



Knowledge and Practices among Diabetic Clients
regarding Cardiovascular Problems
in a Rural Area

Thesis

Submitted in Partial Fulfillment of the Master Degree in Nursing Sciences
(Community Health Nursing)

By

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معلومات وممارسات مرضى السكر تجاه مشاكل القلب والأوعية الدموية في المناطق الريفية

رسالة

مقدمة توطئة للحصول علي درجة الماجستير في علوم التمريض
(تمريض صحة المجتمع)

مقدمة من

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معيدة- تمريض صحة المجتمع

كلية التمريض- الجامعة الحديثة للتكنولوجيا والمعلومات

كلية التمريض

جامعة عين شمس

٢٠١٥



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٢٠١٥

بِسْمِ اللَّهِ الرَّحْمَنِ
الرَّحِيمِ

سَبَّحَانَكَ لَا عِلْمَ
لَنَا إِلَّا مَا
عَلَّمْتَنَا إِنَّكَ أَنْتَ
الْعَلِيمُ الْحَكِيمُ

صدق الله العظيم





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Dedication to:

My

FAMILY

*who always support
and encourage me to accomplish
this study.*

Fman Fbrahim Ahmed

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List of Abbreviations

Abb.	Meaning
A D A	American Diabetes Association.
AACE	American Association of Clinical Endocrinologists .
CVD	Cardiovascular Disease
CNS	Central Nervous System.
CHN	Community Health Nurse.
CHF	Congestive Heart Failure.
CHD	Coronary Heart Disease.
DIAD	Detection of Ischemia in Asymptomatic Diabetics.
DCCT	Diabetes Control and Complications Trial
DKA	Diabetic Ketoacidosis.
DM	Diabetes Mellitus.
DQOL	Diabetes Quality of life.
DSMS	Diabetic Self-Management Strategies
ECG	Electro Cardiogram.
EMA	European Medicines Agency.
FPG	Fast Plasma Glucose.
FDA	Food and Drug Administration.
GTT	Glucose Tolerance Test.
HbA1c	Glycosylated Hemoglobin Control.
HDL	High Density Lipoprotein.
HRQOL	High Rate Quality of Life.
IDF	International Diabetes Federation.

Abb.	Meaning
IGT	Impaired Glucose Tolerance.
IV	Intravenous Injection.
LDL	Low Density Lipoprotein.
LADA	Latent Autoimmune Diabetes.
MENA	Middle East and the Northern Africa.
NDICH	National Diabetes Information Clearing house.
NIDDM	Non-Insulin-Dependent Diabetes Mellitus.
OGTT	Oral Glucose Tolerance Test.
PCI	Percutaneous Coronary Intervention.
PAD	Peripheral Arterial Disease.
QOL	Quality of Life.
RPG	Random Plasma Glucose.
STEMI	St -Elevation Myocardial Infarction.
SPSS	Statistical Package For The Social Sciences.
S.C	Subcutaneous Injection.
T2DM	Type 2 Diabetes Mellitus.
UKPDS	United Kingdom Prospective Diabetes Study.
UN	United Nations.
USA	United State of America.
UTI	Urinary Tract Infection.
VHDL	Very High Density Lipoprotein.
VLDL	Very Low Density Lipoprotein.
WHO	World Health Organization.

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Abstract

Background: The development of all forms of large vessel disease is accelerated with type1 diabetes, and is often present at diagnosis in people with type2 diabetes. It is now well established that type2 diabetes is part of the metabolic or insulin resistance syndrome, which comprises hypertension, dyslipidemia, central adiposity, insulin resistance, diabetes or impaired glucose tolerance, and cardiovascular disease. **Aim:** The study aims to assess the knowledge and practices among diabetic clients regarding cardiovascular problems in a rural area. **Design:** A descriptive study was used. **Sampling:** A purposive sample of 100 diabetic clients. **Setting:** This study was conducted at diabetic outpatient clinics at Kafr El sheikh General Hospital. **Tools:** Three tools were used for data collection. **First tool:** was an interviewing Questionnaire, this tool was divided into four parts for collecting data. **Part one:** It was concerned with data related to socio-demographic characteristics of the Diabetic Clients. **Part two:** It was concerned with the client's past and present health history as duration of illness, symptoms, investigations, and medications. **Part three:** It was concerned with clients' knowledge regarding diabetes mellitus and cardiovascular problems. **Part four:** Assessing diabetic clients' compliance to treatment regimen and follow up. **Second tool:** was Quality of life scale to assess Quality of life of diabetic clients through their practices regarding cardiovascular problems. **Third tool:** was Physical Examination Sheet it was used to assess general and specific health condition of diabetic client. **Results:** The results of this study indicated that, the majority of diabetic clients were females and their age ranged from 45-50 years. Almost were illiterate. The highest portion their duration of diabetes were 4:5 years period. The minority of them had correctly done about practices for hypoglycemia and hyperglycemia control. A large proportion of diabetic clients have poor knowledge and practices regarding diabetes mellitus and cardiovascular problems. **Conclusion:** The study concluded that there was no statistical significant association between socio-demographic characteristics of diabetic clients' knowledge and their practice, but there was a statistically significant relation between diabetic clients' practices to prevent cardiovascular problems and their compliance to follow up and treatment regimen, respectively at $P > 0.05$. **Recommendations:** The study recommended that extensive health education and health promotion programs are recommended to prevent diabetic complications.

Keywords: diabetes mellitus, cardiovascular disease, Quality of life, Compliance, Knowledge and Practice.

Introduction

Diabetes is the most common endocrinal disease that is characterized by metabolic abnormalities and long-term complication involving the eyes, kidneys, nerves, blood vessels and skin. Diabetes is ranked among the leading causes of blindness, renal failure and lower limb amputation in many countries. The overall risk of dying among people with diabetes is at least double the risk of their peers without diabetes (*WHO, 2012*).

The epidemic of diabetes is having major impacts on both individuals and societies. The major burden is from the treatment cost of its complications. Most patients die from cardiovascular disease (particularly coronary artery disease and stroke) and end - stage renal disease. It is well established that the occurrence of vascular complications of diabetes is related to the duration of hyperglycemia. Despite the high prevalence of complications of diabetes and hence the high costs of management, simple low cost measures are effective in preventing the development of diabetes and its vascular complications. Rather than merely focusing on the control of hyperglycemia, global risk reduction with attention on cardiovascular risk factors has been proved to be the most effective way of reducing the burden of diabetes (*Richard et al., 2010*).

Diabetes exerts its greatest adverse impact throughout the vascular system. This effect includes the specific micro vascular complications including retinopathy, nephropathy and neuropathy, but also a predisposition to Premature and accelerated macro vascular disease. The consequences of macro vascular disease contribute to significant reductions in the quality of life of a person with diabetes. The heart in diabetes can be affected by several