

Effectiveness of Prehabilitation on Improving Emotional and Clinical Recovery of Patients Undergoing Open Heart Surgeries

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Abstract : Background: World Health Organization stated that by 2020 cardiac disease will be the number one cause of death worldwide and estimates that 25 million people per year will suffer from heart disease. Cardiac surgery is considered an effective treatment for severe forms of cardiovascular diseases that cannot be treated by medical treatment or cardiac interventions. In spite of the benefits of cardiac surgery, it is considered a major stressful experience for patients who are candidate for surgery. Prehabilitation can decrease incidences of postoperative complications as it prepares patients for surgical stress through enhancing their defenses to meet the demands of surgery. When patients anticipate the postoperative sequence of events, they will prepare themselves to act certain behaviors, identify their roles and actively participate in their own recovery, therefore, anxiety levels are decreased and functional capacity is enhanced. Prehabilitation programs can comprise interventions that include physical exercise, psychological prehabilitation, nutritional optimization and risk factor modification. Physical exercises are associated with improvements in the functioning of the various physiological systems, reflected in increased functional capacity, improved cardiac and respiratory functions and make patients fit for surgical intervention. Prehabilitation programs should also prepare patients psychologically in order to cope with stress, anxiety and depression associated with postoperative pain, fatigue, limited ability to perform the usual activities of daily living through acting in a healthy manner. Notwithstanding the benefits of psychological preparations, there are limited studies which investigated the effect of psychological prehabilitation to confirm its effect on psychological, quality of life and physiological outcomes of patients who had undergone cardiac surgery. Aim of the study: The study aims to determine the effect of prehabilitation interventions on outcomes of patients undergoing cardiac surgeries. Methods: Quasi experimental study design was used to conduct this study. Sixty eligible and consenting patients were recruited and divided into two groups: control and intervention group (30 participants in each). One tool namely emotional, physiological, clinical, cognitive and functional capacity outcomes of prehabilitation intervention assessment tool was utilized to collect the data of this study. Results: Data analysis showed significant improvement in patients' emotional state, physiological and clinical outcomes ($P < 0.000$) with the use of prehabilitation interventions. Conclusions: Cardiac prehabilitation in the form of providing information about surgery, circulation exercise, deep breathing exercise, incentive spirometer training and nutritional education implemented daily by patients scheduled for elective open heart surgery one week before surgery have been shown to improve patients' emotional state, physiological and clinical outcomes.

Keywords : emotional recovery, clinical recovery, coronary artery bypass grafting patients, prehabilitation

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