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A STUDY TO ASSESS THE KNOWLEDGE REGARDING POST OPERATIVE CARE IN CARDIAC SURGERIES AMONG CARE TAKERS IN SELECTED HOSPITALS OF PUNE CITY

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Abstract

Background: Adequate cardiac output is the most crucial idea in optimizing myocardial oxygen supply and demand as well as tissue oxygenation. The units of cardiac output and cardiac index are liters per minute and liters per minute per square meter, respectively. A cardiac index of 2.0 to

4.4 L/min/m2 is considered normal. If the cardiac index remains above 2.0 and 2.2 L/min/m2, a straightforward recovery from heart surgery can be expected. Heart rate and stroke volume both affect cardiac output, with cardiac output being the result of multiplying heart rate by stroke volume. **Methodology:** Quantitative Research Approach adopted for the study. Non experimental, descriptive research design. Sample were consist of 100 caretakers. Non- Probability Purposive sampling technique was used. The validity of the research study was done. The tool was submitted to 5 expert and they had suggested the necessary changes and correction were made with the help of guide. After all the changes, the final tool were prepared and processed for reliability. The reliability were done by the Test Re-test method was used in this study to ensure that the tool was reliable. It was done by taking 10 samples from the selected hospital by following all criteria's by using Karl parsons formula reliability result value obtained was 0.811 so the tool is highly reliable. **Result:** Result showed that 40 % had good knowledge, 46% were having average knowledge and 14% were having poor knowledge about the post-operative surgeries in cardiac surgeries with Mean 11.9 And SD 3.19. **Conclusion**: The findings showed that among caretakers, 43% had average knowledge, 43% had high knowledge, and 12% had poor awareness regarding post-operative surgeries in cardiac surgeries among caretakers.

Categories: Medical & Surgical Nursing.

Keywords: (Knowledge, post-operative care, cardiac surgeries, care takers)

INTRODUCTION

Interventional cardiology has rapidly progressed since then, particularly Intensive Care Unit with regard to ischemic heart disease. Consequently, fewer patients are

undergoing surgical myocardial revascularization and more are receiving percutaneous catheter interventional therapy for ischemic heart disease. Most patients who are referred for surgical revascularization are older and suffer from more serious illnesses. Patients who are referred for surgical revascularization typically have more complicated issues and are older. Additionally, more patients are being referred for surgery for valvular heart disease as the population ages.[4]

Because cardiopulmonary bypass disrupts physiologic processes, the open-heart patient needs specific care. Because blood comes into contact with the synthetic surfaces of the bypass circuit, Cardiopulmonary bypass causes a widespread inflammatory reaction.[4]

Following open heart surgery, the patient presents with a variety of quickly evolving clinical issues. These patients have a very fluid and dynamic clinical condition at first, and they are unstable. In order to provide care for the postoperative open-heart patient, one must be present at the patient's bedside and possess both general and patient care principles. It is crucial to treat these patients as soon as they leave the operating room since it could influence how they recover for the remainder of their stay.[5]

Despite the significance of this job, little study has been done on caretakers' levels of post-operative care knowledge, especially in the Indian context. Every year, a substantial number of heart procedures are performed in Pune, a city that is expanding quickly and has a strong healthcare system. It is unknown, nevertheless, how equipped caretakers in this area are to provide post-operative care.[6]

NEED OF THE STUDY

The need for cardiac surgery has increased over the last 20 years, as more patients with more serious conditions are being operated on. For instance, at Johns Hopkins, the percentage of elective cases for coronary artery disease has dropped from 75% to about 40% in the last several years, while the percentage of urgent cases has climbed from 25% to more than 50%. However, the anticipated fatality rate for this same cohort has stayed steady at about 2 percent in spite of this rise in illness acuity. Improvements in intraoperative and postoperative care techniques may be the cause of these comparable results when dealing with sicker patients. Needless to say, preventing complications calls for a comprehensive grasp of the pathophysiologic underpinnings of organ dysfunction following heart surgery, the capacity to recognize high-risk patients, and the ability to implement therapeutic approaches that avert complications. Early identification and treatment decrease eventual morbidity and mortality and stop further worsening in many individuals who experience problems.

For individuals with serious heart diseases, cardiac surgery can save their lives, but the rehabilitation process is extremely Intensive Care Unit lt. Because patients are susceptible to problems such infections, arrhythmias, and thromboembolic events, the post-operative phase is critical. A good recovery and the reduction of these risks depend on effective post-operative care.

After the patient is discharged, a large portion of the continuing care and monitoring is left to caretakers, even though medical experts are crucial to the immediate post-

operative care provided in the hospital. An essential component of the healing process following surgery is post-operative care. The goals of post-operative treatment include pain management, recovery, and problem prevention. As soon as an operation is finished, the nurses begin it in the hospital, and it continues once the patient has been released. The level of post-operative care is determined by the variety of operation and the medical history. Among the almost pressing concerns are airway protection, pain control, and wound healing. Other post-operative care concerns that should be monitored include preventing blood pressure fluctuations, fever, deep vein thrombosis, constipation, loss of muscle mass, and urine retention.

AIM OF THE STUDY

The right post-operative care can enhance outcomes by reducing the risk of complications, promoting healing, and helping patients manage their pain, emotional support and early recovery to support surgical patient's recuperation during their entire post-operative period.

MATERIAL AND METHODS

Study design: Non experimental, descriptive research design was used.

Study duration: The present study was carried out during the period between 1st April 2024 to 31st January 2025.

Place of study: Research study was done in selected Hospitals of Pune city.

Sample Size: Sample size will consist of 100 caretakers.

Sampling technique: In the current study, samples were selected by Non probability purposive sampling technique.

Consent: Written informed consent was obtained from all the participants after explaining to them all the contents of the patient information sheet, before data collection.

Privacy and confidentiality: Efforts were taken to ensure the privacy & confidentiality of all the information collected from the participating caretakers. Data was collected after explaining the purpose of the research study in the local language (Marathi).

Inclusion criteria:

This study focuses on caretakers of postoperative cardiac surgery patients who can understand either English or Marathi. Their involvement is essential in assessing the caregiving experience and related factors.

Exclusion criteria:

However, individuals who are unwilling to participate will be excluded from the study to ensure voluntary and informed consent. By including only those who can communicate in English or Marathi, the study aims to gather accurate and meaningful data while maintaining clarity in interactions and assessments.

Data collection:

Method of data collection refer to the various steps use for collecting and analysis data. The topic was explain to all the care takers for their better understanding and reassure that the data collected will be personally and used only for the study goal. The research

consent was taken from participants for the study. The data was collected full-fill the sampling criteria by giving time after providing them the data collection. Confidentiality was maintained.

Statistical Analysis

Data was entered using Microsoft Excel 2019 for Windows. Summarization and analysis of data was carried out by using the Software 'Statistical Package for Social Sciences (SPSS version 20) Statistics like Mean and Standard Deviation were calculated for quantitative data. To test the significance of the difference, various statistical tests such as unpaired t-test, and chi-square test were used wherever necessary. For the correlation coefficient of various study factors, Karl Pearsons' coefficient of correlation is used.

RESULTS

Finding related to the Frequency and distribution of demographic variables of samples.

The majority of participants were aged 18-27 years (36%), followed by 28-37 years (35%), 38-47 years (20%), and 48-60 years (9%). Gender distribution was 52% female and 48% male. In terms of education, 42% were graduates, 24% postgraduates, 13% had higher secondary education, 11% were illiterate, and 10% had primary education. Employment-wise, 45% worked in the private sector, 39% in the government sector, and 16% were self-employed. Regarding surgery duration, 38% lasted 1-4 hours, 34% were under 1 hour, and 28% exceeded 4 hours.

Table 1: Distribution related to knowledge post-operative care in cardiac surgeries among caretakers N =100

LEVEL OF KNOWLEDGE	f	%	Mean	SD
POOR (0 - 07)	14	14	11.9	3.19
AVERAGE (08-13)	46	46		
GOOD (14-20)	40	40		

The majority of participants had an average level of knowledge (46%), followed by 40% with a good level and 14% with a poor level. The overall mean knowledge score was 11.9, with a standard deviation of 3.19, indicating moderate variability in knowledge levels among participants.

Table 2: Findings related to item analysis

Sr. N	KNOWLEDGE QUESTIONNAIRE	PERCENTAGE

o		
1	Post operative care means?	64
2	Which of the following should be included in the patient's diet during the early recovery phase after cardiac surgery?	64
3	Which of the following beverages is typically restricted for a patient recovering from cardiac surgery?	57
4	Which food item is generally avoided in a post-operative cardiac diet due to its high sodium content?	51
5	Which of the following nutrients is essential for wound healing after cardiac surgery?	50
6	Which activity should be avoided during the initial recovery period following cardiac surgery?	61
7	What is the recommended position for a patient recovering from cardiac surgery to sleep in?	53
8	Which action should be taken if a patient complains of sudden chest pain during the postoperative period following cardiac surgery?	51
9	What is the purpose of leg exercises for a patient recovering from cardiac surgery?	56
10	How frequently should a patient recovering from cardiac surgery perform deep breathing exercises to prevent respiratory complications?	62
11	Which of the following activities should be encouraged to promote relaxation and stress reduction in a patient recovering from cardiac surgery?	67
12	What is the recommended method for assisting a patient to get out of bed following cardiac surgery?	53
13	What is the purpose of using compression stockings in a patient recovering from cardiac surgery?	49
14	What is the primary purpose of isolation in post-operative care for cardiac surgery patients?	55
15	What is the primary goal of cardiac rehabilitation after surgery?	73

16	How soon should a patient typically start cardiac rehabilitation after surgery?	64
17	Which of the following is a common complication following cardiac surgery that should be reported immediately?	62
18	Which symptom indicates a potential complication related to fluid overload in a patient recovering from cardiac surgery?	74
19	What is the primary purpose of follow-up appointments after cardiac surgery?	54
20	What is the primary reason for ensuring adequate rest and sleep for a patient after cardiac surgery?	72

Association of selected demographic variables knowledge regarding postoperative care in cardiac surgeries among caretakers.

Above association shows that association between selected demographic variables & knowledge regarding post-operative care in cardiac surgeries. Age, gender, education status, occupation and duration of surgery are not associated with a significant level of 0.05.

DISCUSSION

Ann Kristin, conducted a study on an integrated, systematic assessment of qualitative and quantitative research on informal caretakers' experiences following heart surgery. Systematic integrated review without meta-analysis was the design that was employed. The findings indicate that 42 primary research studies with 5292 participants—3231 (62%) caretakers, of whom 2557 (79%) were women—were included in a narrative synthesis out of the 4912 papers found through searches. Across all investigations, the median sample size was 96 (range: 6–734). The qualitative study's findings revealed three main themes: (1) the necessity for information for caretakers; (2) the different Intensive Care Unit lies they face at work; and (3) how they adjust to their recuperation. Similar themes emerged from the observational research (n=22). According to the study's findings, after hospital release following cardiac surgery, informal caretaker wish to help with their significant others' care.[7]

In this study to assess the knowledge regarding post-operative care in cardiac surgeries among caretakers in selected hospital of Pune City. The study were based on the adults caretaker of the patient and the study was done as per the demographic variables of the study .The study was conducted by 100 samples and the results was like 43% good knowledge, 45% average knowledge and 12% poor knowledge regarding post-operative care in cardiac surgeries among caretakers.

CONCLUSIONS

The study sought to determine the level of post-operative care knowledge among caretakers at Pune city Quantitative Research Approach adopted for the study. Non experimental,

descriptive research design. Sample were consist of 100 caretakers. Non- Probability Purposive sampling technique was used. The validity of the research study was done. The tool was submitted to 5 expert and they had suggested the necessary changes and correction were made with the help of guide. After all the changes, the final tool were prepared and processed for reliability.

The reliability were done by the Test Re-test method was used ,this study to ensure that the tool was reliable. It was done by taking 10 samples from the selected hospital by following all criteria's by using Karl parsons formula reliability result value obtained was 0.811 so the tool is highly reliable. The results highlight the fact that although caretakers are essential to the recuperation of patients who had heart surgery, they lack substantial knowledge about wound care, medication administration, identifying complications, dietary modifications, and patient physical rehabilitation. The findings showed that among caretakers, 43% had average knowledge, 43% had high knowledge, and 12% had poor awareness regarding post-operative surgeries in cardiac surgeries among caretakers.

Additional information Disclosures

Human subjects: Authors have confirmed that human participants involved in this study.

Animal subjects: All authors have confirmed that this study did not involve animal subjects or tissue.

Conflicts of interest: The authors declare that they have no involvement in any organization or entity with any financial or non-financial interest in the subject matter or materials discussed in this paper.

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