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Review Article

Pre-operative Teaching is Important on Post-operative Self-care Activities among Cardiac Surgery Patients: an Overview

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Abstract

The patient will experience stress before undergoing any form of surgery. The fact that the heart is such an essential organ results in an increase in the amount of stress experienced. Some patients may experience feelings of helplessness, insecurity, and isolation as a response to the inconvenience, distress, and anxiety brought on by their stitches breaking. The all-encompassing pre-operative education can contribute to a reduction in the intensity of these feelings. Pre-operative education is an important component of the approaches for improved recovery after surgery, which aims to empower patients and their families to make their own health decisions. Pre-operative education reduces hospital stays, surgical complications, and recovery time. Thorough pre-operative instruction helps patients cope with surgery, control pain, and self-care. Post-operative problems, compliance, and anxiety must be reduced. According to a study on self-care knowledge and performance, early extubating, pain management, duration of stay, and complications, scheduled pre-operative training may help patients. Pre-operative teaching can prepare cardiac surgery patients. According to a study on the effect of the Orem self-care program on sleep quality, daily activities, and lower extremity edema in patients undergoing coronary artery bypass graft surgery, the program can reduce post-operative complications and improve self-care in long-term care patients

Keywords: Cardiac surgery patients, post-operative, pre-operative, self-care activities

Introduction

Every organ in the human body is significant, the heart serves the most crucial role in sustaining life by pumping blood to the body's tissues and cells. A situation where life is in danger results from improper heart function. A heart-healthy lifestyle entails eating, getting regular exercise, keeping a healthy weight, abstaining from drugs and smoking, drinking alcohol in moderation, and managing stress.

Any form of operation puts the patient under stress. Stress levels increase when the heart is involved since the heart is a crucial organ. Due to discomfort, distress, and anxiety of breaking stitches, some patients may respond by expressing powerlessness, insecurity, and isolation. A thorough pre-operative education can help to reduce these emotions.Any surgical treatment involving the heart or blood vessels that deliver blood to and from the heart is referred to as cardiovascular surgery, sometimes known as cardiac surgery or heart surgery.[1]In the modern world, non-communicable diseases account for the majority of fatalities in both developing and developed nations, with cardiovascular disorders accounting for more than half of them. Adults in their middle years' account for more than one-third of deaths. The primary cause of death worldwide in 2012 was cardiovascular disease (CVD), which claimed 17.5 million lives worldwide or 31% of all fatalities. 6.7 million cases of stroke and 7.4 million cases of coronary artery disease, respectively.

People with heart disease, those who have experienced a heart attack, stroke, or blood clot, as well as those who are at high risk of experiencing any of these issues, frequently have these operations.[2]Globally, CVDs are the leading cause of death, accounting for more fatalities each year than all other causes combined. Heart attacks, cerebrovascular illness, hypertension, peripheral artery disease, rheumatic heart disease, congenital heart disease, and heart failure are all examples of CVD.[3]

WhatIs Pre-oPeratIve educatIon?

Pre-operative education is a key element of the paths for enhanced recovery following surgery, which aims to empower patients and their families to make self-determined health decisions.[4] It has been described as offering

psychological support, educating patients on health-related topics, and teaching them skills targeted at minimizing discomfort and problems.[5]

Importance of Pre-operative education

Pre-operative education has been shown to shorten hospital stays and post-operative problems while also improving patient recovery. Patients who receive thorough pre-operative teaching deal with surgery more successfully and are better equipped to control their discomfort and carry out suitable self-care activities. Minimizing post-operative complications, boosting patient compliance, and lowering patient anxiety are crucial.[6]As knowledge and technology develop, nurses caring for these patients face new obstacles. Benefits in terms of learning new information and skills, improving self-care, lowering anxiety, raising satisfaction with care, improving pain management, and minimizing disruptions to daily activities. Finally, initiatives and recommendations for patient education draw patients to the provider and raise their satisfaction with their treatment

Why Pre-oPeratIve teachIngIs ImPortantforthecardIac PatIents?

A study was conducted on the prevalence of risk factors for coronary artery disease in an urban Indian population in 2014. According to the study, 4.6% of the study group had a history of early computer-aided design (CAD) and 16% of people had diabetes overall (5.6% were identified during the trial, and the remaining 10.4% were already on medication). About 21% of the individuals had hypertension. A high total cholesterol/high-density lipoprotein ratio was present in 45.6% of the study participants, indicating a considerably high incidence of dyslipidemia. In total, 78.6% of the individuals had two or more CAD risk factors. The present study shows that CAD risk factors are highly prevalent in the urban Indian population. Therefore, it is urgent to start taking action to increase public knowledge of these risk factors so that those who are at high risk for developing CAD in the future can be controlled.[7]Research conducted in 2015 on patients with heart failure scheduled for cardiac resynchronization therapy (CRT) implantation should be aware of their knowledge expectations, self-care needs, and health concerns. Patients anticipated learning the greatest information about their illness and how to treat it (median 4.0, interquartile range 0.13), and the least information about societal issues (median 3.5, interquartile range 0.83). Before the treatment, their self-care was average (standardized mean 51.019.6). Patients reported 8.2 (4.7) health complaints on average, with weariness and sexual issues being the two most serious. Age and knowledge expectations were independently correlated (Exp 0.049, P = 0.033). Heart failure patients who are awaiting the implantation of a CRT device have high expectations for a variety of pre-procedure knowledge, including self-care difficulties. These expectations rise with age and are comparable to those of other surgery patients.[8]In 2016, the investigation on self-care practices and associated variables in congestive heart failure patients treated in the cardiology wards of Tohid Hospital in Sanandaj City. Patients' rates of self-care behaviors were generally modest (average score of 39.54) and linked (P 0.05) with education level, place of residence, and knowledge of the disease. However, there was no statistically significant link between it and age, sex, occupation, marital status, level of disease, smoking, drugs, or alcohol (P > 0.05). According to the findings of this study, heart failure patients should not practice self-care. Therefore, it is thought that patients who are underprivileged in this area particularly need knowledge and its strengthening.[9]Research performed in 2020 on knowledge of surgical patients' post-operative pain management. Patients had an average age of 42.97 ± 13.05 years old. Patients with excellent or good knowledge were found in 11.61% and 21.94% of cases, whereas those with fair or weak knowledge were found in 42.58% and 23.87% of cases, respectively. The lack of understanding about the potential for addiction and the negative effects of analgesics was more pronounced. A higher degree of knowledge about pain and its management was substantially correlated with education level, surgical history, and adequate pre-operative information given about pain management plan by surgeons (P-values 0.0005, 0.002, and 0.0005, respectively). Especially in the areas of side effects and addiction risk, a sizable minority of patients lack a basic understanding of their post-operative pain and how to manage it.[10]

Pre-operative education may helpful In Post-operative self-care activities In cardiac Patients following are some studies Which suggest the same

The results of the study on the effect of education program on knowledge and self-care ability in patients undergoing coronary artery bypass grafting suggest that the comprehensive education program should deliver by giving verbal information with video at the appropriate time, before surgery, the day of admission, post-operation, and before discharge.[11] A study performs in April in Saudi Arabia shows a positive influence on self-care performance and behavior. After leaving the hospital, individuals who had undergone cardiac surgery exhibited a moderate level of self-care. In addition, based on the patients' BCFs, the study's findings revealed a statistically significant difference in the patients' self-care practices.[12] The effect of peer education on anxiety in patient's candidates for coronary artery bypass graft surgery suggested that education to patients who are candidates for elective coronary artery bypass graft surgery can reduce anxiety. Therefore, it is recommended that this educational approach be used in the cardiac surgeries ward.[13] A survey from the patient's perspective in 2013 on thorough awareness of what to anticipate after surgery appears to be given to patients through multidisciplinary written pre-surgical education. According to the findings, occupational therapy's pre-operative verbal education could help some patients reduce their anxiety.[14] As per the results of the study conducted in Zahedan, awareness had an impact on patients with heart failure's self-care practices, and that their performance improved as their knowledge grew. Therefore, it is recommended to give heart failure patients a video instruction manual.[15] As the study suggested on self-care knowledge and performance, early extubating, pain management, duration of stay, and complications, patients may benefit from the planned pre-operative training intervention compared to those who do not receive it. The pre-operative instruction program could be used to help patients get ready for cardiac surgery.[16] As per the study performed on the effect of Orem self-care program on sleep quality, daily activities, and lower extremity edema in patients undergoing coronary artery bypass graft surgery recent study, the implementation of the Orem-based self-care program can reduce post-operative complications and the use of nursing patterns, such as Orem, to enhance self-care ability in patients who require long-term care can be very effective.[17]

conclusion

After reviewing the previous studies, we can conclude that pre-operative education could be beneficial for the post-operative self-care activates in cardiac surgery patients.

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Conflicts of Interest

None

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