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

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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. Although the benefits of cardiac surgery, it is considered a major stressful experience for patient who are candidate for surgery. Prehabilitation can decrease incidence 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 exercise 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. Although the benefits of psychological preparations, there are limited studies which investigated the effect 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

Recent Publications

1. Gamil R, **Ahmed F**, Ahmed N, Sanhory M. "Barriers to cardiac rehabilitation practices for patients with acute coronary syndrome", 15th International Scientific Nursing Conference, Interdisciplinary health care: closing the gap & enhancing quality in collaboration with International Academy for advanced research and studies – London, Alexandria-Egypt 2019.

2. Mohamed A, El-Soussi A, Othman S, Abd El-Monnaem Sh, **Ahmed F.** "Effect of music therapy and aromatherapy massage on autonomic nervous system response among severe traumatic brain injury patients", IOSR Journal of Nursing and Health Science IOSR-JNHS 2019; 8(5):51-9.

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5. Othman S, Mohamed A, El-Soussi A, Abd El-Monaem Sh, **Ahmed F.** "Effect of integrative nursing practices on cognitive recovery among severe traumatic brain injury patients", Journal of Nursing Education and Practice 2020; 10 (10): 75-89.

Biography

Fatma Refaat Abd El-Fattah Ahmed has completed her Msc at the age of 27 and Ph.D. at the age of 30 years from Alexandria University. She is an assistant professor- Department of Nursing, College of Health Sciences- University of Sharjah. She is also a lecturer of Critical Care & Emergency Nursing department, Faculty of Nursing-Alexandria University. She is certified by European Resuscitation Council by 2014 for Advanced Life Support and European Trauma Course. She has participated in more than 20 national and international conferences. She has published more than 11 papers in reputed journals. She has been serving in preparing more than 7 editions of Critical Care Nursing & Emergency Care Manual.

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