Psychiatric Morbidity in a Sample of Egyptian Patients with Selected Cardiovascular and Endocrinal Diseases at Ain-Shams University Hospital

A thesis submitted for partial fullfilment of
M.D, Degree in Psychiatry
By

Al-Shayma Aly Hassan Radwan

M.B.B.Ch., M.Sc. Ain Shams University

Supervised by

Prof. Ahmed Mahmoud Okasha

Professor of Psychiatry
Faculty of Medicine Ain-Shams University

Prof. Mohamed Fahmy Abdel Aziz

Professor of Internal Medicine
Faculty of Medicine
Ain-Shams University

Prof. Mohamed Hamed Ghanem

Professor of Psychiatry
Faculty of Medicine
Ain-Shams University

Prof. Tarek Ahmed Mahmoud

Professor of Psychiatry
Faculty of Medicine
Ain-Shams University

Prof. Afaf Mohamed Abdel Samei

Professor of Psychiatry
Faculty of Medicine
Ain-Shams University

Faculty of Medicine
Ain-Shams University
Cairo, 2013

الإعتلال النفسي في عينة من المرضى المصريين المصابين بأمراض القلب والأوعية الدموية وأمراض الغدد الصماء بمستشفى عين شمس الجامعي

رسالة توطئه للحصول على درجة الدكتوراه فى الطب النفسي مقدمة من

الطبيبة /الشيماء على حسن رضوان

تحت إشراف

الأستاذ الدكتور/ أحمد محمود عكاشه

أستاذ أمراض المخ والاعصاب والطب النفسى
كلية الطب – جامعة عين شمس

الأستاذ الدكتور/
محمد فهمي عبد العزيز
أستاذ الباطنه العامه
كلية الطب – جامعة عين شمس

الأستاذ الدكتور/
محمد حامد غانم
أستاذ أمراض المخ والاعصاب والطب النفسى
كلية الطب – جامعة عين شمس

الأستاذ الدكتور/
طارق أحمد محمود
أستاذ أمراض المخ والاعصاب والطب النفسى
كلية الطب – جامعة عين شمس

الأستاذ الدكتور/
عفاف محمد عبد السميع
أستاذ أمراض المخ والاعصاب والطب النفسى
كلية الطب – جامعة عين شمس

كلية الطب – جامعة عين شمس

2013

بسم الله الرحمن الرحيم

" قالوا سبحانك لا علم لنا
إلا ما علمتنا إنك أنت العليم الحكيم

صدق الله العظيم
سورة البقرة (32)

ACKNOWLEDGEMENT

*First and foremost, I feel always indebted to **Allah** the most kind and most merciful, as we owe to him for his great care and guidance in every step in our life, and who enabled me to accomplish this work.*

*I wish to express my greatest gratitude and ultimate thanks to **Prof. Ahmed Okasha** Professor of Psychiatry, Faculty of Medicine, Ain Shams University for accepting to supervise this work and for his valuable supervision and guiding comments. He generously devoted much of his precious time and provided unlimited in depth guidance, I sincerely appreciate all the encouragement and support given by him.*

*I am profoundly grateful to **Prof. Mohamed Ghanem**, Professor of Psychiatry, Faculty of medicine, Ain Shams University, for his close and kind supervision, his constant fatherly advice and support and scientific guidance, for his trust in my performance and my work.*

*I am deeply grateful to **Prof. Mohamed Fahmy**, Professor of Internal Medicine, Faculty of Medicine, Ain Shams University, I am grateful for his helpful notes and valuable recommendations throughout this work. His constant guidance helped me to achieve this work.*

*To **Prof. Tarek Okasha**, Prof. of Psychiatry, Faculty of Medicine, Ain Shams University, I express my sincere appreciation for his patient guidance, constructive remarks and continuous support. He gave genuine and kind help to achieve the best of this work.*

*My sincere thanks and deep appreciation goes to **Prof. Afaf Mohamed**, Prof. of Psychiatry, Faculty of Medicine, Ain Shams University, for her valuable comments and constructive criticism, and meticulous revision of the thesis, helping me to accomplish this work the best it could be.*

I would like to extend my thanks to all my professors, colleagues and friends, so many of them influenced, encouraged and inspired me throughout the years.

Last but not least, I wish to express my love and respect to my parents, my husband and my sisters and brothers, for your endless love and care, for your valuable emotional support and continuous encouragement which brought the best out of me. I owe you all every achievement throughout my life.

Finally, my thanks should go to all the patients who were the subjects of this work and who cooperated in this research.

CONTENTS

LIST of ABBREVIATIONS

5-HT	5-Hydroxytryptophan
ACS	Acute Coronary Syndrome
AD	Anxiety Disorder
ASD	Acute Stress Disorder
BAD	Bipolar Affective Disorder
BDI	Beck Depression Inventory
BMI	Body Mass Index
CABG	Coronary Artery Bypass Grafting
CAD	Coronary Artery Disease
CAPMAS	Central Agency for Public Mobilization and Statistics
CHD	Coronary Heart Disease
CRP	C-reactive protein
CVS	Cerebrovascular Stroke
D2	Dopamine 2
DM	Diabetes Mellitus
ED	Endothelial dysfunction
EF	Ejection Fraction
FPG	Fasting Plasma Glucose
FT4	Free Thyroxine 4
GAD	Generalized Anxiety Disorder
GAF	Global Assessment of Functioning
GHQ	General Health Questionnaire
HAM-A	Hamilton-Anxiety
HDL	High Density Lipoprotein
HF	Heart Failure
HPA	Hypothalamo-Pituitary-Adrenal

HPT	Hypotalama-Pituitary-Thyroid
HR	Heart Rate
HRV	Heart Rate Variability
IDO	Indoleamine 2,3 Dioxygenase
IL	Interleukin
ISHD	Ischemic Heart Disease
LDL	Low Density Lipoprotein
LVEF	Left Ventricular Ejection Fracrtion
MDD	Major Depressive Disorder
MI	Myocardial Infarction
NSRI	Norepinephrine Serotonin Reuptake Inhibitor
NYHA	New York Heart Association
OGTT	Oral Glucose Tolerance Test
OHG	Oral Hypoglycemics
PAF	Platelet Activating Factor
PCI	Percutaneous Coronary Intervention
PTSD	Post-Traumatic Stress Disorder
SCID-I	Structured Clinical Interview for DSM-IV Axis I Disorders
SNS	Sympathetic Nervous System
SPSS	Statistical Package for Social Science
SSRI	Selective Serotonin reuptake Inhibitor
TCA	Tricyclic Antidepressants
TNF	Tumor Necrosis Factor
TRH	Thyrotropin-releasing hormone
TSH	Thyroid Stimulating Hormone

INTRODUCTION

Cardiovascular disease is the leading cause of death in the United States and in third-world countries. According to World Health Organization's estimate, depression and cardiovascular disease will be the two major causes of disability-adjusted life years by the year 2030 ***(Murray and Lopez, 1996)***.

Egypt bears a heavy burden from cardiovascular disease. The Egyptian National Hypertension Project found an adjusted overall prevalence of coronary heart disease of 8.3%, and a prevalence of heart failure of 13.3% among the hypertensive cohort and 5.8% among the normotensive cohort ***(Sharraf et al., 2003; Almahmeed et al., 2012)***. The prevalence of coronary heart disease is promoted in turn by a high prevalence of cardiovascular risk factors, particularly smoking, hypertension, dyslipidemia, diabetes, and sedentary lifestyles ***(Ibrahim et al., 2001)***. The death rates resulting from ischemic heart disease in Egypt reached 21% of total deaths ***(World Health Organization, 2004)***.

Despite the high prevalence of depression in cardiovascular populations (18.5% according to ***Van Melle et al., 2006***), depression often remains underdiagnosed and thus

undertreated due to following reasons. First, depression is often regarded as a normal, understandable and expected reaction to physical illness that does not require further investigation or attention. Moreover, healthcare providers are reluctant to communicate the diagnosis of depression to patients due to the social stigma associated with psychiatric disorder. Second, depression is underdiagnosed due to lack of knowledge of healthcare providers regarding its diagnosis, screening and treatment options ***(Hirschfeld et al., 1997)***.

Yet the diagnosis of depression in these patients is of extreme importance as depression has a major impact on mortality, morbidity and functional recovery in patients with cardiovascular diseases ***(Carney et al., 2004)***. Seventeen percent of the depressed patients had died 6 months post-infarct, compared to only 3% of the non-depressed, a relative hazard 3.5 times higher for depressed patients compared to non-depressed after correction for other cardiovascular risk factors ***(Frasure-Smith et al., 1993)***. Patients who showed depressive symptomatology in the absence of major depressive disorder did not show an elevated mortality risk at 6 months, yet, mortality rates were significantly higher at 12 months compared to non-depressed patients and, at 18 months, mortality rates of patients with depressed symptomatology did not significantly differ from mortality rates of those diagnosed with depressive disorder