Psychiatric morbidity and quality of life among adults with Type I and Type II diabetes mellitus

Thesis submitted for Partial Fulfillment of
Master Degree in Neuropsychiatry

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بِسْمِ ّالله الـرّحـمَنِ الـرّحـيـمِ

(...رَبِّ أَوزِعنِي أَن أَشكُرَ نِعمَتَكَ الّتِي أَنْعَمْتَ
عَلَيَّ و عَلى والِدَيَّ و أَنْ أَعْمَلَ صَالِحاً تَرْضَاهُ
و أَدْخِلْنِي بِرَحْمَتِكَ فِي عِبَادِكَ الصَّالِحِينَ)

صدق الله الـعظيم

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Rana Ali Ashour Mohammed

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List of abbreviations

Abbrev.	Full term
A1C	: Glycated hemoglobin
ANOVA	: Analysis of variance
BDI II	: Beck Depression Inventory II
BG	: Blood glucose
BGS	: Biguanides
CIDI	: Composite International Diagnostic Interview for ICD- 10
CNS	: Central Nervous System
CVD	: Cardiovascular disease
DKA	: Diabetic ketoacidosis
DM	: Diabetes mellitus
DSM-III	: Diagnostic and Statistical Manual of Mental Disorder Third Edition
DSM-IV	: Diagnostic and Statistical Manual of Mental Disorders Fourth Edition
ED	: Erectile dysfunction
HAMA	: Hamilton Anxiety Rating Scale
HAM-D	: The Hamilton Depression Rating Scale
HbA1C	: Glycated Haemoglobin
HDL	: High Density Lipoprotein
HDS	: The Hamilton Depression Rating Scale

List of abbreviations (cont.)

Abbrev.	Full term
HEPESE	: Hispanic Established Population for Epidemiologic Study of Elderly
HLAs	: Human leukocyte antigens
HPA axis	: Hypothalamic-Pituitary-Adrenal axis
HRQOL	: Health Related Quality of life
HRSD	: Hamilton Rating Scale for depression
ICD-10	: International Classification of diseases Tenth Edition
IDF	: International Diabetes Federation
LADA	: Latent autoimmune diabetes in adults
LDL	: Low Density Lipoprotein
M.I.N.I.Plus	: The Mini International Neuropsychiatric Interview Plus
NIDDM	: Non Insulin Dependent Diabetes Mellitus
OGTT	: Oral Glucose Tolerance Test
OHD	: Oral hypoglycemic drugs
PG	: Plasma glucose
PVD	: Peripheral vascular disease
PWD	: People with diabetes
QOL	: Quality of life
SCID-P	: Structured clinical interview for DSM diagnoses

List of abbreviations (cont.)

Abbrev.	Full term
SD	: Standard deviation
SMI	: Severe Mental Illness
SPD	: Severe Psychological Distress
SPSS	: Statistical Package for Social Sciences
SUs	: Sulphonylureas
SZ	: Schizophrenia
T2DM	: Type 2 Diabetes Mellitus
UK	: United Kingdom
X'2	: Chi-square
WHO	: World Health Organization
WHOQOL-100	: World Health Organization Quality of life scale 100
WHOQOL-BREF	: World Health Organization Quality of life scale BREF
WHOQOL instruments	: World Health Organization Quality of life instruments

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Introduction

Diabetes Mellitus is a major global public health problem which is increasing dramatically in developing countries. The prevalence of Diabetes Mellitus worldwide is estimated to be around 200 million people, more than 5% of the adult population globally. Several factors contribute to Type II Diabetes Mellitus pathogenesis, including environmental and lifestyle factors, positive family history and genetics ***(Shaw et al., 2010).***

A growing body of literature has reported that patients with diabetes are almost twice as likely to suffer from anxiety and depression as the general population. Also, such symptoms were associated with poor glycaemic control, diabetes complications, worsened prognosis and quality of life. Among the many additional complications which coincide with Diabetes Mellitus, tension and stress are most commonly under-detected **(*World federation of mental health, 2010).***

Depression has a high prevalence worldwide. Approximately 340 million people worldwide suffer from depression at any given time including 18 million in the United States. According to the World Health Organization (WHO), depression is responsible for the greatest proportion of burden

associated with non-fatal health outcomes accounting for approximately 12% total years lived with disability ***(Sahota et al, 2008)*.**

Therefore Diabetes and depression are two debilitating conditions that are associated with significant morbidity, mortality, and healthcare costs. Coexisting depression in people with diabetes is associated with decreased adherence to treatment, poor metabolic control, higher complication rates, decreased quality of life, increased healthcare use and cost, increased disability and lost productivity, and increased risk of death. Coordinated strategies for clinical care are necessary to improve clinical outcomes and reduce the burden of illness ***(International Diabetes Federation, 2009).***

Worldwide estimates of depression prevalence among individuals with diabetes appear to vary by diabetes type and among developed and developing nations ***(Wagner et al., 2009).***

Anxiety disorders belong to the most prevalent psychiatric disorders, and considerable burden is associated with these disorders, not only for the individual sufferer, but also for the health care system. However, many patients who might benefit from treatment are not diagnosed or treated. This may partly be due to lack of awareness of the anxiety disorders by primary care practitioners. Also, the stigma still associated with

psychiatric disorders and lack of confidence in psychiatric treatments are likely factors leading to non-recognition and subsequently to a lack of treatment or the use of unnecessary or inappropriate methods ***(Allgulander et al., 2008).***

The incidence of diabetes mellitus in psychiatric patients has been found to be 2 to 8 times higher than in the general population. The prevalence of depression alone ranges between 15-40% and that of overall psychiatric disorders is at least 2 times higher among people with DM in comparison to general population ***(Katon , 2008).***

The data about the prevalence and the impact of mental illness among patients with diabetes will raise the concern for mental illness and overall health of these patients ***(Brown et al., 2007).***

Type I diabetes is usually diagnosed in children and young adults, and was previously known as juvenile diabetes. In type I diabetes, the body does not produce insulin. Insulin is a hormone that is needed to convert sugar, starches and other food into energy needed for daily life. Only 5-10% of people with diabetes have this form of the disease. With the help of insulin therapy and other treatments, even young children with type I diabetes can learn to manage their condition and live long, healthy, happy lives.

Type II diabetes is the most common form of diabetes. Millions of Americans have been diagnosed with type II diabetes, and many more are unaware they are at high risk. Some groups have a higher risk for developing type II diabetes than others. In type II diabetes, either the body does not produce enough insulin or the cells ignore the insulin.Therefore the difference between in psychiatric morbidity is due to the duration of the disease and the difference in medication ***(Katon , 2008).***

Diabetes affects all aspects of everyday life and diabetics bear much of the responsibility for treatment decisions that will affect their immediate and long-term health but less than half of our patients had been exposed to therapeutic patient education and psycho educational interventions. Therapeutic patient education aims to inform patients adequately about their chronic disorders in order to manage and take responsibility for their condition. Psychotherapeutic patient education can help patients to deal with the insecurity they suffer from and give the appropriate answers to their questions. Such education has brought about a significant decrease in the number of hospital admissions of patients with diabetic coma ***(Mental health care, 2011).***