بسم الله الرحمن الرحيم

MONA MAGHRABY

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

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MONA MAGHRABY

Effect of Cardiac Rehabilitation on the Psychological Changes in Post Myocardial Infarction Patients

Thesis

Submitted for Fulfillment of
Master Degree in **Cardiology**

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List of Abbreviations

Abb.	Full term

ACS ..... *Acute coronary syndrome*
A-state ..... *State-anxiety*
A-trait ..... *Trait-anxiety*
BDI ..... *Beck depression inventory*
BP ..... *Blood pressure*
CAD ..... *Coronary artery disease*
CHD ..... *Coronary heart disease*
CRF ..... *Corticotropin-releasing factor*
CRP ..... *Cardiac rehabilitation program*
cTn ..... *Cardiac troponin*
CVD ..... *Cardiovascular disease*
EMS ..... *Emergency medical system*
EST ..... *Exercise stress test*
HADS ..... *Hospital Anxiety and Depression Scale*
HF ..... *Heart failure*
HPA ..... *Hypothalamic–pituitary–adrenal*
LVEF ..... *Left ventricular ejection fraction*
MI ..... *Myocardial infarction*
PCI ..... *Percutaneous coronary intervention*
STAI ..... *State–trait anxiety inventory*
WHO ..... *World health organization*

INTRODUCTION

Coronary artery disease is a major cause of mortality and morbidity. The prevalence of CAD in adults has risen 4-folds over the last 40 years (around 10%), and even in rural areas the prevalence has doubled over the past 30 years (around 4%) ***(Contractor, 2011).***

Within the spectrum of CAD, myocardial infarction (MI) is the leading cause of death. For those who survive an MI, the prevention of subsequent coronary events and the maintenance of physical functioning are the major challenges ***(Contractor, 2011).***

Secondary prevention is an essential part of the contemporary care of the patient with CAD. Cardiac rehabilitation/secondary prevention programs are recognized as integral to the comprehensive care of patients with CAD and as such are recommended as useful and elective (Class I) by the American Heart Association and the American college of cardiology in the treatment of patients with CAD ***(Anderson et al., 2016).***

The term cardiac rehabilitation refers to coordinated, multifaceted interventions designed to optimize a cardiac patient's physical, psychological, and social functioning, in addition to stabilizing, slowing, or even reversing the

progression of the underlying atherosclerotic processes, thereby reducing morbidity and mortality ***(McLean, 2017).***

In essence, cardiac rehabilitation services are comprehensive programs involving education, exercise, risk factor modification and counselling, designed to limit the physiological and psychological effects of heart disease, reduce the risk of death or recurrence of the cardiac event, and enhance the psychosocial and vocational state of patients ***(Contractor, 2011).***

After an MI, some of the common psychological reactions that patients may experience are: low mood, tearfulness, sleep disturbance, irritability, anxiety, acute awareness of minor somatic sensations or pains, poor concentration and memory.

Psychological factors are strong risk factors for CAD and adversely affect recovery after major CAD events. Although most of the attention has been directed at depression, other adverse psychological characteristics, including anxiety and hostility, may also be significant CAD risk factors.

Studies have demonstrated reductions of between 40% and 70% in the prevalence of depression, anxiety, and hostility after cardiac rehabilitation ***(Lavie and Milani, 2011; Menezes et al., 2012).*** Studies have also shown that depressed patients with CAD who attended a formal cardiac rehabilitation

program, had nearly a 70% reduction in mortality risk. It has been found that only small improvements in exercise capacity may produce profound improvements in depression and depression-related mortality ***(Lavie et al., 2009).***

Aim of the Work

The aim of this study is to assess the effectiveness of cardiac rehabilitation on depression, anxiety and physical capacity in patients after myocardial infarction.