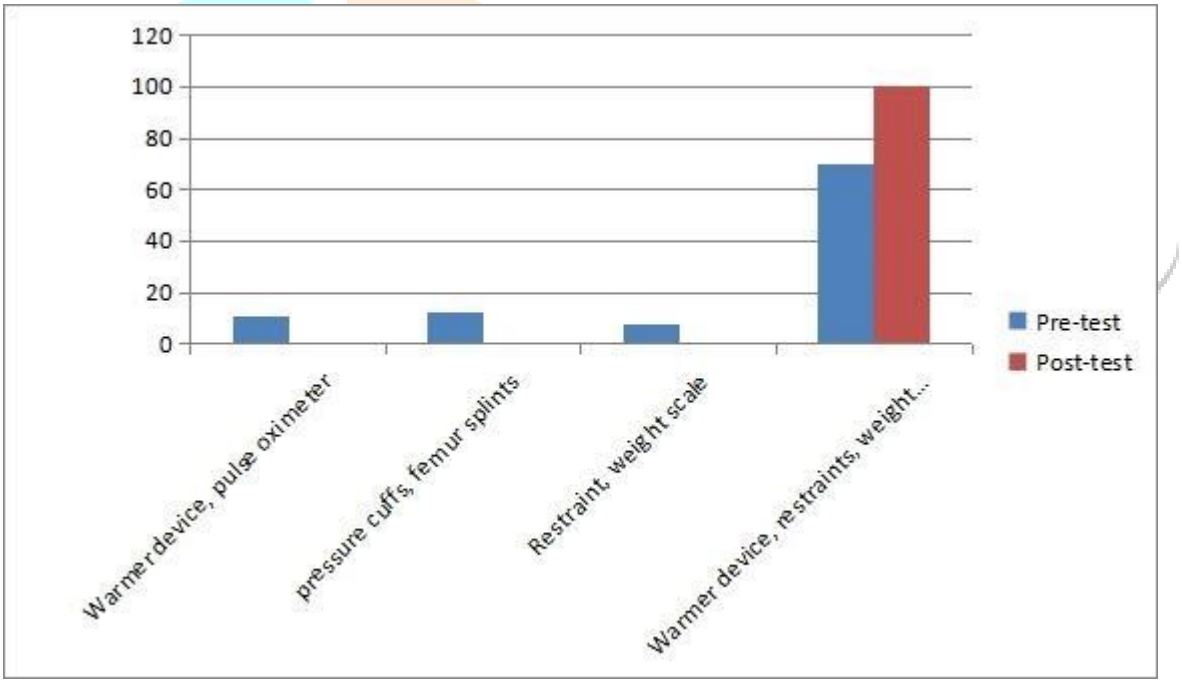


Fig No 23

Table no 22 : Staff nurse is responsible for

Knowledge	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Cleaning, inspecting, replacing, and arrangement of crash cart	20	24.09	0	0

Treatment of the patient when needed	7	8.43	0	0
Function of all equipment in crash cart	3	3.61	0	0
All of above	53	63.87	83	100
Total	83	100%	83	100%

Table no 22 and figure No 24 Shows that in Pretest 63.87% majority of the second year and third year BSC nursing students had answer the all of above.24.9% of them had answer cleaning,inspecting, replacing and arrangements of crash cart.8.43% of them had answer treatment of patients when needed.3.61% of them had answer function of all equipment in crash cart.In post test 100% majority of second year and third year BSC nursing students had answer the all of above.0% of them had answer cleaning, inspection, replacing and arrangements of crash cart.0% of them had answer treatment of the patients when needed.0% of them had answer function of all equipment in crash cart.

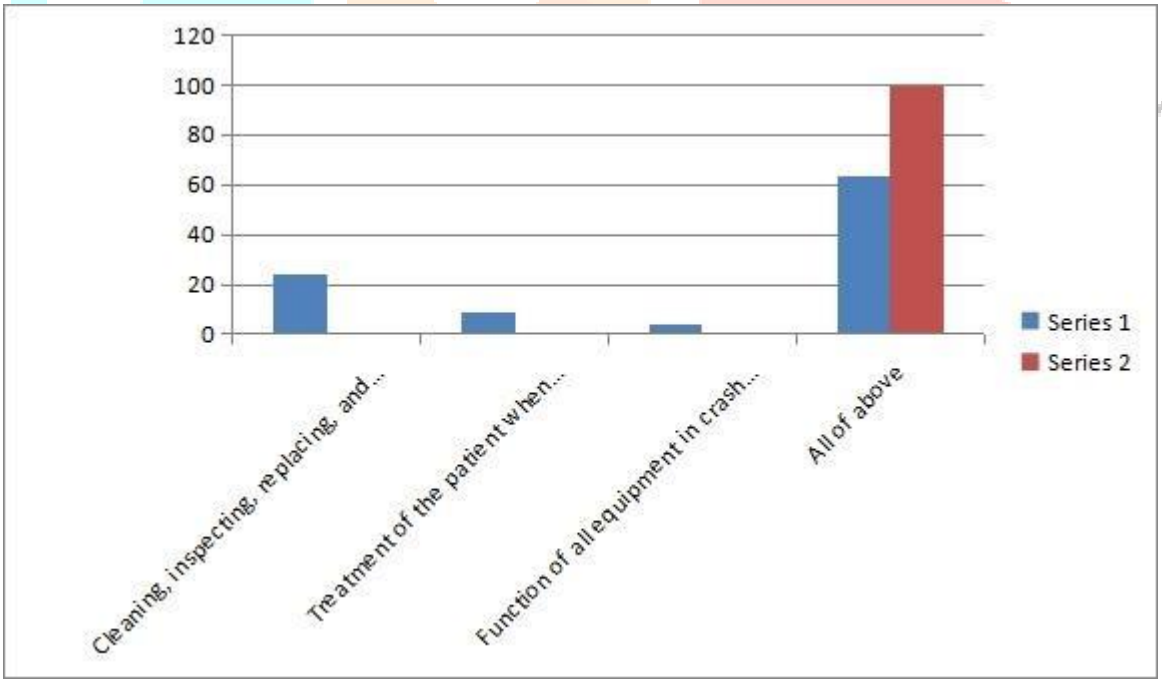


Fig No 24

Table no 23 : What things should be done by staff nurse while arranging the medication in crash cart?

Knowledge	Pre-test	Post-test

	Frequency	Percentage	Frequency	Percentage
Protection of IV fluids from light	7	8.43	0	0
Making sure all the labels are clear and easy to locate	59	71.08	83	100
Monitor patient with renal and hepatic impairment	8	9.64	0	0
Monitoring patient carefully	9	10.8	0	0
Total	83	100%	83	100%

Table 23 And figure No 25 Shows that in pretest 100%majority of second year and third year BSC nursing students had answer the making sure all the lables are clear and easy to locate.8.43% of them had answer protection from IV fluids from light.9.64% of them had answer monitoring patients with renal and hepatic impairment.10.8% of them had answer monitoring patients carefully.ain post test 100% of majority of second year and third year BSC nursing students had answer the making sure all the lables are clear and easy to locate. 0% of them had answer protection of IV fluids from light.0% of them had answer monitor patients with renal and hepatic impairment.0% of them had answer monitoring patients carefully.

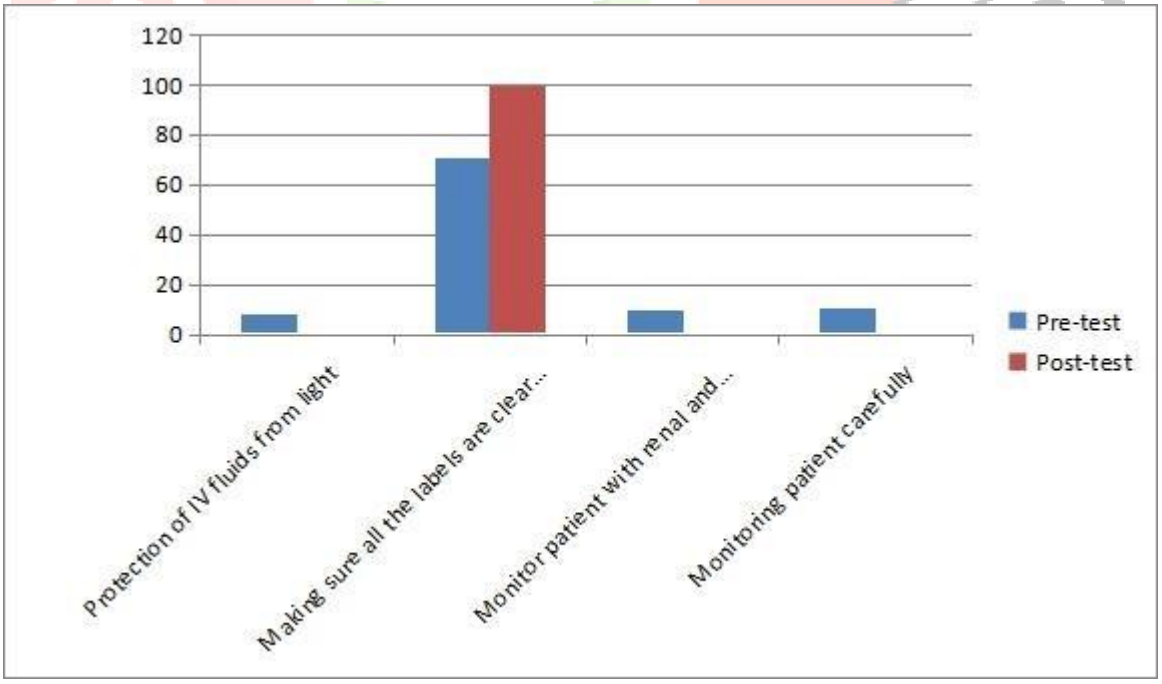


Fig 25

Table no 24 : Which are the nursing consideration in crash cart ?

Knowledge	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Protection of IV solution from light	8	9.64	0	0
Monitoring patients' status	9	10.84	0	0
Monitoring patients renal and hepatic impairment	7	8.43	0	0
All of above	59	71.09	83	100
Total	83	100%	83	100%

Table no 24 And figure No 26 Shows that in pretest majority of second year and third year BSC nursing students had answer the all of above. 9.64% of the. Had answer the protection of IV solution from light.10.84% of them had answer monitoring patients status.8.43% of them had answer monitoring patients renal and hepatic impairment. In post test 100% of second year and third year BSC nursing students had answer all of above.0% of them had answer monitoring patients renal and hepatic impairment.0% of them had answer monitoring patients status.0% of them had answer protection of IV solution from light.

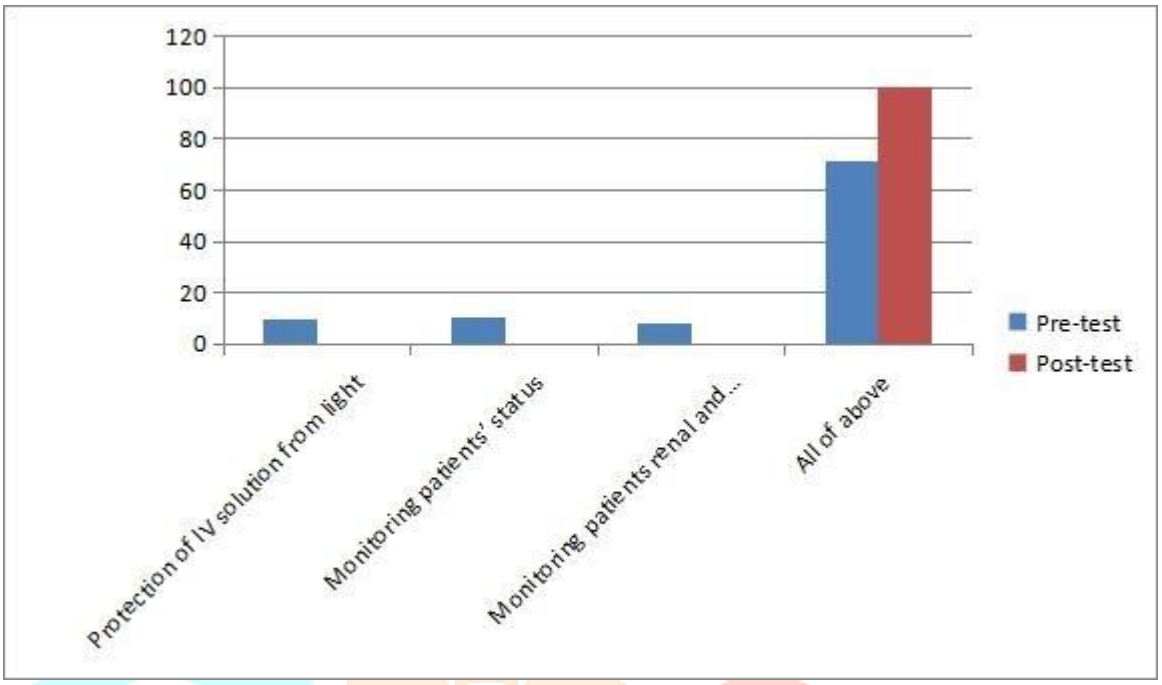


Fig No 26

SUMMARY:

The chapter analysis and interpretation gives description of results and findings of the study. Result shows that the level of knowledge regarding crash cart management among second year and third year BSC nursing students after conduction of planned teaching programme is increased. Hence it was concluded that planned teaching programme was effective.

CHAPTER 5

SUMMARY, FINDINGS, CONCLUSION AND RECOMMENDATION

This chapter presents a brief summary of the study regarding crash cart management and its significant findings. It also includes suggestions, limitation, personal experiences, recommendations and implications for the further study in nursing research, nursing administration, nursing services and nursing education. This chapter discuss the methodology used for the study. It includes research design, identification of target and accessible population, sampling technique, sample, sampling criteria, tool preparation, feasibility of the study, reliability and validity of the tool, pilot study, data collection process and plan for data analysis

OBJECTIVE OF THE STUDY

1. To assess the knowledge regarding crash cart management among second year and third year nursing students before and after structure teaching programme

2. To administer the structure teaching programme on crash cart Management among second year and third year nursing students in selected nursing college, Mumbai.

3. To assess the effectiveness of structured teaching programme on crash cart Management among second year and third year nursing students in selected nursing college, Mumbai. by comparing pre-test and post test score.

RESEARCH METHODOLOGY

Research approach:

Pre- Experimental research approach is used.

Research design:

In this study one group pretest and posttest used, where group was observed and administration of questionnaires given to participants. This approach helped the investigator to evaluate and assess the effectiveness of structured teaching program on crash cart management among second year and third year nursing students in selected nursing college, Mumbai.

Variable study:

Two types of variables were identified in this study.

Dependent variable:

In this study the dependent variable are second basic B.Sc. Nursing student and third year basic Bsc Nursing students.

Independent variable:

In this study the independent variables are parenting styles developed in basic B.Sc. nursing student.

Setting of the study:

The study was conducted in the selected Nursing College.

Population:

The population for present study is a second year and Third year basic B.Sc. Nursing Students in selected nursing college.

Target population:

In the present study the target student consisted of second year and third year basic B.Sc. Nursing students and those who meet the inclusion and exclusion criteria.

Sample and sample size:

In this study total 83 students of second year and third year Basic B.Sc. Nursing were selected as a sample.

Sampling technique:

In this study modified structured questionnaire used.

Inclusion criteria:

a. Student's who are willing to participate.

b. Student's who are studying in Basic B.Sc. Nursing from second year and third year course.

Exclusion criteria:

a. Student's of first, final year Basic B.Sc. Nursing.

Tool and technique:

In this study structured questionnaire used.

Tool for data collection:

The aim of the tool was to assess the effectiveness of structured teaching program on crash cart management among second year and third year basic bsc nursing students in selected nursing college, Mumbai.

The tool has two sections:

Section A: Demographic data

Section B: Knowledge regarding crash cart management

Data collection method:

Descriptive and inferential statistics data presented in the form of table and figures.

Feasibility of study:

This research found the study feasible consideration with following points:

•Adequate samples would be available.

•All were students study and assured complete cooperation during study.

•The research has to be conducted in the Nursing College.

•Therefore samples were easy to find.

Pilot study:

The requisite permission was taken from the concerned authorities. Pilot study was carried out in an S.M.E.S, Smt.Sunanda Pravin Gambhirchand College of nursing from to 2021. The researcher approach second year and third year Basic Nursing class to select 10 samples suited according to the selection criteria.

RESEARCH FINDINGS OF THE STUDY:

The data collected has been analyze and presented in section based on objective of study. The data obtained from the samples has been classified and under following section.

SECTION 1:

THE DEMOGRAPHIC DATA WHICH COVERS THE FOLLOWING VARIABLES:

Age:-Results shows that the 0% of them had age 17 years of age. 3.61 of them had 19-20 years.34.94% had 20-21 years of age.61.45% of them had 21-22 years of age.

knowledge about crash cart : Results shows that 91.57% had knowledge about the topic and 8.43% had no any knowledge about the topic.

Yes, then source of information : Results Shows that the 4.82% had the knowledge about crash vart from social media.95.18 had gain the knowledge during clinicals.0% knowledge gain from the mass media.

meaning of crash cart : Results Shows that majority of 92.78% Second year and Third year BSC nursing students had answer the It is storing and transporting vital equipments during emergency.2.40% had the answer it is only for drug storage.0% had answer it is only for equality.4.82% had answer it is helpful for storing the drugs and equipments. In post-test majority of 100% second year and third year BSC nursing students had answer the it is storing and transporting vital equipments during emergency.0% of them had answer the it is only for drug storage.0% of them had answer it is only for equipment storage.0% of them had answer it is helpful for storing the drugs and equipments.

purpose of crash cart : Results Shows that 10.84% had answer the save valuable time and life of patients.8.43% of them had answer the provide immediate access to supplies and medications. 4.82% of them had answer the fascilitate coordination of emergency equipments.75.9% of them had answer the all of above. In posttest majority of second year and third year BSC students had answer the all of above.0% of them had answer the save the valuable time and life of patients.0% of them had answer the provide provide immediate access to the supplies and medications.0% of them had answer the fascilitate coordination of emergency equipments.

functions of the crash cart : Results Shows that in Pretest 65% majority of the second year and third year BSC students had answer the all of above 3.63% of them had answer the arrangement of equipment in crash cart.8.43% of them had it allows the treatment to come to the patients when in needed.22.89 of them had answer the to provide mobile station in hospital which helps for the emergency situation. In posttest majority of 100% second year and third year BSC nursing students had answer the all of above. 0% of them had answer the arrangement of equipment in crash cart.0% of them had answer the it allows treatment to come to the patients when in needed.0% of them had answer the to provide mobile station in hospital which helps for emergency situation.

The importance of crash cart checklist : Results Shows that in Pre-test 49.39% of majority second year and third year BSC nursing students had answer the to save valuable time at the time of emergency.32.53% of them had answer the both a and b.2.41% of them had answer the it provides details for every steps in process.15.67% of them had answer the helps in keeping things organized and prioritising the task. In post-test majority of 100% second year and third year BSC nursing students had answer the both a and b.0% of then had answer the to save the valuable time at the time of emergency.0% of then had answer the to provide

details for every steps in process.0% of them had answer the helps in keeping things organized and prioritising the task.

things are included in the crash cart : Results shows that majority of the 86.75% second year and third year BSC nursing students had answer the all of above.1.20% of them had answer pediatric supplies and tubing.4.82% of then had answer the blood draw equipment, airway management supplies.7.23% of them had answer medication,IV fluids and tubing. In post-test majority of 100% of second year and third year BSC nursing students had answer all of above .0% of them had answer pediatric supplies and tubing.0% of them had answer blood draw equipment, airway management supplies.0% of them had answer medication, IV fluids and tubing.

the policies of crash cart management -: Results Shows that 65.06% majority of second year and third year BSC nursing students had answer all of above.28.92% of them had answer the Crash cart must be checked every shift and standardization must be maintained.2.41% if th had answer to provide mobile station in hospital.3.61% of them had answer arrangements of equipment in crash cart. In post-test majority of 100% of second year and third year BSC nursing students had answer all of above.0% of them had answer arrangements of equipment in crash cart.0% of them had answer to provide mobile station in hospital.0%of them had answer Crash cart must be checked every shift and standardization must be maintained.

How many times crash cart must be checked : Results Shows that in Pre-test majority of 92.78% of second year and third year BSC nursing students had answer every shift.3.61% of them had answer every three hourly.3.61% of them had every two hourly.0% of them had answer every one hourly. In post-test majority 100% of second year and third year BSC nursing students had answer every shift.0% of them had answer every one hourly. Another 0% of them had answer every two hourly. 0% of them had answer every three hourly.

Crash cart must be checked by: Results shows that in Pre-test majority of second year and third year BSC nursing students had answer the both a and b.5% of them had answer head nurse. 5% of them had answer staff nurse and 0% of them had answer doctors assistant.in post- test majority of 100% of second year and third year BSC nursing students had answer both a and b .0% of them had answer head nurse.0 % of them had answer staff nurse. 0% of them had answer doctors assistant.

The equipment present on the side of the crash cart :Results Shows that in the pre-test 66.27% majority of the second year and third year BSC nursing students had answer the O2 tank, rigid plastic, handle suction mechanism.15.66% of them had answer spo2 probe and ecg strips.14.46% of them had answer the Atropine and dobutamine.3.61% of them had lidocaine and dextrose. In post-test 100% majority of second year and third year BSC nursing students had answer O2 tank, rigid plastic, handle suction mechanism. 0% of them had answer spo2 probe and ecg strips.0% of them had answer atropine and dobutamine.0% of them had answer lidocaine and dextrose.

The equipments present on the top of the shelf : Results Shows that in pretest majority of second year and third year BSC nursing students had answer the defibrillator,spo2 probe ,ecg strips,USG jelly for DC shock, AMBU bag.16.87% of them had answer defibrillator,spo2 probe,ecg strips.20.48% of them had answer medicines and laryngoscope.4.82% of them had answer dextrose and lidocaine.In post-test 100% majority of second year and third year BSC nursing students had answer the defibrillator,spo2 probe, ecg strips, USG jelly for DC shock,AMBU bag.0% of them had answer defibrillator,spo2 probe, ecg strips .0% of them had answer dextrose and lidocaine.0% of them had answer medicines and laryngoscope.

First drawer of crash cart contains: Results shows that in pre-test 63.86% of second year and third year BSC nursing students had answer the medicines.19.28% of them had answer spo2 probe.7.23% of them had answer ECG strips.9.63% of them had answer dextrose .In post-test 100% majority of second year and third year BSC nursing students had answer the spo2 probe.0% had answer ecg strips.0% of them had answer dextrose.

The emergency drug present in the first drawer : Results shows that in Pre-test 74.69% majority of second year and third year BSC nursing students had answer the adrenaline, atropine, digoxine,dobutamine.12.05% of them had answer potassium chloride, dopamine,dobutamine.12.05% of them had answer dextrose, adrenaline, atropine.1.21% of them had answer sodium bicarbonate, lidocaine. In post-test 100% majority of the second year and third year BSC nursing students had answer the adrenaline, atropine, digoxine,dobutamine ,verapamile.0% of them had answer dextrose, adrenaline, atropine.0% of them had answer potassium chloride, dopamine, dobutamine.0% of them had answer sodium bicarbonate, lidocaine.

Second drawer of crash cart contains : Results Shows that in pre-test 43.37% of majority of second year and third year BSC nursing students had answer the sodium bicarbonate.10.87% of them had answer adrenaline.13.25% had answer dextrose, dopamine.32.54% if them had answer dextrose, lidocaine. In post-test 100% majority of second year and third year BSC nursing students had answer dextrose, lidocaine.0% of them had answer dextrose, dopamine.0% of them had answer sodium bicarbonate.

Third drawer of crash cart contains : Results Shows that in pretest 57.83% majority of second year and third year BSC nursing students had answer the laryngoscope, gauze, stylete, electrodes.27.71% of them had answer endotracheal tube.13.25% of them had answer tracheostomy tube.1.21% of them had answer gloves. In post-test 100% majority of second year and third year BSC nursing students had answer the laryngoscope, stylete, gauz, electrodes.0% if them had answer endotracheal tube.0% if them had answer tracheostomy tube.0% of them had answer gloves

Fourth drawer of crash cart contains Results Shows that 80.73% of them had answer ETT, tracheostomy, suction catheter,airway.8.43% of them had answer atropine.8.43% of them had answer xylocaine jelly.2.41% of them had answer plaster. In post-test 100% majority of

second year and third year BSC nursing students had answer the ETT, tracheostomy, suction catheter, airway.0% of them had answer atropne.0% of them had answer xylocaine jelly.0% of them had answer.

defibrillator must be checked for expiry date : Results Shows that in pretest 79.52% majority of the second year and third year BSC nursing students had answer the every month.6.02% of them had answer every four month.9.65% of them had answer every two month.4.81% of them had answer every three month. In post-test 100% majority of second year and third year BSC nursing students had answer the every month.0% of them had answer every four months.0% of them had answer every two months.0% of them had answer every three months.

Pediatric equipments in crash cart includes : Results Shows that in Pre-test 69.88% of majority of second year and third year BSC nursing students had answer the warmer devices, restraints, weight scale, measuring tools,spo2 probe.10.84% of th had answer warmer device, pulse oximeter.12.5% of them had answer pressure cuffs, femur splints.7.23% of them had answer restraint and weight scale. In post-test 100% of majority of second year and third year BSC nursing students had answer the warmer device, restraints, weight scale, measuring scale, measuring tools, spo2 probe. 0% of them had answer warmer device ,pulse oximeter.0% of them had answer pressure cuffs and femur splints.0% of them had answer restraint and weight sacle.

Staff nurse is responsible for : Results Shows that in Pre-test 63.87% majority of the second year and third year BSC nursing students had answer the all of above.24.9% of them had answer cleaning, inspecting, replacing and arrangements of crash cart.8.43% of them had answer treatment of patients when needed.3.61% of them had answer function of all equipment in crash cart.In post test 100% majority of second year and third year BSC nursing students had answer the all of above.0% of them had answer cleaning, inspection, replacing and arrangements of crash cart.0% of them had answer treatment of the patients when needed.0% of them had answer function of all equipment in crash cart.

The things should be done by staff nurse while arranging the medication in crash cart : Results Shows that in pre-test 100%majority of second year and third year BSC nursing students had answer the making sure all the lables are clear and easy to locate.8.43% of them had answer protection from IV fluids from light.9.64% of them had answer monitoring patients with renal and hepatic impairment.10.8% of them had answer monitoring patients carefully.in post-test 100% of majority of second year and third year BSC nursing students had answer the making sure all the lables are clear and easy to locate. 0% of them had answer protection of IV fluids from light.0% of them had answer monitor patients with renal and hepatic impairment.0% of them had answer monitoring patients carefully.

The nursing consideration in crash cart : Shows that in pre-test majority of second year and third year BSC nursing students had answer the all of above. 9.64% of the. Had answer the

protection of IV solution from light.10.84% of them had answer monitoring patients status.8.43% of them had answer monitoring patients renal and hepatic impairment. In post test 100% of second year and third year BSC nursing students had answer all of above.0% of them had answer monitoring patients renal and hepatic impairment.0% of them had answer monitoring patients status.0% of them had answer protection of IV solution from light.

IMPLICATIONS OF THE STUDY:

The findings of the study have implications in nursing service, nursing administration, nursing education, nursing administration and nursing research development cell.

NURSING SERVICE

The study will help to assess existing knowledge of second year and third year basic B.Sc. Nursing students regarding to Crash Cart Management.

The study will help to assess the effectiveness of structured teaching program.

NURSING ADMINISTRATION

The finding will help the nurse administrator to assess the effectiveness of structured teaching programme on crash cart management among second year and third year basic Bsc nursing students.

NURSING EDUCATION

The finding of the study may help student to improve the qualities about them statement of the problems.
The finding of the study may help student to improve their ability regarding Crash Cart management.
The findings of the study may help to improve student's knowledge and practice regarding Crash Cart Management.

NURSING RESEARCH

The methodology, tools and the recommendation of the study can be taken into account to provide scope for future study.
The findings of the study can be utilized by researchers for their reference purpose and expand the scientific body of the professional knowledge upon which the further study.

LIMITATIONS OF THE STUDY:

Following the limitations of the present study,
The study is limited to the selected nursing colleges in Mumbai.

The sample size of the study is limited to 83.

SUGGESTIONS FOR IMPROVING THE PRESENT STUDY:

The study can include time series design and see the effectiveness.
Larger sample can be taken in the study for the purpose of generalization.

RECOMMENDATIONS FOR FURTHER STUDIES:

On basis of the present study following recommendations are made:

A similar study can be conducted with a larger sample size a larger setting.

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25. 13 pageshttps://pubmed.ncbi.nlm.nih.gov/683033/

ANNEXURE-A

INSTITIUTIONAL ETHICAL COMMITTEE APPROVAL CERTIFICATE

This is to certify that the research proposal of dissertation topic A study to assess the effectiveness of structured teaching programme on crash cart management among second year and third year nursing students in selected nursing college, Mumbai. Was discussed in ethical committee meetings. Ethical committee has unanimously approved the dissertation topic of……...

This work will be done under the guidance and supervision of your guide……

CHAIRPERSON

ETHICAL COMMITTEE

ANNEXURE – B

LETTER REQUESTING EXPERT OPINION TO ESTABLISH CONTENT AND

CONSTRUCT VALIDITY OF THE RESEARCH TOOL

To,

.....

Subject: Content validity of research tool

Respected Sir/Madam,

Mr. / Ms. …… is a bona fide graduate student of our institute. She has selected the below mentioned topic for her dissertation to be submitted in Maharashtra University of Health Sciences, Nashik in partial fulfilment for award of Bachelors of Science Degree in Nursing.

Title of the study:

A study to assess the effectiveness of structured teaching programme on crash cart management among second year and third year nursing students in selected nursing college ,Mumbai. Regarding the study, she is in need of expert opinion and suggestions to validate the research tool. We request you to provide her necessary help & cooperation regarding the same.

Thanking you,

Yours faithfully,

Signature of Principal

ANNEXURE – C

LETTER RREQUESTING EXPERT OPINION TO ESTABLISH CONTENT AND

CONSTRUCT VALIDITY OF THE RESEARCH TOOL BY STUDENTS

To,

……..

Subject: Request for expert opinion and suggestion to establish content validity of the research tool.

Respected Sir/Madam,

I Mr./Ms……

Basic B.Sc. Nursing student at institute, has selected the following topic for my dissertation to be submitted in Maharashtra University of Health sciences, Nashik in partial fulfilment for award of Bachelor of Science Degree in Nursing.

TITLE:

A study to assess the effectiveness of structured teaching programme on crash cart management among second year and third year nursing students in selected nursing college,Mumbai.

OBJECTIVE:

1. To assess the knowledge regarding crash cart management among second year and third year nursing students before and after structure teaching programme

2. To administer the structure teaching programme on crash cart Management among second year and third year nursing students in selected nursing college, Mumbai.

3. To assess the effectiveness of structured teaching programme on crash cart Management among second year and third year nursing students in selected nursing college, Mumbai. by comparing pretest and post test score.

Here with I have enclosed,

Research tool containing, demographic data and questionnaire.

Blue print of tool.

Certificate of validation.

I kindly request you to go through the items and give your valuable suggestion and opinions about the appropriateness and validity of the tool. Kindly suggest modification, additions and deletions, if any in the remark's column.

Thanking you,

Yours faithfully,

B.Sc. Nursing Student

TOOLS VAIDATION

Serial no	Name of the Professor	Subjects	Signature
1.	Mrs. Namrata Kuba	Medical Surgical Nursing	
2.	Mrs. Priyanka Prasad	Medical Surgical Nursing	
3.	Mrs. Tejasvi Pavaskar	Medical Surgical Nursing	

4.	Mr. Prashant Tambe	Child health nursing	
5.	Mrs. Diana fernandes	Child health nursing	

ANNEXURE – D

CERTIFICATE OF VALIDATION

This is to certify that Ms. Jayshree Pandurang Pawar, a final year B.Sc Nursing student of S.M.E.S college of nursing, Mumbai is conducting research on topic "A study to assess the effectiveness of structured teaching programme on crash cart management among second year and third year nursing students in selected nursing college ,Mumbai**".** phase developed the tools to collect data which have been validated by me."

DATE: SIGNATURE:

PLACE: NAME:

SEAL:

ANNEXURE E

A LETTER SEEKING PREMISSION TO CONDUCT THE STUDY

Date

To,

The Class Coordinator,

SMES, Smt. Sunanda Pravin Grambhirchan College of Nursing,

R. A. Kidwai road, Matunga, Mumbai-19.

Subject- Permission to Conduct Research Study

Respected Madam,

I Miss. Jayshree Pandurang Pawar, an Under graduate student (Final year basic BSc nursing) would like to conduct research study (A study to assess the effectiveness of structured teaching programme on crash cart management among second year and third year nursing students in selected nursing college ,Mumbai.").

I request you to allow me to conduct the above said study as it is approved by Ethical Review Committee of SMES, Smt. Sunanda Pravin Gambhirchand College of Nursing.

This research is required as a part of partial fulfilment of completion of BSc nursing under Maharashtra University of Health Sciences, Nashik. I promise to maintain confidentiality with all data collected and it will be used only for educational purpose.

Thanking you.

Yours truly,

Ms. Jayshree Pandurang Pawar

ANNEXURE-F

EDITOR'S CERTIFICATE

This is to certify that, I Mr./Ms._____have edit the dissertation of

Mr./ Ms. a graduate student of _____

Institute of the below mentioned topic in partial fulfilment of the requirement of the degree Of Bachelor of Science in Nursing.

Title: "A study to assess the effectiveness of structured teaching programme on crash cart management among second year and third year nursing students in selected nursing college ,Mumbai**".**

Date:

Editor's Signature:

Place:

Place: Name and Designation:

Stamp

ANNEXURE- G

INFORMED WRITTEN CONSENT

Title of project: "A study to assess the effectiveness of structured teaching programme on crash cart management among second year and third year nursing students in selected nursing college ,Mumbai**."**

I hereby give my consent to participant in the above-mentioned study. I have been explained about the study in my own language and I have had the opportunity to consider the information, ask questions and got the answer satisfactorily.

I understand that my participation is voluntary and that I'm free to withdraw at any time, without giving any reason, without my legal rights being affected. I have been explained that all information will be kept confidential and I am willing to participate in the same.

Signature of investigator:

Signature of participant:

Name of investigator:

Date:

ANNEXURE- H

RESEARCH TOOL

INSTRUCTION :-

• Various possible alternatives of each questions are given in the questionnaire.

• Select only one alternatives which is correct and click mark (✓) on the alternatives.

• Confidentiality will be maintained.

• Please answer all questions.

• Do not overwrite.

Section A: Demographic data

Section B: Knowledge regarding crash cart management

SectionA

Part-I Demographic Data:

1.Name of student:

2.Age in years:

a)18

b)19

c)20

d)21

3.Do you have any knowledge about crash cart management

a) Yes

b) No

If Yes, then Source of information

a) Social Media:

b) During clinicals:

c) Mass Media:

SECTION B

Knowledge regarding crash cart management

1. What is the meaning of crash cart?

a) It is storing and transporting vital equipment, drugs during emergency

b) It is only for drug storage

c)It is only for equipment storage

d) It is helpful for storing the drugs and equipments

2.What is the purpose of crash cart?

a) Save the valuable time and life of patients

b) Provide immediate access to supplies and medications

c) Facilitate coordination of emergency equipment

d) All of above

3.What are the functions of crash cart?

a) To provide mobile station in hospital which helps for emergency situation

b) It allows the treatment to come to the patient when needed

c) Arrangement of equipment in crash cart

d) All of above

4.What is the importance of crash cart checklist?

a) Helps in keeping things organized and prioritizing the task

b) It provides details for every step-in process

c) Both a and b

d) To save valuable time at the time of emergency

5.Which of the following things are included in the crash cart ?

a) Medications, IV fluids and tubing

b) Blood draw equipment, airway management supplies

c) Pediatric supplies and tubing

d)All of above

6.What are the policies of crash cart management?

a) Crash cart must be checked every shift and standardization must be maintained

b) To provide mobile station in hospital

c) Arrangement of equipment in crash cart

d)All of above

7.How many times crash cart must be checked?

a) Every one hourly

b) Every two hourly

c) Every shift

d) Every three hourly

8 Crash cart must be checked by_____

a) Head nurse

b) Staff nurse

c) Both a and b

d) Assistant doctors

9.Which equipment present on the side of cart?

a) O2 tank, rigid plastic, handled suction mechanism

b) SpO2 probe, ECG strips

c) Atropine, Dobutamine

d) Lidocaine, Dextrose

10. Which equipments present on the top shelf?

a) Defibrillator, SPO2 probe, ECG strips

b) medicines and laryngoscope

c) Dextrose, Lidocaine

d) Defibrillator, SpO2 probe, ECG strips, USG jelly for DC shock, AMBU bag

11. First drawer of crash cart contains_____

a) SPO2 probe

b) ECG strips

c) Dextrose

d) Medicines

12. Which are the emergency drugs present in the first drawer?

a) Dextrose, Adrenaline, Atropine

b) Potassium chloride, Dopamine, Dobutamine

c) Adrenaline, Atropine, Digoxin, Dobutamine, Verapamil

d)Sodium carbonate, Lidocaine

13. Second drawer of crash cart contains_____

a) Adrenaline, Atropine

b) Sodium bicarbonate, Lidocaine

c) Dextrose, Dopamine

d) Dextrose, Lidocaine, Potassium chloride, Sodium bicarbonate

14. Third drawer of crash cart contains_____

a) Laryngoscope, Gauze, stylete, electrodes

b) Endotracheal tube

c) Tracheostomy tube

d) Gloves

15. Fourth drawer of crash cart contains_____

a) Atropine

b) ETT, tracheostomy, suction catheter, Airway

c) Xylocaine jelly

d) Plaster

16. How many times defibrillator (AED) must be checked for expiry date?

a) Every four month

b) Every month

c)Every two month

d) Every three month

17. Pediatric equipment in crash cart includes_

a) Warmer device, pulse oximeter

b) pressure cuffs, femur splints

c) Restraint, weight scale

d)Warmer device, restraints, weight scale, measuring tools, SPO2 probe

18. Staff nurse is responsible for_____of crash cart

a) Cleaning, inspecting, replacing, and arrangement of crash cart

b) Treatment of the patient when needed

c) Function of all equipment in crash cart

d) All of above

19. What things should be done by staff nurse while arranging the medications in crash cart?

a) Protection of IV fluids from light

b) Making sure all the labels are clear and easy to locate

c) Monitor patient with renal and hepatic impairment

d) Monitoring patient carefully

20. Which are the nursing consideration in crash cart?

a) Protection of IV solution from light

b) Monitoring patients' status

c) Monitoring patients renal and hepatic impairment

d)All of above

DECLARATION BY THE CANDIDATE

We hereby declare that dissertation/thesis, "A study to assess the effectiveness of structured teaching programme on crash cart management among second year and third year nursing students in selected nursing college ,Mumbai" Is a bonafide and genuine research work carriedout by me under the guidance of lecturer Mrs.Priyanka Prasad , head of department of Medical Surgical Nursing, Seva Mandal education society's Smt. Sunanda Pravin Gambhirchand college of nursing, Matunga-400019.

Date:

Place:

Signature of candidate, Ms.Jayshree

Pandurang Pawar

CERTIFICATE BY THE GUIDE

This is to certify that dissertation entitled, "A study to assess the effectiveness of structured teaching programme on crash cart management among second year and third year nursing students in selected nursing college ,Mumbai."Is a bonafide and genuine research work done by Ms. Jayshree Pandurang Pawar. In partial fulfilment of the requirements for the basic B.Sc.Nursing degree.....

Date:

Place:

Signature of the guide

Lecturer of,

Head of department Mediacal-

Surgical Nursing.

CERTIFICATE BY THE HEAD OF THE DEPARTMENT

We hereby declare that dissertation/thesis, "A study to assess the effectiveness of structured teaching programme on crash cart management among second year and third year nursing students in selected nursing college ,Mumbai". Is a bonafide and genuine research work carriedout by me under the guidance of lecturer Mrs. Namrata Kubal head of department of Medical Surgical Nursung, Seva Mandal education society's Smt. Sunanda Pravin Gambhirchand college of nursing Matunga, mumbai-400019.

Signature of HOD Mrs. Shilpa

Shettigar,

Head of the department,

SevaMandal education society's

College of nursing, Matunga, Mumbai-19

Date:

Place:

ENDORSEMENT BY THE PRINCIPAL/HEAD OF THE INSTITUTION

This is to certify that dissertation entitled, "A study to assess the effectiveness of structured teaching programme on crash cart management among second year and third year nursing students in selected nursing college, Mumbai". Is a bonafide and genuine research work carriedout by me under the guidance of Principal Mrs. Shilpa Shettigar, head of department of community health nursing, Seva Mandal education society's Smt. Sunanda Pravin Gambhirchand college of nursing, Matunga Mumbai-19

Date:

Place:

Signature of principal,

Mrs. Shilpa Shettigar,Incharge

Principal of,
Seva Mandal education society's

College of nursing, Matunga, Mumbai-19

COPY RIGHT DECLARATION

BY THE CANDIDATE

We hereby that the Maharashtra university of health sciences, Nashik shall have the rights to preserve, use and dissertation / thesis in print or electronic format for academic research purpose.

Signature of candidate

Ms. Jayshree Pandurang PawarDate:

Place:

ABSTRACT

The objective of this research is. “A study to assess the effectiveness of structured teaching programme on crash cart management among second year and third year nursing students in selected nursing college ,Mumbai”. The subject of this study includes 83 second year basic B.Sc. nursing and third year basic B.sc nursing students, where the group was assessed and administration of tools to participant. Usually used modified structured questionnaire and check list tool. All the 100% sample are female.

INTRODUCTION

Crash cart is an essential part in hospital. An organized crash cart brings a sense of structure to a potentially chaotic situation .Crash cart are usually stock with emergency medication for almost all potential emergency situation

OBJECTIVE OF STUDY

1. To assess the knowledge regarding crash cart management among second year and third year nursing students before and after structure teaching programme

2. To administer the structure teaching programme on crash cart Management among second year and third year nursing students in selected nursing college, Mumbai.

3. To assess the effectiveness of structured teaching programme on crash cart Management among second year and third year nursing students in selected nursing college, Mumbai. by comparing pre-test and post test score.

METHODOLOGY

An evaluative approach with pre-experimental one group pre-test post-test design was used for this study. The study was carried out in a selected nursing college at Mumbai. The samples, 83 second year and third year basic BSc. Nursing students, were selected from the nursing college by non-probability purposive sampling technique. The data collection after obtaining permission and consent. Pre-test was conducted by administering a structured interpretive questionnaire, and an interpretive educative session on crash cart management was given on the same day. Post-test was conducted on second day using the same structured questionnaire. The data was analyzed using descriptive and inferential statistics to find the association of pre-test knowledge score on interpretation with selected baseline variables.

RESULT:

Analysis and interpretation gives description of results and findings of the study. Result shows that the level of knowledge regarding crash cart management after conduction of planned teaching programme is increased.

CONCLUSION:

The study showed that majority of the second year and third year basic BSc. Nursing students had an inadequate knowledge regarding crash cart management and interpretation has significantly improved after the administration of structured teaching program. Hence it was concluded that structured teaching program was an effective teaching strategy in improving the knowledge on crash cart management among second year and third year basic BSc. Nursing students.