

**Quality of Life of Clients with Diabetes Mellitus
Regarding Prevention of Eye Problems**

Thesis

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

By

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List of Abbreviations

- **ABCs** : A¹C control, lowering blood pressure, and lowering cholesterol
- **ADA** : American Diabetes Association
- **APHA** : American Public Health Association
- **APHA** : American Public Health Association
- **BG** : Blood glucose
- **BP** : Blood pressure
- **CAG** : Closed angle glaucoma
- **CDC** : Center of disease control
- **CVD** : Cerebrovascular disease
- **CWS** : Cotton wool spots
- **DCCT** : Diabetes Control and Complications Trial
- **DKA** : Diabetic ketoacidosis
- **DM** : Diabetes Mellitus
- **DR** : Diabetic retinopathy
- **FPG** : Fasting plasma glucose
- **GDM** : Gestational diabetes mellitus
- **HbA^{1c}** : Glycated haemoglobin
- **HDL** : High-density lipoprotein
- **Hex** : Hard Exudates
- **HHS** : Hyperosmolar hyperglycemic state
- **HRQOL** : Health Related Quality of Life
- **IDDM** : Insulin Dependent Diabetes Mellitus

List of Abbreviations (Cont.)

- **IDF** : International Diabetes Federation
- **IFG** : Impaired fasting glucose
- **IGT** : Impaired glucose tolerance
- **IOP** : Intra-ocular pressure
- **IRMA** : Intraretinal microvascular abnormalities
- **LDL** : Low-density lipoprotein
- **Ma** : Microaneurysms
- **MENA** : The Middle East and Northern Africa
- **NIDDM** : Non insulin Dependent Diabetes Mellitus
- **NPDR** : Non-proliferative diabetic retinopathy
- **NTG** : Normal tension glaucoma
- **OAG** : Open angle glaucoma
- **OGTT** : Oral glucose tolerance test
- **PDR** : Proliferative diabetic retinopathy
- **POAG** : Primary open angle glaucoma
- **QOL** : Quality of Life.
- **SMBG** : Self-monitoring of blood glucose
- **UK** : United Kingdom
- **UKPDS** : United Kingdom Prospective Diabetes Study
- **UV** : Ultra Violet
- **VB** : Venous beading
- **WHO** : World Health Organisation



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Ghada

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

لسببنا انك لا تعلم لنا
إلا ما علمتنا إنك أنت
العليم العظيم

صدق الله العظيم

سورة البقرة الآية: ٣٢

Abstract

The burden of diabetes-related visual impairment and blindness on individuals and society is significant. Early diagnosis and management of diabetes mellitus is an important factor for limiting visual and physical complications of the disease. **Aim:** The study aimed to assess quality of life of clients with diabetes mellitus regarding prevention of eye problems. **Setting:** The study was conducted at diabetes Outpatient clinic in Ain Shams University Hospital. **Sample:** a purposive sample of 100 clients diagnosed with diabetes 2-3 years, free from eye problems, their age ranged from 20: 40 years and free from other chronic conditions. For data collection, the tool used in this study: an interviewing questionnaire for assessing socio-demographic characteristics of the client with diabetes, an interviewing questionnaire for assessing clients knowledge about diabetes & knowledge regarding eye problems and quality of life assessment sheet for clients. **Results:** More than half of the studied sample had average knowledge about diabetes mellitus, while more than three quarters of the studied sample had poor knowledge about diabetes eye problems, while less than one quarter had average knowledge about diabetes eye problems. While most of them had fair quality of life in physical domain, psychological, social and daily activity. There was statistically significant relation between socio-demographic and compliance to follow up. However there were statistically insignificant relations between eye examination and quality of life. **Recommendations:** Annual eye examinations are recommended for clients with diabetes and prompt treatment when indicated.

Key words: Diabetes Mellitus, quality of life, visual impairment, compliance

Introduction

Diabetes mellitus is a chronic metabolic disorder that results from excess blood levels of glucose. The various forms of the disease are caused by defects in insulin secretion, insulin action, or both. This defect leads to blood glucose levels rise, causing abnormalities in the structure of blood vessels and nerves. Organ and tissue damage occur and can have serious consequences affecting the eyes (**Al Shafee et al., 2008**).

The long-term consequences of diabetes mellitus are chiefly the result of damage to the large and small blood vessels. Elevated blood glucose levels over a period of years seriously damage blood vessels and the organs they serve. Diabetic patient for more than 10 years is likely to develop one or more of the complications of the disease. The less closely the blood glucose has been controlled, the more likely the development of eye complications. Improperly treated or untreated diabetes is the leading cause of new blindness (**Leslie et al., 2008**).

Research strongly supports the value of a comprehensive approach that targets appropriate monitoring and treatment of diabetes as well as the early detection of complications associated with diabetes. Many actions cross over in terms of addressing multiple risk factors with a single intervention. As an example, supporting tobacco cessation prevents or delays the

onset of complications for people with diabetes (**Kaczorowski et al., 2009**).

The backbone of diabetes management is proper diet and regular exercise, which have to be individualized. Both could be the only management needed for controlling blood glucose in type II diabetes in its early phase. Patients with type II diabetes may require oral hypoglycemic agents and/or insulin (**WHO, 2006**).

People with diabetes are more likely to suffer from glaucoma (2.7% increase) and more likely to develop cataracts (7.7% increase) than those without diabetes. Cataracts in people with diabetes also occur at a younger age and progress more rapidly in people with diabetes (**ADA, 2009**).

Quality of life has been defined as a “descriptive term that refers to people’s emotional, social and physical well being and their ability to function in the ordinary tasks of living” (**Donald, 2010**).

Quality of life in diabetes is like a formalized way of talking about the personal side of diabetes, the felt burden of living with the illness. Different clinical features of diabetic patients and type of complications can be critical components of the global individual perception of quality of life (**Musselman et al., 2005**).

Nurses' roles include meeting the acute and chronic needs of patients with diabetes, as well as engaging in healthcare which helps reduce the risks associated with their condition. This means they will engage with diabetic patients to manage emergencies, help them control and manage symptoms, prevent longer-term effects, reduce the risk factors in their lives such as obesity and smoking, and educate them in a way that will encourage independence and self-management (**Watkins, 2003**).

Significance of the Study

Diabetes mellitus (DM) has long been recognized as a major health problem. Not only for its adverse health impact on individuals, but also for its economic burden on health care system and society at a large. Recent studies indicate there were 171 million people in the world with diabetes in the year 2000 and this is projected to increase to 366 million by 2030. It is associated with reduced life expectancy, significant morbidity due to specific diabetes related micro vascular abnormalities and its complications and diminished quality of life (**Wild et al., 2008**).

Diabetes is the leading cause of blindness among adults aged 20-74 years (**Klein et al., 2009**). The Middle East and Northern Africa (MENA) have the highest prevalence of diabetes as a world region, with six MENA countries making the top 10 ranking. Currently Egypt is number nine as shown in table 1 (**Snouffer E., 2011**). A recent New York Times report
