Effect of an Educational Program on Patients with Coronary Artery Diseases Self Efficacy

Thesis

Submitted for Partial Fulfillment of the Requirement of Doctorate Degree in Nursing Sciences (Medical Surgical Nursing)

By

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2016

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2016

Acknowledgement

First and foremost I am grateful to **ALLAH** the most kind and merciful for helping me to achieve this work.

I am deeply grateful to **Prof. Dr. Magda Abd El Aziz Mohamed,** Professor of Medical Surgical Nursing, Faculty of Nursing, Ain Shams University. I am indebted to her constructive criticism, expertise, and for giving me the privilege to work under her supervision.

I am deeply grateful to **Prof. Dr. Manal Houssien Nasr,** Professor of Medical Surgical Nursing, Faculty of Nursing, Ain Shams University. I appreciate her for active participation in providing me with a lot of knowledge and constructive criticism to accomplish this work.

I would like to express my deep appreciation to **Assist. Prof. Zeinab Houssien Ali,** Assist Professor of Medical Surgical Nursing, Faculty of Nursing, Helwan University, I appreciate her for scientific help, meticulous supervision and constructive criticism to accomplish this work.

I would like to express my deep appreciation to **Dr. Mona Nadr Ebraheim,** lecturer of Medical Surgical Nursing, Faculty of Nursing, Ain Shams University, I appreciate her for meticulous supervision and constructive criticism to accomplish this work.

I would like to express my deepest thanks to all patients and all the staff members at cardiology unit & CCU and outpatient unit at Ain shams university hospitals. for their help to accomplish this work. Last but not least, I would like to express my gratitude and appreciation to all those who helped me directly or indirectly in accomplishing this work.

Sedika Sadek

Dedication to:

- My family

- My husband

Who offer me support, advice and motivation.

Sedika Sadek

Abstract

Coronary artery disease is one of the most prevalent cardiovascular diseases. Promotion of cardiac self-efficacy after coronary artery disease event is the outcome that plays a pivotal role in increasing rehabilitation skills to modify healthy behaviors. Having desirable illness perception may have promoted this capability. The aim of this study was to evaluate the effect of an educational program on Patients with coronary artery diseases self efficacy through: 1) Assessment of patients` self efficacy. 2) Developing and implementing an educational program according to patients' needs. 3) Evaluate the effect of an educational program on patient`s outcomes regarding their self efficacy. Four tools were used in this study; Patient structured interview questionnaire. Cardiac self efficacy scale. The somatic health complaints questionnaire (SHCQ) and beck anxiety inventory. This study was conducted at cardiology unit & CCU and outpatient unit at Ain shams university hospitals. A purposive sample of (104) adult patients diagnosed with CAD, was selected and equally divided into study & control group, (52) patients for each one. The finding of this study revealed that: Mean age of study and control group subjects were (54.71 ±10.42) and (54.21±8.01) respectively. Majority of study group had satisfactory level of knowledge, high cardiac exercise self-efficiency, Very low anxiety, while no one of them complaining of fatigue, pain, breathlessness and unrest often and all times post and follow up program implementation. The study concluded that, there was highly statistically significant improvement regarding the mean scores of total knowledge, cardiac self efficacy, cardiac exercise self efficacy, SHCQ and anxiety for the study group post and follow up implementation of the educational program. As compared with control group there was no statistical significant relation between mean scores of total knowledge, cardiac exercise self efficacy. This study recommended that, Promotion and enhancement of the self-care modalities to the patient; a strict written instruction with pictures about disease process, allowed foods , rest and physical activities and follow up should be continued after termination of the treatment through a rehabilitation program.

Key words: Coronary artery disease, Educational program, Cardiac self efficacy.

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LIST OF ABBREVIATIONS

- ACC : American College of Cardiology
- ACE : Angiotensin-Converting Enzyme
- ACS : Acute Coronary Syndrome
- ADL : Activities of Daily Living
- AHA : American Heart Association
- BAI : Beck Anxiety Inventory
- BMI : Body Mass Index
- CABG : Coronary Artery Bypass Grafting
- CAD : Coronary Artery Disease
- CESES : Cardiac exercise self efficacy scale
- CMR : Cardiovascular Magnetic Resonance
- CR : Cardiac Rehabilitation
- CSE : Cardiac Self Efficacy
- CT : Computed Tomography
- CV : Cardiovascular
- ECG : Electrocardiogram
- ED : Erectile dysfunction
- HDL : High Density Lipoprotein
- ICSI : Institute for Clinical Systems Improvement
- IHD : Ischemic Heart Disease
- LDL : low density lipoprotein

- MDD : Major Depression Disorder
- MI : Myocardial Infarction
- NTG : Nitroglycerin
- NSTEMI : Non-ST Elevated Myocardial Infarction
- PCI : Percutaneous Coronary Intervention
- PT : Physical Therapy
- PUFA : Poly Unsaturated Fatty Acid
- QOL : Quality of Life
- SBP : Systolic Blood Pressure
- SE : Self Efficacy
- SECS : Self Efficacy Continuous Symptoms
- SEMF : Self Efficacy Maintaining function
- SHCQ : Somatic Health Complain Questionnaire
- STEMI : ST-Elevated Myocardial infarction
- SPSS : Statistical Package for Social Science
- WHO : World Health Organization

INTRODUCTION

Coronary artery disease (CAD) is the presence of atherosclerosis in the epicardial coronary arteries. Atherosclerotic plaques may either rupture and cause acute ischemia or progressively narrow the coronary artery lumen, resulting in chronic stable angina. Acute myocardial ischemia occurs when an atheromatous plaque ruptures. The causes of plaque ruptures are relating to plaque calcium content, plaque morphology, and plaque softening due to an inflammatory process **(Roger, Go & Lloyd-Jone, 2012).**

Coronary artery disease remains a major cause of morbidity and mortality worldwide. The vital determinants are the ageing of populations and unhealthy lifestyles **(WHO, 2014).** Although adequate risk factor control is highly effective to guideline-recommended target levels in the secondary prevention setting, new surveys have revealed that risk factor control is far from ideal in clinical practice **(Kotseva, Wood & De Bacquer., 2015).**

Patients with Coronary artery disease are instructed to engage in self-care behaviors as part of daily disease management. Many terms are used with self-care including self-regulation, self-management, self-monitoring, compliance and adherence to explain the activities in which patients are asked to engage in to promote health and well-being **(Fihn, Gardin & Abrams, 2012).**

In the cardiovascular literature, self-care refers to compliance to treatment recommendations, symptom response, and adoption of healthy lifestyles like weight management and smoking cessation. Education

designed to promote these self-care behaviors into all major clinical practice guidelines for CAD **(Dickson et al., 2013).**

One of the goals of nursing care is health promotion and prevention of disease. Cardiac rehabilitation achieves these goals through a comprehensive program that prepares the patient to vital, full and productive life in the termination imposed on him by the cardiac disease. It is a process for restoring and maintaining a patient at his optimal social, physiological and psychological status. Patient moves from complete dependence to independence in his activities of daily living (ADL) **(Nair, 2009).**

The American Heart Association and American College of cardiology have developed treatment guidelines for patients with coronary artery disease. Each guideline addresses initial and ongoing drug therapy, indication for fibrinolytic, Percutaneous coronary interventions, and discharge consideration. For patient with MI, the therapeutic goals are to reduce infarct size, provide emotional support and education, prevent and treat complications. Recovery from unstable angina is shorter than with myocardial infarction because only ischemic, not infracted, tissue occurs **(Gulanick & Myers, 2011).**

Self efficacy (SE) is a psychological construct which describes how one's subjective belief in their ability to perform a task in a desired manner affects their physical engagement and subsequent completion of that task **(Amagai, 2012)**. Cardiac Self Efficacy (CSE) is a cardiac specific measure of an individual's belief in their ability to achieve actions which relate to the symptoms and challenges imposed by their cardiovascular disease (CVD) **(O'Neil, Berk, Davis & Stafford, 2013).**

Cardiac Self Efficacy motivates individuals to make healthy lifestyle modifications regarding their CAD by showing willingness and desire to accept such behaviors **(Breaux-Shropshire, 2012).** Also self efficacy affects the health-related behaviours and health-related outcomes in the management of chronic disease patients **(Sarkar, Ali, & Whooley, 2009).**

Significance of the study

Coronary artery disease is a major cause of morbidity and mortality worldwide. It is estimated that 1 in 3 American adults have CAD. After age of 40, the lifetime risk of developing CAD is 49% for men and 32% for women **(Roger et al., 2012).**

According to **WHO** CAD deaths in Egypt reached 78,897 which represent (21.73%) of total deaths. The age adjusted death rate is 173.98 per 100,000 of population and Egypt has been rank number 33 in the world **(WHO, 2011).** At Ain Shams University Hospitals the total number of admission to cardiology unit were 1460 patients in 2014. 1040 patients of them had coronary artery diseases (**Information Center in Ain Shams University Medical Records Office, 2014).**

Abdel wahab, (2013) showed that CAD have low scores in all aspects of self efficacy scale and recommended that patients with cardiac diseases need educational program to improve their self efficacy.

Aim of the Study

The overall aim of the study was to:

Evaluate the effect of an educational program on patients with coronary artery diseases self efficacy through: