بسم الله الرحمن الرحيم

An-Najah National University

Faculty of Medicine and health sciences

Nursing and Midwifery Department

Quality of life for patient with type II Diabetes in North of West Bank

Prepared by:

Osama Showli Alaa Sarsure Ahmad naalwa

Ahmad Rsheed Sulaiman Hawari

Supervised by:

Miss Shorooq Qadous

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Abstract:

Background: The number of people with diabetes mellitus (DM) is increasing. For chronic illnesses such as DM, where there is no cure. Diabetes is Know to strongly affect the health-related quality of life (HRQOL).

Aim: To determine quality of life and some factors affecting it in type 2 diabetic patients.

Method: Cross-sectional study was conducted in five primary health care (PHC) centers in the North of West Bank area. From a random sample of 160 type 2 diabetic patients (80 males and 80 females), participant age range from (35-70 year). The Arabic version of the SF-36 questionnaire was used as a health survey tool to measure the quality of life (QOL) of patients in this study.

Result: The result of this study was the general health for 60% of participant is fair and poor status, the 38.7% of participant see their health is Somewhat worse now than a year ago, Pts didn't know the outcome of their disease and treatment, the (DM) pts become nervously, depressed a good bit of the time,(30%) they have moderately of pain,(38.2%) of participant their pain moderately interfere with normal work, (41.3%) that social relationship slightly limited and (35.6%) of participant are social activities is limited in some times.
As a factor affecting the life we fund the gender as female is more affected than male and the age grope (58-70 years) is the most affected physically and patients with low educational level suffer from poor quality of life and there is no relationship between the quality of life and places of residence.

Conclusion: Quality of life was lower in type 2 diabetic patients and was affected by many factors. Females had lower quality of life than males, also ages and educational level associated with impaired QOL in at least one SF-36 subscale, and there some factor don't affect them like places of resident. Improving QOL in diabetic patients is important.
Key words: diabetes mellitus**,** health-related quality of life**,** Quality of life

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List of Abbreviations

QOL: Quality of life.

DM: Diabetes Mellitus.

Pt: Patient.

SPSS: Statistical Package for Social Science.

No. : Number.

WB: West Bank.

WHO: World health organization.

HRQOL: Health-related quality of life.

BMI: Body mass index.

PHC: primary health care.

Chapter One

I. I Introduction

We are always hearing about many of chronic diseases that are affect many people in the world and one of the most important of this diseases is diabetes mellitus disease.

In 2012, the world health organization estimated that more than 347 million people worldwide have diabetes, WHO estimated more than 80% of diabetes death occurs in low- and middle-income countries. Healthy diet, regular physical activity, maintaining a normal body weight and avoiding tobacco use can prevent or delay the onset of type 2 diabetes. (WHO 2012)

In 2012 Palestinian Ministry of Health, the number of reviewers diabetes clinics in primary health care 10.617 revisers in Tulkarem, 13.217 revisers in Nablus, 2.570 revisers Qalqiliya, 3.613 revisers Salfit.(MOH 2012)

In 2011 Palestinian Ministry of Health, the number of reviewers diabetes clinics in primary health care 113.370 revisers, and the percentage of male revisers to diabetes clinics (40.9%), while the percentage of females revisers to diabetes clinics (59.1%). The number of new diabetes patients who enrolled in the diabetes clinics in primary health care 1.634 patients of whom 968 females (59.2%) and 666 males (40.8%). (92.3%) of new diabetes patients age 35 years and older. The highest number of new diabetic patient in Jenin 279 new patient (17.1%), followed by Nablus 265 new patient (16.2%), then Hebron 250 new patients (15.3%) of the registered cases. (4.9%) of diabetic patient with Type 1 insulin-dependent and (63.8%) of diabetic with Type 2 treated by oral tablet, (21.6%) using insulin, (8.7%) take oral tablet and insulin together, and (0.6%) only exercising and diet.(MOH 2011)

In recent years, concern about cost containment in healthcare and interest in the impact of medical intervention on functioning and well-being have resulted in increased attention to the measurement of health-related quality of life (HRQOL).(Coons and Kaplan 1993)

When a person has a chronic disease like diabetes, their overall quality of life can influence coping with their disease successfully in short and over the long term.

Patients with DM have statistically significant impairment of all aspects of QOL, not simply physical functioning. DM put a substantial burden on affected individuals by influencing physical, psychological and social aspects of QOL.(Porojan, Poanta et al. 2012)

Several factor influence the quality of life of a person with type 2 diabetes, this include awareness of the complication and risk-factors of diabetes, and age of the patient, duration of the disease, and BMI of the patient.(Kalda, Ratsep et al. 2008) . Older age, lower education, being unmarried, obesity, hypertension and hyperlipidaemia were also associated with impaired HRQOL in at least one SF-36 subscale. (Papadopoulos, Kontodimopoulos et al. 2007)

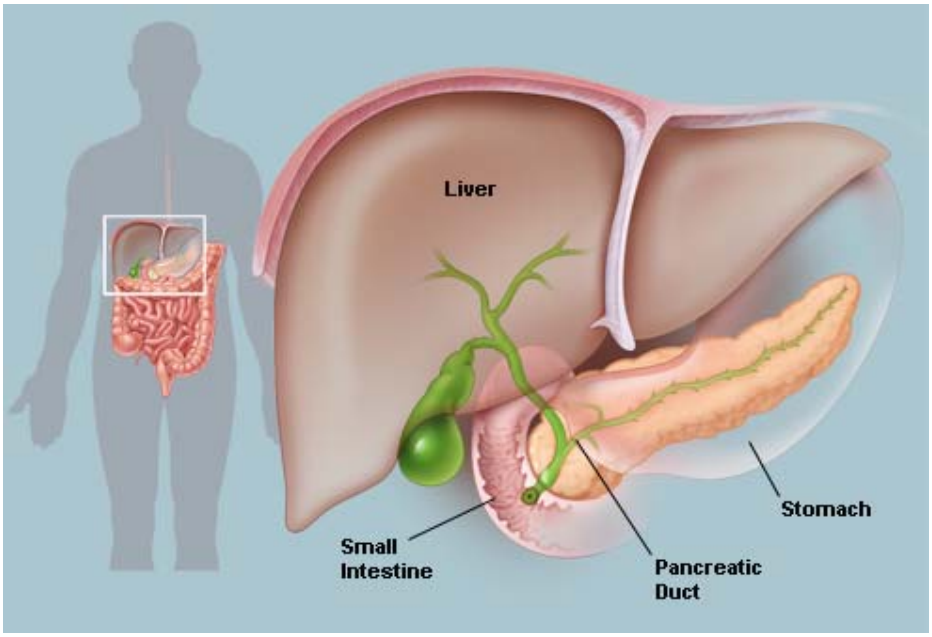
Effective type 2 diabetes management and improved quality of life of individuals are interrelated. The measurement of quality of life is an important component in continuous improvement of chronic disease management in primary care settings.

Because the lack of social studies about Quality of life for patient with type II Diabetes in Palestine, especially in North of West Bank. Because there is great importance to know the quality of life for patients with type II diabetes, we conducted this study to determine the impact of diabetes on quality of life for patients, and know some of the factors that can worsen the quality of life for patients.

I. II Background

I. A. Normal pancreas and their function

The pancreas is located behind the stomach and is surrounded by other organs including the small intestine, liver, and spleen. It is about six inches long and is shaped like a flat pear. The wide part, called the head of the pancreas, is positioned toward the center of the abdomen; the middle section is called the neck and the body of the pancreas; the thin end is called the tail and extends to the left side.(Panc 2011)



The pancreas has two main functions: **an exocrine** function that helps in digestion and **an endocrine** function that regulates blood sugar.

1- **Exocrine Function:** The pancreas contains exocrine glands that produce enzymes important to digestion. When food enters the stomach, these pancreatic juices are released into a system of ducts that culminate in the main pancreatic duct. The pancreatic duct joins the common bile duct to form the ampulla of Vater which is located at the first portion of the small intestine, called the duodenum. The common bile duct originates in the liver and the gallbladder and produces another important digestive juice called bile. The pancreatic juices and bile that are released into the duodenum, help the body to digest fats, carbohydrates, and proteins.(Panc 2011)

2- Endocrine Function: The endocrine component of the pancreas consists of islet cells that create and release important hormones directly into the bloodstream. Two of the main pancreatic hormones are insulin, which acts to lower blood sugar, and

glucagon, which acts to raise blood sugar. Maintaining proper blood sugar levels is crucial to the functioning of key organs including the brain, liver, and kidneys.(Panc 2011).

I. B. Diabetes mellitus

Is a group of metabolic diseases characterized by elevated levels of glucose in the blood (hyperglycemia) resulting from defects in insulin secretion, insulin action, or both. Normally a certain amount of glucose circulates in the blood. The major sources of this glucose are absorption of ingested food in the gastrointestinal (GI) tract and formation of glucose by the liver from food substances.

Insulin, a hormone produced by the pancreas, controls the level of glucose in the blood by regulating the production and storage of glucose. In the diabetic state, the cells may stop responding to insulin or the pancreas may stop producing insulin entirely. This leads to hyperglycemia, which may result in acute metabolic complications such as diabetic ketoacidosis (DKA) and hyperglycemic hyperosmolar nonketotic syndrome (HHNS).

I. C. Type of Diabetes Mellitus

There are three main types of diabetes mellitus (DM):

* Type 1 DM: is characterized by loss of the insulin-producing beta cells of the islets of Langerhans in the pancreas, leading to insulin deficiency. This type can be further classified as immune-mediated or idiopathic. The majority of type 1 diabetes is of the immune-mediated nature, in which beta cell loss is a T-cell-mediated autoimmune attack.
There is no known preventive measure against type 1 diabetes, most affected people are otherwise healthy and of a healthy weight when onset occurs. Type 1 diabetes can affect children or adults, but was traditionally termed "juvenile diabetes" because a majority of these diabetes cases were in children.

* Type 2 DM: is characterized by insulin resistance, which may be combined with relatively reduced insulin secretion.
The defective responsiveness of body tissues to insulin is believed to involve the insulin receptor. However, the specific defects are not known, this form was previously referred to as non insulin-dependent diabetes mellitus (NIDDM) or "adult-onset diabetes". Type 2 diabetes is the most common type.

* Gestational diabetes: resembles type 2 diabetes in several respects, involving a combination of relatively inadequate insulin secretion and responsiveness. It occurs in about 2%–5% of all pregnancies and may improve or disappear after delivery, gestational diabetes is fully treatable, but requires careful medical supervision throughout the pregnancy. About 20%–50% of affected women develop type 2 diabetes later in life.
Though it may be transient, untreated gestational diabetes can damage the health of the fetus or mother. Risks to the baby include macrosomia (high birth weight), congenital cardiac and central nervous system anomalies, and skeletal muscle malformations. In severe cases, perinatal death may occur, most commonly as a result of poor placental perfusion due to vascular impairment.(Wikipedia 2009)

I. D. Diabetes mellitus Signs and symptoms

The classic symptoms of untreated diabetes are loss of weight, polyuria (frequent urination), polydipsia (increased thirst) and polyphagia (increased hunger).

Symptoms may develop rapidly (weeks or months) in type 1 diabetes, while they usually develop much more slowly and may be subtle or absent in type 2 diabetes. Prolonged high blood glucose can cause glucose absorption in the lens of the eye, which leads to changes in its shape, resulting in vision changes. Blurred vision is a common complaint leading to a diabetes diagnosis; type 1 should always be suspected in cases of rapid vision change, whereas with type 2 change is generally more gradual, but should still be suspected.

I. E. Causes of Diabetes mellitus and Risk factors

Type 1 diabetes is partly inherited, and then triggered by certain infections, with some evidence pointing at Coxsackie B4 virus. A genetic element in individual susceptibility to some of these. The onset of type 1 diabetes is unrelated to lifestyle.

Type 2 diabetes is due primarily to lifestyle factors and genetics, such as weight, family history, race, age and Inactivity.(mayo 2012)

I. F. Pathophysiology of Diabetes mellitus

Insulin is the principal hormone that regulates uptake of glucose from the blood into most cells. Therefore, deficiency of insulin or the insensitivity of its receptors plays a central role in all forms of diabetes mellitus.

Insulin is released into the blood by beta cells (β-cells), found in the islets of Langerhans in the pancreas, in response to rising levels of blood glucose, typically after eating. Insulin is used by about two-thirds of the body's cells to absorb glucose from the blood.

If the amount of insulin available is insufficient, if cells respond poorly to the effects of insulin (insulin insensitivity or resistance), or if the insulin itself is defective, then glucose will not have its usual effect, so it will not be absorbed properly by those body cells that require it, nor will it be stored appropriately in the liver and muscles. The net effect is persistent high levels of blood glucose, and other metabolic derangements, such as acidosis.

When the glucose concentration in the blood is raised to about 9-10 mmol/L, reabsorption of glucose in the proximal renal tubuli is incomplete, and part of the glucose remains in the urine (glycosuria). This increases the osmotic pressure of the urine and inhibits reabsorption of water by the kidney, resulting in increased urine production (polyuria) and increased fluid loss. Lost blood volume will be replaced osmotically from water held in body cells and other body compartments, causing dehydration and increased thirst.

I. G. Management of Diabetes mellitus

Diabetes mellitus is a chronic disease which cannot be cured except in very specific situations. Management concentrates on keeping blood sugar levels as close to normal as possible, without causing hypoglycemia. This can usually be accomplished with diet, exercise, and use of appropriate medications (insulin in the case of type 1 diabetes, oral medications, as well as possibly insulin, in type 2 diabetes).(Wikipedia 2009)

Patient education, understanding, and participation is vital, since the complications of diabetes are far less common and less severe in people who have well-managed blood sugar levels. Attention is also paid to other health problems that may accelerate the deleterious effects of diabetes. These include smoking, elevated cholesterol levels, obesity, high blood pressure, and lack of regular exercise.(Wikipedia 2009)

I. H. Complications

All forms of diabetes increase the risk of long-term complications. These typically develop after many years (10–20). The major long-term complications relate to damage to blood vessels. Diabetes doubles the risk of cardiovascular disease. The main "macrovascular" diseases are ischemic heart disease, stroke and peripheral vascular disease.

Diabetes also damages the capillaries. Diabetic retinopathy, which affects blood vessel formation in the retina of the eye, can lead to visual symptoms, reduced vision, and potentially blindness. Diabetic nephropathy, the impact of diabetes on the kidneys. Diabetic neuropathy is the impact of diabetes on the nervous system, most commonly causing numbness, tingling and pain in the feet and also increasing the risk of skin damage due to altered sensation. Together with vascular disease in the legs, neuropathy contributes to the risk of diabetes-related foot problems (such as diabetic foot ulcers) that can be difficult to treat and occasionally require amputation.(Wikipedia 2009)

I. I. Quality of life QOL

Quality of life (QOL), an individual's perception of his or her life and sense of well-being in relation to his or her goals, expectations, standards, and concerns,(Sloan, Cella et al. 2002). As defined by the World Health Organization, "QOL is an individual's perception of their position in life in the context of the culture and value systems in which they live with the patient survival and concerns" (WHO.1993).

QOL may be profoundly altered by chronic disease. The study showed Patients with DM have statistically significant impairment of all aspects of QOL, not simply physical functioning.(Porojan, Poanta et al. 2012). Another study showed type 2 diabetes patients has negative consequences for HRQOL, particularly for women.(Schunk, Reitmeir et al. 2011) . There are many Several factor influence the quality of life of a person with type 2 diabetes, this include awareness of the complication and risk-factors of diabetes, and age of the patient, duration of the disease, and BMI of the patient.(Kalda, Ratsep et al. 2008) .

I. J. SF-36 questionnaire

Is a generic health-related quality of life measure, the SF-36 includes multi-item scales that assess eight health concepts: physical functioning; bodily pain; role limitations due to physical health problems; role limitations due to emotional problems; emotional well-being (mental health); social functioning; energy/fatigue (vitality); and general health perceptions. A single item that provides an indication of perceived change in general health perception. The SF-36 has been translated into a number of languages, and psychometric testing of the translated versions provides evidence that the SF-36 is reliable and valid general health survey measure across different cultures or nation.(Aaronson, Acquadro et al. 1992)

I. III Significance of study

According to our past experience from training in many hospitals in clinical care courses, we noticed that there were many complaints from DM Pts about their disease and treatment (insulin, oral hypoglycemic tablets), because they need to restrict their diet.

We decided to do this study about the quality of life for type 2 diabetic patient, because the lack of local studies about this subject in Palestine. As well as, we hope to give some recommendations according to study result, to improve the quality of life in patients with diabetes.

I. IV Aims of Study

The aim of this study is:

1- To assess the quality of life for patient with type 2 diabetes mellitus by using SF-36 instrument.

2- To assess factors that affect the quality of life such as age, gender, academic qualification and place of residence.

I. V Hypothesis

1- Female patients are suffering from poor quality of life more than male.

2- Elderly patients suffer from poor in the quality of life compared with younger.

3- Patients with a low educational level suffer from poor quality of life compared with higher level of education.

4- There is a relationship between the quality of life in patients with type II diabetes and different place of residence.

5- Quality of life (QOL) for patient with type 2 diabetes is poor.

Chapter Two

II. Literature Review

Author, year, country	Title of articles	objectives	method	result
M. Porojan Laurapoantă D.L. dumitraşcu, 2012	Assessing Health Related Quality of Life in Diabetic Patients	To analyze the quality of life in a group of diabetic patients without major complications.	The study group consisted of 50 patients, males and females, aged 60 (±6), diagnosed with type 2 DM and followed up at an outpatient clinic. The Romanian version of the SF-36 questionnaire was used as a health survey tool to measure the quality of life (QOL) of patients in the study.	QOL scores for study group were significantly lower compared with general population. Examining the effects of insulin use and QOL, there are no significant differences between patients following insulin therapy and patients with other therapeutic protocols. Role limitations due to emotional problems correlate with disease duration. Statistical analysis demonstrates a significant correlation between energy/fatigue scores and HbA1c. There are no other statistically significant correlations between SF-36 scores and other variables analyzed.

(Porojan, Poanta et al. 2012)

Author,year,country	Title of articles	objectives	method	result
Al-Shehri A. H. Taha A. Z. Bahnassy A. A. Salah, M., 2008	Health-related quality of life in type 2 diabetic patient.	To determine HRQOL and the factors affecting it in type 2 diabetic patients.	This cross-sectional study was conducted in five primary health care (PHC) centers in the Al-Khobar area. From a random sample of 225 type 2 diabetic patients, 216 patients were included in the study along with 216 ages- , sex- and nationality-matched controls. Nine patients refused to participate. Type 2 diabetic patients and controls were interviewed with the translated Arabic SF-12 questionnaire.	Type 2 diabetic patients had lower socioeconomic status and educational level than controls. Obesity was significantly higher in diabetics than controls. HRQOL in type 2 diabetic patients was significantly lower than controls. HRQOL was significantly lower in females than males. HRQOL was impaired in uncontrolled patients in comparison with controlled patients.

(Al-Shehri, Taha et al. 2008)

Author,year,country	Title of articles	objectives	method	result
James E Graham. Diane G Stoebner-May. Glenn V Ostir. Soham Al Snih. M Kristen Peek. Kyriakos Markides. Kenneth J Ottenbacher , 2007	Health related quality of life in older Mexican Americans with diabetes: A cross-sectional study.	To examine differences in health related quality of life between older Mexican Americans with and without diabetes living in the community.	Cross-sectional study assessing differences in health related quality of life between older Mexican Americans with and without diabetes. Participants (n = 619) from the Hispanic Established Population for the Epidemiological Study of the Elderly were interviewed in their homes. The primary measure was the Medical Outcomes Study Short Form (SF-36).	The sample was 59.6% female with a mean age of 78.3 years. 31.2% of the participants were identified with diabetes. Individuals with diabetes had significantly lower scores on the Physical Composite scale of the SF-36 compared to persons without diabetes. There was no significant difference between persons with and without diabetes on the Mental Composite scale of the SF-36.

(Graham, Stoebner-May et al. 2007)

Author,year,country	Title of articles	objectives	method	Result
Angelos A Papadopoulos, Nick Kontodimopoulos, Aristidis Frydas, Emmanuel Ikonomakis1 and Dimitris Niakas1, 2007	Predictors of health-related quality of life in type II diabetic patients In Greece.	To assess health related quality of life (HRQOL) of Greek Type II DM patients and to identify significant predictors of the disease in this patient population.	The sample (N = 229, female, 70.0 years mean age) lived in a rural community of Lesvos. The generic SF-36 instrument, administered by trainee physicians, was used to measure HRQOL. Scale scores were compared with non-parametric Mann-Whitney and Kruskal-Wallis tests and multivariate stepwise linear regression analyses were used to investigate the effect of sociodemographic and diabetes-related variables on HRQOL.	The most important predictors of impaired HRQOL were female gender, diabetic complications, non-diabetic comorbidity and years with diabetes. Older age, lower education, being unmarried, obesity, hypertension and hyperlipidaemia were also associated with impaired HRQOL in at least one SF-36 subscale.

(Papadopoulos, Kontodimopoulos et al. 2007)

Author,year,country	Title of articles	objectives	method	Result
BA Issa O Baiyewu, 2006.	Quality of Life of Patients with Diabetes Mellitus in a Nigerian Teaching Hospital.	To assess the quality of life of patients with diabetes mellitus and to determine the clinical and sociodemographic factors that affects the quality of life of these patients.	This was a cross-sectional study of 251 patients with diabetes mellitus attending the University of Ilorin Teaching Hospital, Nigeria. The World Health Organization quality of life instrument, short version and a sociodemographic questionnaire was administered to assess quality of life.	Most of the respondents performed fairly well on the World Health Organization quality Of life instrument, short version. Poor quality of life was associated with some of the physical complications of diabetes mellitus, lower income, lower educational status, and type 2 diabetes mellitus.

(Issa. and Baiyewu. 2006)

Author,year,country	Title of articles	objectives	method	result
Ashraf Eljedi Rafael T Mikolajczyk, Alexander Kraemer, Ulrich Laaser, 2006.	Health-related quality of life in diabetic patients and controls without diabetes in refugee camps in the Gaza strip: a cross sectional study.	We analysed the effects of having diabetes on HRQOL under the living conditions in refugee camps in the Gaza strip.	We studied a sample of 197 diabetic patients who were recruited from three refugee camps in the Gaza strip and 197 age- and sex-matched controls living in the same camps. To assess HRQOL, we used the World Health Organization Quality of Life questionnaire (WHOQOL-BREF). Domain scores were compared for cases (diabetic patients) and controls (persons without diabetes) and the impact of socio-economic factors was evaluated in both groups.	All domains were strongly reduced in diabetic patients as compared to controls, with stronger effects in physical health (36.7 vs. 75.9 points of the 0–100 score) and psychological domains (34.8 vs. 70.0) and weaker effects in social relationships (52.4 vs. 71.4) and environment domains (23.4 vs. 36.2). The impact of diabetes on HRQOL was especially severe among females and older subjects (above 50 years). Low socioeconomic status had a strong negative impact on HRQOL in the younger age group (<50 years).

(Eljedi, Mikolajczyk et al. 2006)

Author,year,country	Title of articles	objectives	method	result
Ruth Kalda Anneli Rätsep, Margus Lember, 2008.	Predictors of quality of life of patients with type 2 diabetes	To examine which factors most strongly influence the quality of life of patients with type 2 diabetes.	200 patients with type 2 diabetes were studied in Estonia in 2004–2005. A patient blood sample, taken during a visit to the family doctor, was collected. The family doctor also provided data on each patient's body mass index (BMI), blood pressure, and medications for treatment of type 2 diabetes. Patients completed a SF-36 during a doctor visit, and also a special questionnaire which we provided to study their awareness about diabetes type 2.	The mean age of the respondents was 64.7 (±11.1) years and the mean duration of the diabetes was 7.5 (±1.8) years. Logistic regression analysis showed that quality of life was most significantly affected by awareness of the complications and risk-factors of diabetes, and by the age, duration of the disease, and BMI of the patient. Patients who were less aware had a significantly higher quality of life score (p ┐ 0.001 in all cases). The age and BMI of the patients as well as the duration of the diabetes all lowered the score of the quality of life.

(Kalda, Ratsep et al. 2008)

Author,year,country	Title of articles	objectives	method	result
M. Papelbaum, H.M. Lemos, M. Duchesne, R. Kupfer, R.O. Moreira, W.F. Coutinho, 2010.	The association between quality of life, depressive symptoms and glycemic control in a group of type 2 diabetes patients.	To assess QOL in a clinical sample of patients with T2DM and its association with depressive symptoms and glycemic control.	One hundred outpatients from a sequential sample underwent clinical and psychiatric evaluation. The Problem Areas of Diabetes scale (PAID) and the Beck Depression Inventory (BDI) were used to assess, respectively, QOL and the presence of overall psychopathology. The levels of glycated hemoglobin (HbA1c) were used as the main parameter of glycemic control.	The perception degree of the QOL related with diabetes was associated with the severity of depressive symptoms ($r = 0.503$; $p < 0.001$), but not with HbA1c levels ($p = 0.117$). However, the severity of general psychopathology, evaluated through the BDI scores, predicted the metabolic control, measured by HbA1c levels, among the patients in our sample ($r = 0.233$; $p = 0.019$).

(Papelbaum., Lemos. et al. 2010)

Author,year,country	Title of articles	objectives	method	result
Mehdi Javanbakht, Farid Abolhasani, Atefeh Mashayekhi1, Hamid R. Baradaran, Younes Jahangiri noudeh, 2012.	Health Related Quality of Life in Patients with Type 2 Diabetes Mellitus in Iran: A National Survey.	To measure health-related quality of life (HRQOL) in Iranian people with Type 2 Diabetes Mellitus using two different measures and examines which socio demographic and diabetes-related characteristics are associated with better quality of life based on a nationally distributed sample.	A multi-stage cluster sampling method was used to select 3472 subjects as a part of Iranian surveillance of risk factors of non-communicable disease (ISRFNCD). EuroQol-5 Dimensions questionnaire (EQ-5D) and Visual Analog Scale (VAS) were employed to measure HRQOL. Binary logistic and To bit regression models were used to investigate factors associated with EQ-5D results.	The mean age of subjects was 59.4 years (SD = 11.7), 61.3% were female and had 8.08 years (SD = 6.7) known duration of diabetes. The patients reported ‘‘some or extreme problems’’ most frequently in Pain/Discomfort (69.3%) and Anxiety/Depression (56.6%) dimensions of EQ-5D. The mean EQ-5D and VAS score were 0.70 (95% CI 0.69–0.71) and 56.8 (95% CI 56.15–57.5) respectively. Female gender, lower education, unemployment, long duration of diabetes, diabetes related hospitalization in past years and having nephropathy and lower extremity lesions were associated with higher probabilities of reporting ‘‘some or extreme problems’’ in most dimensions of EQ-5D in binary logistic regression models. The same factors in addition to retinopathy were significantly associated with lower levels of HRQOL in To bit regression analysis too.

(Javanbakht, Abolhasani et al. 2012)

Chapter three

III. Methodology

III. I Study population

The population of the study is (type2 DM) patients. It accounts 160 patients 40 from Tulkarem (Shweikeh & Kafr El-Labad PHC), 40 from Nablus (Asira al-Shamaliya PHC), 40 from Qalqilya (Azzoun PHC) and 40 from Salfeet (Salfeet PHC). The sample divided into 80 male and 80 female, population ages range between (35-70) years.

III. II Study Design

This study was designed as non experimental, cross sectional health status survey of Quality of life for patient with type II Diabetes in North of West Bank.

Cross-sectional designs (also known as cross-sectional analysis, transversal studies, prevalence study) form a class of research methods that involve the collection of data at one point in time; the phenomena under study are captured during one period of data collection.

Advantages of cross-sectional studies: 1- Relatively inexpensive and takes up little time to conduct. 2- Can estimate prevalence of outcome of interest because sample is usually taken from the whole population. 3- Descriptive role.

Disadvantages of cross-sectional studies: 1- Selection bias. 2- Snapshot in time (loss to follow-up). 3- Shows association, not causality.

III. III Sampling

Consecutive sampling (is very similar to convenience sampling except that it seeks to include all accessible subjects as part of the sample), researcher select the first 40 patients coming to primary health care center that have been mentioned previously, these centers were visited for one day and was taking patients who meet the inclusion criteria.

III. IV Instrument of the study

Short form health questionnaire (SF-36) was used to measure Quality of life. The questionnaire contained 36 questions covering eight health concepts: physical functioning; bodily pain; role limitations due to physical health problems; role limitations due to emotional problems; emotional well-being (mental health); social functioning; energy/fatigue (vitality); and general health perceptions. A single item that provides an indication of perceived change in general health perception. The SF-36 has been translated into a number of languages, and psychometric testing of the translated versions provides evidence that the SF-36 is reliable and valid general health survey measure across different cultures or nation.

III. V Criticism of SF-36

This instrument covering a few factors that affect the quality of life (such as age, sex and educational level). And there are a lot of factors that greatly affect the quality of life doesn't covered by SF-36 instrument (such as job, income, duration of illness and marital status)**.**

III. VI Setting of the study

Our study conducted in Palestine in the north of WB, five primary health care centers included {Tulkarem (Shweikeh & Kafr El-Labad PHC), Nablus (Asira al-Shamaliya PHC), Qalqilya (Azzun PHC) and Salfeet (Salfeet PHC)}.

III. VII Inclusion criteria and exclusive criteria

Inclusion Criteria:

1- Participants with uncomplicated type II DM.

2- Participants age range from 35-70 year.

3- Participants consist of male and female.

Exclusion Criteria:

1- Participants with type I DM.

2- Participants age < 35 years & age > 70 years.

3- Participants with complicated DM (such as impaired renal function).

4- Participants with other chronic diseases that could affect person of life (e.g., ischemic heart disease, hypertension, valvular heart disease, stroke, heart failure).

III. VIII Data collection

After taking permission from the Palestinian Ministry of Health, just we went to collect the data from the primary health care centers. Participants were selected by consecutive sampling, and then were receiving consent form that contains brief information about study. Participants were fill questionnaire (SF-36) alone if they need an explanation, they can ask the researcher to seek clarify. The place of the meeting was in the PHC, each the Participants need period about 10 to 15 minutes to fill the questionnaire.

III. IX Ethical consideration

Institutional Review Board (IRB) approval was obtained from An-Najah National University. Permission was obtained from the Palestinian ministry of health to conduct this study and to use PHC centers to collect the data from the patients.

This study will conducted according to the general principles of research ethics. A verbal consent was obtained from each participant after discussing with each of them the purpose of the study and all related matters to the research purpose, Participants was given the right to withdrawn from study any time without any consequences, also the questionnaire contain an introductory letter including information on the nature and purpose of the research, the Participants right to refuse to participate, anonymity and confidentiality of all personal information.

III. X Statistical analysis

We have used SPSS Statistical Package for Social Science (10 version) to analyze data collected from Participants. Arabic form of SF-36 questionnaire was inserted to SPSS program to analyses 160 questionnaire that collected from Participants.

Chapter Four

IV. Study Results:

The study was done on a sample of (160) type 2 diabetic patients male and female selected randomly from the PHC centers in North of West Bank according to table (1), (2), (3) and (4).

Table (1): The distribution of participant according to the gender

Gender	NO.	Percentage %
Male	80	50%
Female	80	50%
total	160	100%

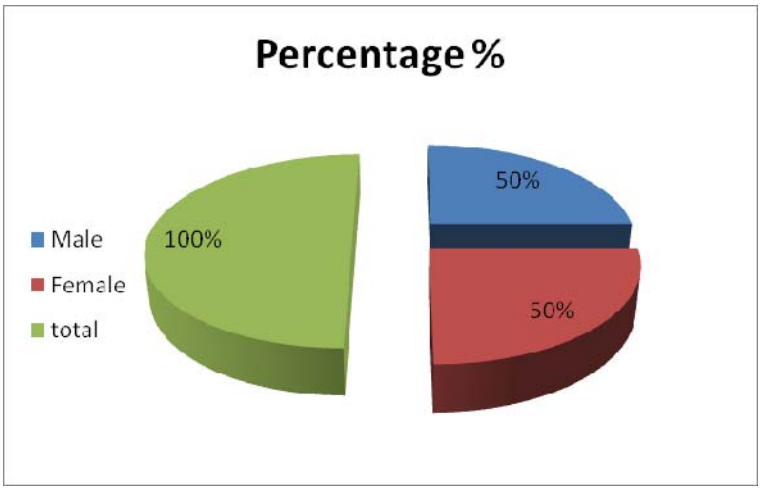


Figure (1): The distribution of participant according to the gender

Table (2): The distribution of participant according to the place of resident

Place	Percentage %
Tolkarem	25%
Qalqelia	25%
Nablus	25%
Salfet	25%
Total	100%

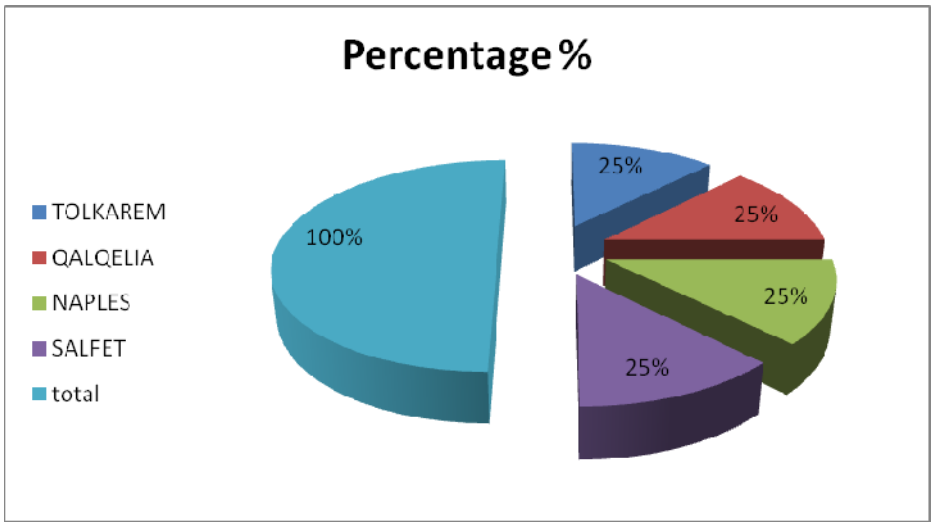


Figure (2): The distribution of participant according to the place of resident

Table (3): The distribution of participant according to their age

Age	No.	Percentage %
35-45 year	58	36.2%
46-57 year	59	36, 9%
58-70 year	43	26.9%
Total	160	100%

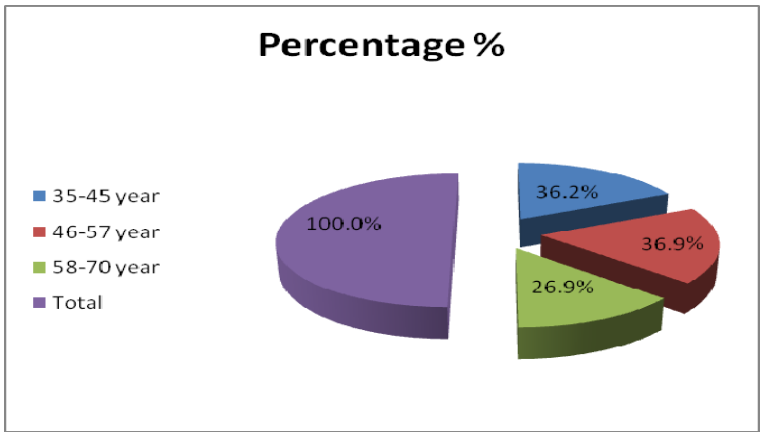


Figure (3): The distribution of participant according to their age

Table (4): The distribution of participant according to the Academic qualification

Academic qualification	No.	Percentage %
Primary	42	26.2%
Preparatory	34	21.2%
Secondary	46	28.8%
Bachelor	24	15%
Master	12	7.5%
Ph.D.	2	1.3%
Total	160	100%

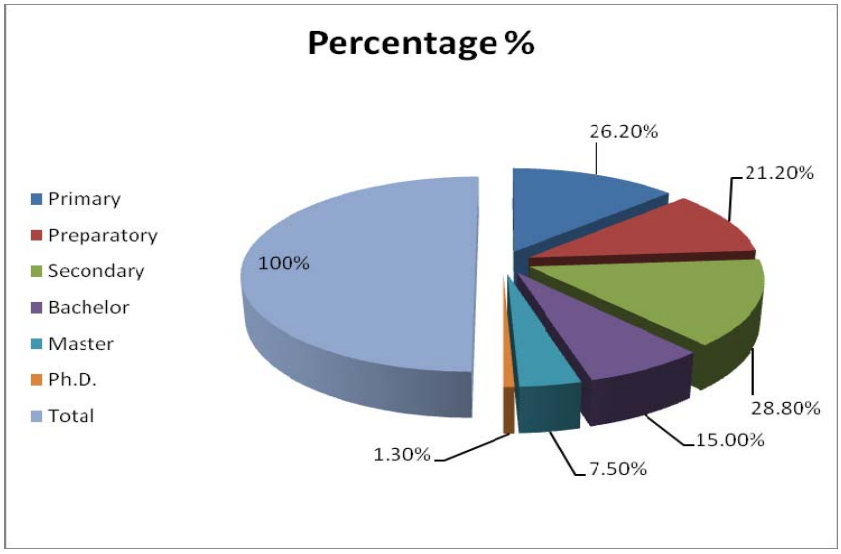


Figure (4): The distribution of participant according to the Academic qualification

A-The result of according well being scale:

1- General health:

Question (1): In general, would you say your health is?

Table (5): The distribution of the study sample on the question number 1

In general , would you say your health is	No.	Percentage%
Excellent	5	3.1%
Very good	13	8.1%
Good	46	28.8%
Fair	48	30.0%
Poor	48	30.0%
Total	160	100%

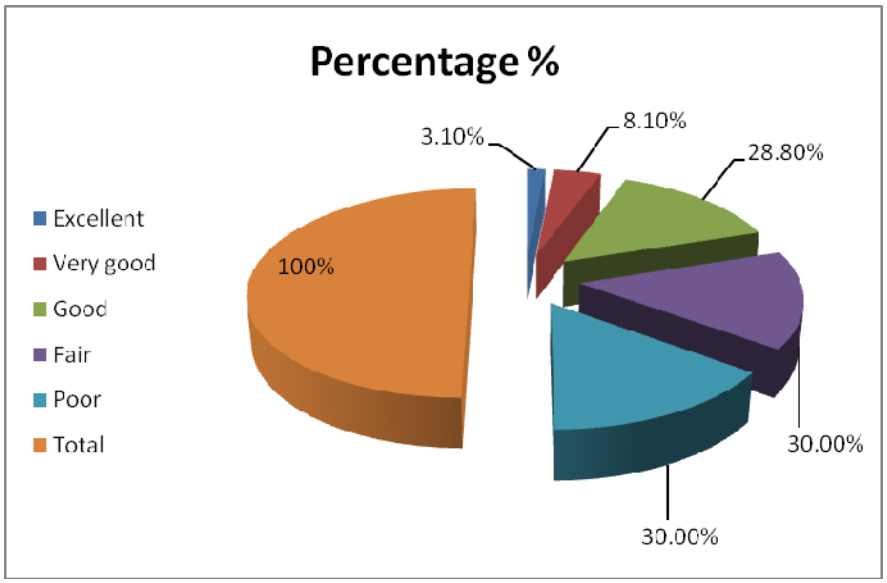


Figure (5): The distribution of the study sample on the question number 1

It has been shown from the table (5) that (30%) of participants their general health fair and poor status.

Question (2): Compare to one year ago, how would you rate your health in general now?

Table (6): The distribution of the study sample on the question number 2

In general , how would you rate your health	No.	Percentage%
Much better now than a year ago	8	6.9%
Somewhat better now than a year ago	11	5%
About the same as one year ago	41	23.8%
Somewhat worse now than a year ago	62	38.7%
Much worse now than a year ago	38	25.6%
Total	160	100%

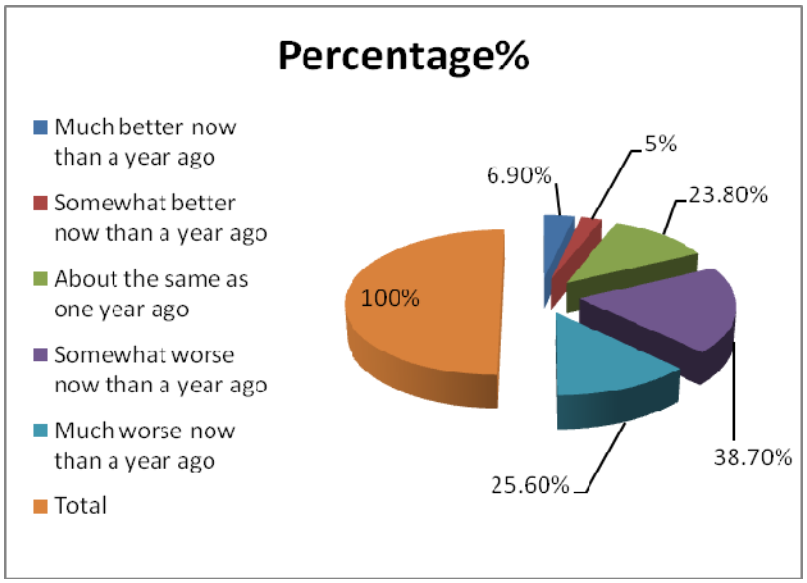


Figure (6): The distribution of the study sample on the question number 2

It has been shown from the table (6) that the rate (38.7%) participants their general health is somewhat worse now than a year ago.

Question (11):

Table (7): The distribution of the study sample on the question number 11

11. How TRUE or FALSE is each of the following statements for you?	Definitely true	Mostly true	Don't know	Mostly false	Definitely false
a. I seem to get sick a little easier than other people	0.6	29.4	23.1	34.4	12.5
b. I am as healthy as anybody I know	25	31.3	43.8	13.1	9.4
c. I expect my health to get worse	0	6.3	55.6	23.8	6.3
d. My health is excellent	13.1	31.3	35.0	18.8	1.3

The table (7) Pts didn't know the outcome of their disease and treatment. Such as they don't know how they get their illness when they compare with other patients.

2- Vitality and Psychological well-being (MH):

Question (9):

Table (8): The distribution of the study sample on the question number 9

9. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question,	All of the time	Most of the time	A good bit of the time	Some of the time	A little of the time	None of the time
a. did you feel full of pep (vitality)?	10.6	11.9	10.0	20.6	38.8	8.1
b. have you been a very nervous person?	2.5	13.1	38.1	33.1	12.5	0.6
c. have you felt so down in the dumps nothing could cheer you up?	16.9	15.5	32.5	24.4	9.4	1.3
d. have you felt calm and peaceful?	0.6	11.9	28.8	32.5	25.0	1.3
e. did you have a lot of energy?	9.4	8.8	15.0	24.4	32.5	10.0
f. have you felt downhearted and blue?	17.5	17.5	23.1	25.0	15.6	1.3
g. did you feel worn out?	9.4	15.0	30.6	33.1	9.4	2.5
h. have you been a happy person?	1.3	14.4	20.0	25.0	38.8	0.6
i. did you feel tired?	10.0	18.8	18.1	23.1	21.9	8.1

The table (8) showed that the (DM) pts become nervously, depressed a good bit of the time. On other hand they felt downhearted, blue, tired and worn out in some of times. And they feel happy and more energy in a little of the time.

B-Functional scale: Results according:

1- Physical function:

Question 3:

Table (9): The distribution of the study sample on the question number 3

3-The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?	Limited a lot.	limited a little	not limited at all
a. Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports.	58.8	28.1	13.1
b Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf?	31.3	43.8	25.0
c. Lifting or carrying groceries.	37.5	44.4	18.1
d. Climbing several flights of stairs.	43.8	30.6	25.6
e. Climbing one flight of stairs.	34.4	50.0	15.6
f. Bending, kneeling or stooping.	28.1	47.5	24.4
g. Walking more than one mile.	49.4	38.1	12.5
h. Walking several blocks.	40.6	32.5	26.9
i. Walking one block.	45.6	28.8	25.6
j. Bathing or dressing yourself.	16.3	42.5	41.2

Pts with (DM) have physical limitation .as a result of it they can't do vigorous activity and they have some of limitation to do moderate activity and they are able to do light activity and self care.

2- Role Function-Physical (RP):

Question 4:

Table (10) the distribution of the study sample on the question number 4

4. During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?	Yes	No
a. Cut down the amount of time you spent on work or other activities?	68.1	31.9
b. Accomplished less than you would like?	59.4	40.6
c. Were limited in the kind of work or other activities	64.4	35.6
d. Had difficulty performing the work or other activities (for example, it took extra time)	73.8	26.3

The table (10) shown that the large distribution of pts have limitation in time, achievement, performance, doing their works according to physical limitation.

3- Role Function-Emotional factors (RE):

Question 5:

Table (11): The distribution of the study sample on the question number 5

5. During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as result of any emotional problems (such as feeling depressed or anxious)?	Yes	No
a. Cut down the amount of time you spent on work or other activities?	76.9	23.1
b. Accomplished less than you would like	73.8	26.2
c. Didn't do work or other activities as carefully as usual	71.9	28.1

The large distribution of pts has limitation in time, achievement, performance, doing their works according to psychological status.

4- Bodily Pain (BP):

Question (7): How many bodily pain have you had during the past 4 weeks?

Table (12): The distribution of the responds of the study sample on the question number 7

How many bodily pain have you had during the past 4 weeks?	No.	Percentage %
None	21	13.1%
Very mild	19	11.9%
mild	32	20.0%
moderate	48	30.0%
severe	26	16.3%
Very severe	14	8.7%
Total	160	100%

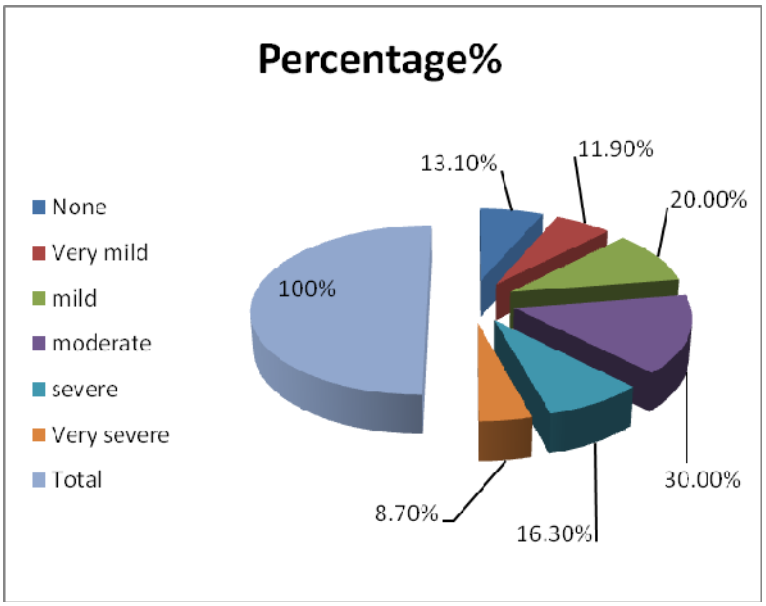


Figure (7): The distribution of the responds of the study sample on the question number 7.

It has been shown from the table (12) that (30%) they have moderately of pain

Question (8): During the past 4 weeks, how much did pain interfere with your normal work (including work outside the home and house work)?

Table (13): The distribution of the responds of the study sample on the question number 8

During the past 4 weeks , how much did pain interfere with your normal work (including work outside the home and house work)	No.	Percentage %
Not at all	25	15.6%
Slightly	32	20.0%
Moderately	61	38.2%
Quite a bit	33	20.6%
Extremely	9	5.6%
Total	160	100%

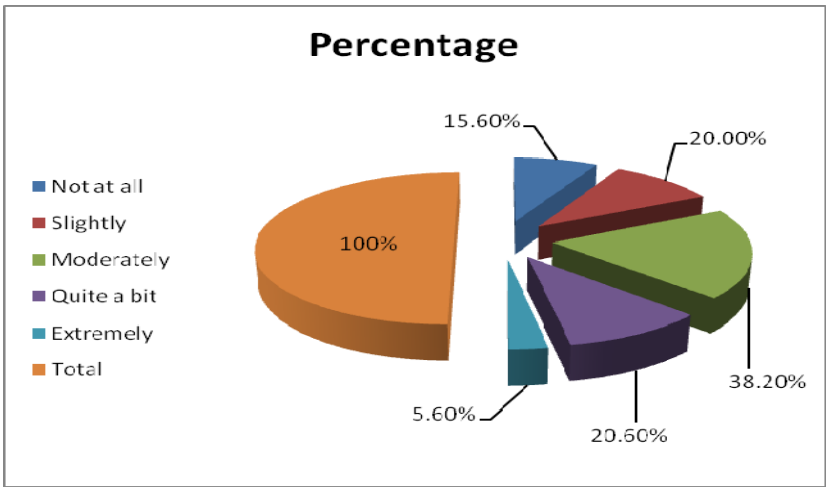


Figure (8): The distribution of the responds of the study sample on the question number 8

It has been shown from the table (13) that (38.2%) of participant their pain moderately interfere with normal work.

5-Social function (SF)

Question (6): During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with friends, neighbors or groups?

Table (14): The distribution of the responds of the study sample on the question number 6:

During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with friends, neighbors or groups?	No.	Percentage %
Not at all	23	14.4%
Slightly	66	41.3%
Moderately	27	16.8%
Quite a bit	25	15.6%
Extremely	19	11.9%
Total	160	100%

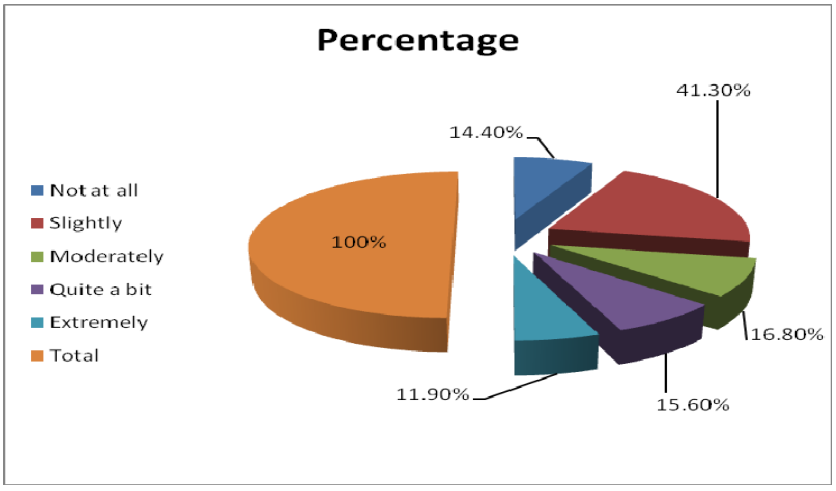


Figure (9): The distribution of the responds of the study sample on the question number 6

It has been shown from the table (14) that (41.3%) of participant social relationship slightly limited.

Question (10): During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc...)??

Table (15): The distribution of the responds of the study sample on the question number 10

During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc...)?	No.	Percentage %
All the time	29	18.1%
Most of the time	47	29.4%
Some of the time	57	35.6%
A little of the time	16	10.0%
None of the time	11	6.9%
Total	160	100%

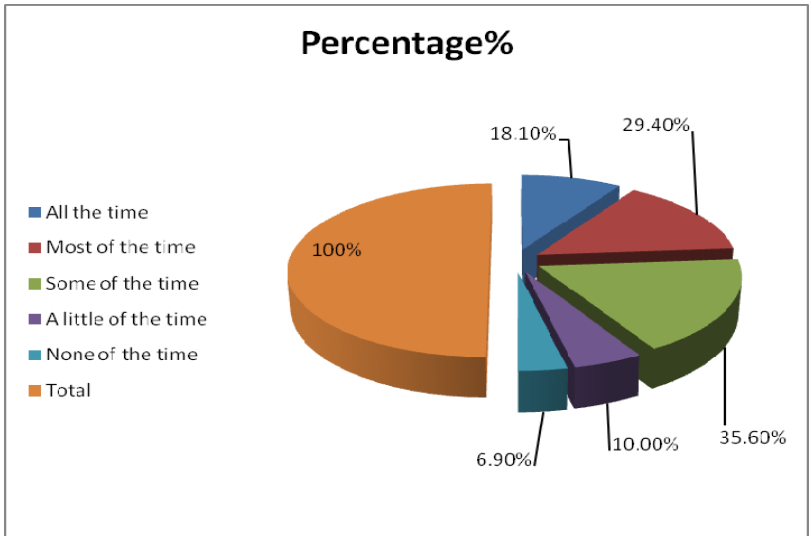


Figure (10): The distribution of the responds of the study sample on the question number 10

It has been shown from the table (15) that (35.6%) of participant social activities are limited in some times.

Results pertinent to the Hypothesis of the study:

I. The relationship between quality of life in type 2 diabetes patient and gender

Role Function-Physical (RP):

Hypothesis (1):

Hypothesis one say: there is no significant relation at the level (α = 0.05) between Cut down on the amount of time you spent on work or other activities, and Gender.

Table (16): Results of Chi Square for relation between Cut down on the amount of time you spent on work or other activities, and Gender

Gender	Cut down on the **amount of time** you spent on work or other activities				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
Male	47	58.7	33	41.3	1	6.476	*0.011
Female	62	77.5	18	22.5			

* Statically significant at (α = 0.05)

Table (16) indicates that there is significant relation between Cut down on the amount of time you spent on work or other activities, and Gender.

Hypothesis (2):

Hypothesis two say: there is no significant relation at the level (α = 0.05) between Accomplished less than you would like, and Gender.

Table (17): Results of Chi Square for relation between Accomplished less than you would like, and Gender.

Gender	**Accomplished less** than you would like				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
Male	55	68.75	25	31.25	1	5.83	*0.016
Female	40	50	40	50			

* Statically significant at (α = 0.05)

Table (17) indicates that there is significant relation between Accomplished less than you would like, and Gender.

Hypothesis (3):

Hypothesis three say: there is no significant relation at the level ($\alpha = 0.05$) between were limited in the kind of work or other activities, and Gender.

Table (18): Results of Chi Square for relation between were limited in the kind of work or other activities, and Gender.

Gender	Were limited in the **kind** of work or other activities				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
Male	39	48.75	41	51.25	1	17.003	*0.001
Female	64	80	16	20			

* Statically significant at ($\alpha = 0.05$)

Table (18) indicates that there is significant relation between were limited in the kind of work or other activities, and Gender.

Hypothesis (4):

Hypothesis four say: there is no significant relation at the level ($\alpha = 0.05$) between difficulty performing the work or other activities and Gender.

Table (19): Results of Chi Square for relation between difficulty performing the work or other activities and Gender.

Gender	Had **difficulty** performing the work or other activities (for example, it took extra effort				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
Male	53	66.25	27	33.75	1	4.649	*0.031
Female	65	81.25	15	18.75			

* Statically significant at ($\alpha = 0.05$)

Table (19) indicates that there is significant relation between difficulty performing the work or other activities and Gender.

Role Function-Emotional factors (RE):

Hypothesis (5):

Hypothesis five say: there is no significant relation at the level ($\alpha = 0.05$) between Cut down the amount of time you spent on work or other activities, and Gender as a result of your physical health as a result of any emotional problems (such as feeling depressed or anxious)

Table (20): Results of Chi Square for relation between Cut down the amount of time you spent on work or other activities, and Gender.

Gender	Cut down the **amount of time** you spent on work or other activities				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
Male	59	73.75	21	26.25	1	0.552	0.578
Female	63	78.75	17	21.25			

* Statically significant at ($\alpha = 0.05$)

Table (20) indicates that there is no significant relation between Cut down the amount of time you spent on work or other activities, and Gender.

Hypothesis (6):

Hypothesis six says : there is no significant relation at the level ($\alpha = 0.05$) between Accomplished less than you would like, and Gender as a result of your physical health as a result of any emotional problems (such as feeling depressed or anxious).

Table (21): Results of Chi Square for relation between Accomplished less than you would like, and Gender.

Gender	**Accomplished less** than you would like				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
Male	46	57.5	34	42.5	1	21.82	*0.001
Female	72	90	8	10			

* Statically significant at ($\alpha = 0.05$)

Table (21) indicates that there is significant relation between Accomplished less than you would like, and Gender.

Hypothesis (7):

Hypothesis seven say: there is no significant relation at the level ($\alpha = 0.05$) between didn't do work or other activities as carefully as usual, and Gender as a result of your physical health as a result of any emotional problems (such as feeling depressed or anxious)

Table (22): Results of Chi Square for relation between didn't do work or other activities as carefully as usual, and Gender.

Gender	Didn't do work or other activities as **carefully** as usual				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
Male	51	63.75	29	36.25	1	5.225	*0.022
Female	64	80	16	20			

* Statically significant at ($\alpha = 0.05$)

Table (22) indicates that there is significant relation between didn't do work or other activities as carefully as usual, and Gender.

Social function (SF):

Hypothesis (8):

Hypothesis eight say: there is no significant relation at the level ($\alpha = 0.05$) between during the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors or groups, and Gender

Table (23): Results of Chi Square for relation between during the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors or groups, and Gender).

Gender	During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors or groups										D.F	Chi square value	Sig*
	Not at all		Slightly		Moderately		Quite a bit		Extremely				
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage			
Male	16	20	14	17.5	17	21.52	18	22.5	15	18.75	4	33.66	*0.0001
Female	7	8.75	5	6.25	8	10	9	11.25	51	63.75			

* Statically significant at (α = 0.05)

Table (23) indicates that there is significant relation between during the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors or groups, and Gender.

Bodily Pain (BP):

Hypothesis (9):

Hypothesis nine say: there is no significant relation at the level (α = 0.05) between how much bodily pain have you had during the past 4 weeks, and Gender

Table (24): Results of Chi Square for relation between How much bodily pain have you had during the past 4 weeks, and Gender

Gender	How much bodily pain have you had during the past 4 weeks												D.F	Chi square value	Sig*
	None		Very mild		Mild		Moderate		Severe		Very severe				
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage			
Male	18	22.5	13	16.25	13	16.25	21	26.25	10	12.5	5	6.25	5	52.88	0.0001*
Female	3	3.75	6	7.5	1	1.25	11	13.75	38	47.5	21	26.25			

* Statically significant at (α = 0.05)

Table (24) indicates that there is significant relation between how much bodily pain have you had during the past 4 weeks, and Gender.

II. The relationship between quality of life in type 2 diabetes patient and Age

Role Function-Physical (RP):

Hypothesis (1):

Hypothesis one say: there is no significant relation at the level (α = 0.05) between Cut down on the amount of time you spent on work or other activities, and ages.

Table (25): Results of Chi Square for relation between Cut down on the amount of time you spent on work or other activities, and ages

Ages	Cut down on the **amount of time** you spent on work or other activities				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
35-45 year	31	53.4	27	46.6	2	9.855	*0.007
46-57 year	43	72.9	16	27.1			
58-70year	35	81.4	8	18.6			

* Statically significant at (α = 0.05)

Table (25) that there is significant relation at between Cut down on the amount of time you spent on work or other activities, and ages.

Hypothesis (2):

Hypothesis two say: there is no significant relation at the level (α = 0.05) between Accomplished less than you would like, and ages.

Table (26): Results of Chi Square for relation between Accomplished less than you would like, and age.

Ages	**Accomplished less** than you would like				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
35-45 year	31	53.4	27	46.6	2	7.365	*0.025
46-57 year	31	52.5	28	47.5			
58-70year	33	46.7	10	23.3			

* Statically significant at (α = 0.05)

Table (26) indicates that there is significant relation between Accomplished less than you would like, and ages.

Hypothesis (3):

Hypothesis three say: there is no significant relation at the level ($\alpha = 0.05$) between were limited in the kind of work or other activities, and age.

Table (27): Results of Chi Square for relation between were limited in the kind of work or other activities, and age.

Ages	Were limited in the **kind** of work or other activities				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
35-45 year	31	53.4	27	46.6	2	5.212	*0.044
46-57 year	40	67.8	19	32.2			
58-70year	32	74.4	11	25.6			

* Statically significant at ($\alpha = 0.05$)

Table (27) indicates that there is significant relation between were limited in the kind of work or other activities, and age.

Hypothesis (4):

Hypothesis four say: there is no significant relation at the level ($\alpha = 0.05$) between difficulty performing the work or other activities and age.

Table (28): Results of Chi Square for relation between difficulty performing the work or other activities and age.

Ages	Had **difficulty** performing the work or other activities (for example, it took extra effort				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
35-45 year	35	60.3	23	39.7	2	9.284	*0.01
46-57 year	46	78	13	22			
58-70year	37	86	6	14			

* Statically significant at ($\alpha = 0.05$)

Table (28) indicates that there is significant relation between difficulty performing the work or other activities and age.

Role Function-Emotional factors (RE):

Hypothesis (5):

Hypothesis five say: there is no significant relation at the level ($\alpha = 0.05$) between Cut down the amount of time you spent on work or other activities, and age as a result of your physical health as a result of any emotional problems (such as feeling depressed or anxious)

Table (29): Results of Chi Square for relation between Cut down the amount of time you spent on work or other activities, and age.

Ages	Cut down the **amount of time** you spent on work or other activities				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
35-45 year	39	67.2	19	32.8	2	6.088	*0.048
46-57 year	45	76.3	14	23.7			
58-70year	38	88.4	5	11.6			

* Statically significant at ($\alpha = 0.05$)

Table (29) indicates that there is significant relation between Cut down the amount of time you spent on work or other activities, and age.

Hypothesis (6):

Hypothesis six says : there is no significant relation at the level ($\alpha = 0.05$) between Accomplished less than you would like, and age as a result of your physical health as a result of any emotional problems (such as feeling depressed or anxious).

Table (30): Results of Chi Square for relation between Accomplished less than you would like, and age.

Ages	**Accomplished less** than you would like				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
35-45 year	44	75.9	14	24.1	2	0.344	0.843
46-57 year	42	71.2	17	28.8			
58-70year	32	74.4	11	25.6			

* Statically significant at ($\alpha = 0.05$)

Table (30) indicates that there is no significant relation between Accomplished less than you would like, and age.

Hypothesis (7):

Hypothesis seven say: there is no significant relation at the level ($\alpha = 0.05$) between didn't do work or other activities as carefully as usual, and age as a result of your physical health as a result of any emotional problems (such as feeling depressed or anxious)

Table (31): Results of Chi Square for relation between didn't do work or other activities as carefully as usual, and age.

Ages	Didn't do work or other activities as **carefully** as usual				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
35-45 year	44	75.9	14	24.1	2	0.344	0.84
46-57 year	42	71.2	17	28.8			
58-70year	32	74.4	11	25.6			

* Statically significant at ($\alpha = 0.05$)

Table (31) indicates that there is no significant relation between didn't do work or other activities as carefully as usual, and age.

Social function (SF):

Hypothesis (8):

Hypothesis eight say: there is no significant relation at the level ($\alpha = 0.05$) between during the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors or groups, and age

Table (32): Results of Chi Square for relation between during the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors or groups, and age.

ages	During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors or groups										D.F	Chi square value	Sig*
	Not at all		Slightly		Moderately		Quite a bit		Extremely				
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage			
35-45 year	12	20.7 %	17	%29.3	10	%17.2	11	%19.0	8	%13.8	8	14.15	*0.078
46-57 year	9	15.3 %	29	%49.2	8	%13.6	10	%16.9	3	%5.1			
58-70year	2	%4.7	20	%46.5	9	%20.9	4	%9.3	8	%18.6			

* Statically significant at (α = 0.05)

Table (32) indicates that there is significant relation between during the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors or groups, and age.

Bodily Pain (BP):

Hypothesis (9):

Hypothesis nine say: there is no significant relation at the level (α = 0.05) between how much bodily pain have you had during the past 4 weeks, and age

Table (33): Results of Chi Square for relation between How much bodily pain have you had during the past 4 weeks, and age

ages	How much bodily pain have you had during the past 4 weeks												D.F	Chi square value	Sig*
	None		Very mild		Mild		Moderate		Severe		Very severe				
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage			
35-45 year	10	17.3	9	15.5	12	20.7	16	27.6	5	8.6	6	10.3	10	6.94	0.731
46-57 year	7	11.9	6	10.2	10	16.9	19	32.2	13	22	4	6.8			
58-70year	4	9.3	4	9.3	10	23.3	13	30.2	8	18.6	4	9.3			

* Statically significant at (α = 0.05)

Table (33) indicates that there is no significant relation between how much bodily pain have you had during the past 4 weeks, and age.

III. The relationship between quality of life in type 2 diabetes patient and Qualification:

Role Function-Physical (RP):

Hypothesis (1):

Hypothesis one say: there is no significant relation at the level (α = 0.05) between Cut down on the amount of time you spent on work or other activities, and Qualification.

Table (34): Results of Chi Square for relation between Cut down on the amount of time you spent on work or other activities, and Qualification

Qualification	Cut down on the **amount of time** you spent on work or other activities				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
Primary	27	64.3	15	35.7	5	3.43	0.634
Preparatory	21	61.8	13	38.2			
Secondary	33	71.7	13	28.3			
Bachelor	16	66.7	8	33.3			
Master	10	83.3	2	16.7			
Ph.D.	2	100.0	0	0.0			

* Statically significant at (α = 0.05)

Table (34) indicates that there is no significant relation between Cut down on the amount of time you spent on work or other activities, and Qualification.

Hypothesis (2):

Hypothesis two say: there is no significant relation at the level (α = 0.05) between Accomplished less than you would like, and Qualification.

Table (35): Results of Chi Square for relation between Accomplished less than you would like, and Qualification.

Qualification	**Accomplished less** than you would like				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
Primary	20	47.6	22	52.4	5	9.792	*0.042
Preparatory	20	58.8	14	41.2			
Secondary	30	65.2	16	34.8			
Bachelor	15	62.5	9	37.5			
Master	8	66.7	4	33.3			
Ph.D.	2	100	0	0			

* Statically significant at (α = 0.05)

Table (35) indicates that there is significant relation between Accomplished less than you would like, and Qualification.

Hypothesis (3):

Hypothesis three say: there is no significant relation at the level ($\alpha = 0.05$) between were limited in the kind of work or other activities, and Qualification.

Table (36): Results of Chi Square for relation between were limited in the kind of work or other activities, and Qualification.

Qualification	Were limited in the **kind** of work or other activities				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
Primary	28	66.7	14	33.3	5	4.938	0.424
Preparatory	20	58.8	14	41.2			
Secondary	33	71.7	13	28.3			
Bachelor	12	50	12	50			
Master	8	66.7	4	33.3			
Ph.D.	0	0	2	100			

* Statically significant at ($\alpha = 0.05$)

Table (36) indicates that there is no significant relation between were limited in the kind of work or other activities, and Qualification.

Hypothesis (4):

Hypothesis four say: there is no significant relation at the level ($\alpha = 0.05$) between difficulty performing the work or other activities and Qualification.

Table (37): Results of Chi Square for relation between difficulty performing the work or other activities and Qualification.

Qualification	Had **difficulty** performing the work or other activities (for example, it took extra effort				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
Primary	32	76.2	10	23.8	5	6.491	0.261
Preparatory	20	58.8	14	41.2			
Secondary	37	80.4	9	19.6			
Bachelor	17	70.8	7	29.2			
Master	10	83.3	2	16.7			
Ph.D.	0	0	2	100			

* Statically significant at ($\alpha = 0.05$)

Table (37) indicates that there is significant relation between difficulty performing the work or other activities and Qualification.

Role Function-Emotional factors (RE):

Hypothesis (5):

Hypothesis five say: there is no significant relation at the level ($\alpha = 0.05$) between Cut down the amount of time you spent on work or other activities, and Qualification as a result of your physical health as a result of any emotional problems (such as feeling depressed or anxious)

Table (38): Results of Chi Square for relation between Cut down the amount of time you spent on work or other activities, and Qualification.

Qualification	Cut down the **amount of time** you spent on work or other activities				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
Primary	27	64.3	15	35.7	5	14.107	*0.015
Preparatory	22	64.7	12	35.3			
Secondary	43	93.5	3	6.5			
Bachelor	19	79.2	5	20.8			
Master	9	75	3	25			
Ph.D.	0	0	2	100			

* Statically significant at ($\alpha = 0.05$)

Table (38) indicates that there is significant relation between Cut down the amount of time you spent on work or other activities, and Qualification.

Hypothesis (6):

Hypothesis six says: there is no significant relation at the level ($\alpha = 0.05$) between Accomplished less than you would like, and Qualification as a result of your physical health as a result of any emotional problems (such as feeling depressed or anxious).

Table (39): Results of Chi Square for relation between Accomplished less than you would like, and Qualification.

Qualification	**Accomplished less** than you would like				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
Primary	30	71.4	12	28.6	5	1.603	0.901
Preparatory	24	70.6	10	29.4			
Secondary	36	78.3	10	21.7			
Bachelor	17	70.8	7	29.2			
Master	9	75	3	25			
Ph.D.	0	0	2	100			

* Statically significant at (α = 0.05)

Table (39) indicates that there is no significant relation between Accomplished less than you would like, and Qualification.

Hypothesis (7):

Hypothesis seven say: there is no significant relation at the level (α = 0.05) between didn't do work or other activities as carefully as usual, and Qualification as a result of your physical health as a result of any emotional problems (such as feeling depressed or anxious)

Table (40): Results of Chi Square for relation between didn't do work or other activities as carefully as usual, and Qualification.

Qualification	Didn't do work or other activities as **carefully** as usual				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
Primary	31	73.8	11	26.2	5	8.164	0.147
Preparatory	19	55.9	15	44.1			
Secondary	38	82.6	8	17.4			
Bachelor	16	66.7	8	33.3			
Master	9	75	3	25			
Ph.D.	0	0	2	100			

* Statically significant at (α = 0.05)

Table (40) indicates that there is no significant relation between didn't do work or other activities as carefully as usual, and Qualification.

Social function (SF):

Hypothesis (8):

Hypothesis eight say: there is no significant relation at the level (α = 0.05) between during the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors or groups, and Qualification

Table (41): Results of Chi Square for relation between during the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors or groups, and Qualification.

Qualification	During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors or groups										D.F	Chi square value	Sig*
	Not at all		Slightly		Moderately		Quite a bit		Extremely				
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage			
Primary	8	19	17	40.5	6	14.3	4	9.5	7	16.7	20	16.4	*0.041
Preparatory	1	2.9	13	38.2	10	29.4	6	17.6	4	11.8			
Secondary	7	15.2	20	43.5	5	10.9	10	21.7	4	8.7			
Bachelor	5	20.8	10	41.7	3	12.5	3	12.5	3	12.5			
Master	2	16.7	4	33.3	3	25	2	16.7	1	8.3			
Ph.D.	2	100	0	0	0	0	0	0	0	0			

* Statically significant at (α = 0.05)

Table (41) indicates that there is significant relation between during the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors or groups, and Qualification.

Bodily Pain (BP):

Hypothesis (9):

Hypothesis nine say: there is no significant relation at the level (α = 0.05) between how much bodily pain have you had during the past 4 weeks, and Qualification

Table (42): Results of Chi Square for relation between How much bodily pain have you had during the past 4 weeks, and Qualification

Qualification	How much bodily pain have you had during the past 4 weeks												D.F	Chi square value	Sig*
	None		Very mild		Mild		Moderate		Severe		Very severe				
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage			
Primary	5	11.9	11	26.2	6	14.3	15	35.7	3	7.1	2	4.8	25	30.35	0.211
Preparatory	5	14.7	3	8.8	7	20.6	5	14.7	10	29.4	4	11.8			
Secondary	4	8.7	4	8.7	10	21.7	14	30.4	9	19.6	5	10.9			
Bachelor	5	20.8	1	4.2	6	25	9	37.5	2	8.3	1	4.2			
Master	2	16.7	0	0	3	25	4	33.3	1	8.3	2	16.7			
Ph.D.	0	0	0	0	0	0	1	50	1	50	0	0			

* Statically significant at (α = 0.05)

Table (42) indicates that there is no significant relation between how much bodily pain have you had during the past 4 weeks, and Qualification.

IV. The relationship between quality of life in type 2 diabetes patient and Place of residence:

Role Function-Physical (RP):

Hypothesis (1):

Hypothesis one say: there is no significant relation at the level (α = 0.05) between Cut down on the amount of time you spent on work or other activities, and Place of residence.

Table (43): Results of Chi Square for relation between Cut down on the amount of time you spent on work or other activities, and Place of residence

Place of residence	Cut down on the **amount of time** you spent on work or other activities				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
Tulkarem	28	70	12	30	3	4.461	0.216
Qalqilya	32	80	8	20			
Nablus	24	60	16	40			
Salfit	25	62.5	15	37.5			

* Statically significant at (α = 0.05)

Table (43) indicates that there is no significant relation between Cut down on the amount of time you spent on work or other activities, and Place of residence.

Hypothesis (2):

Hypothesis two say: there is no significant relation at the level (α = 0.05) between Accomplished less than you would like, and Place of residence.

Table (44): Results of Chi Square for relation between Accomplished less than you would like, and Place of residence.

Place of residence	**Accomplished less** than you would like				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
Tulkarem	28	70	12	30	3	2.772	0.428
Qalqilya	23	57.5	17	42.5			
Nablus	21	52.5	19	47.5			
Salfit	23	57.5	17	42.5			

* Statically significant at (α = 0.05)

Table (44) indicates that there is no significant relation between Accomplished less than you would like, and Place of residence.

Hypothesis (3):

Hypothesis three say: there is no significant relation at the level (α = 0.05) between were limited in the kind of work or other activities, and Place of residence.

Table (45): Results of Chi Square for relation between were limited in the kind of work or other activities, and Place of residence.

Place of residence	Were limited in the **kind** of work or other activities				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
Tulkarem	27	67.5	13	32.5	3	4.878	0.181
Qalqilya	28	70	12	30			
Nablus	20	50	20	50			
Salfit	28	70	12	30			

* Statically significant at (α = 0.05)

Table (45) indicates that there is no significant relation between were limited in the kind of work or other activities, and Place of residence.

Hypothesis (4):

Hypothesis four say: there is no significant relation at the level (α = 0.05) between difficulty performing the work or other activities and Place of residence.

Table (46): Results of Chi Square for relation between difficulty performing the work or other activities and Place of residence.

Place of residence	Had **difficulty** performing the work or other activities (for example, it took extra effort				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
Tulkarem	31	77.5	9	22.5	3	2.195	0.533
Qalqilya	30	75	10	25			
Nablus	26	65	14	35			
Salfit	31	77.5	9	22.5			

* Statically significant at (α = 0.05)

Table (46) indicates that there is no significant relation between difficulty performing the work or other activities and Place of residence.

Role Function-Emotional factors (RE):

Hypothesis (5):

Hypothesis five say: there is no significant relation at the level (α = 0.05) between Cut down the amount of time you spent on work or other activities, and Place of residence as a result of your physical health as a result of any emotional problems (such as feeling depressed or anxious)

Table (47): Results of Chi Square for relation between Cut down the amount of time you spent on work or other activities, and Place of residence.

Place of residence	Cut down the **amount of time** you spent on work or other activities				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
Tulkarem	32	80	8	20	3	1.242	0.743
Qalqilya	29	72.5	11	27.5			
Nablus	32	80	8	20			
Salfit	29	72.5	11	27.5			

* Statically significant at (α = 0.05)

Table (47) indicates that there is no significant relation between Cut down the amount of time you spent on work or other activities, and Place of residence.

Hypothesis (6):

Hypothesis six says : there is no significant relation at the level (α = 0.05) between Accomplished less than you would like, and Place of residence as a result of your physical health as a result of any emotional problems (such as feeling depressed or anxious).

Table (48): Results of Chi Square for relation between Accomplished less than you would like, and Place of residence.

Place of residence	**Accomplished less** than you would like				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
Tulkarem	31	77.5	9	22.5	3	4.520	0.211
Qalqilya	25	62.5	15	37.5			
Nablus	29	72.5	11	27.5			
Salfit	33	82.5	7	17.5			

* Statically significant at (α = 0.05)

Table (48) indicates that there is significant relation between Accomplished less than you would like, and Place of residence.

Hypothesis (7):

Hypothesis seven say: there is no significant relation at the level (α = 0.05) between didn't do work or other activities as carefully as usual, and Place of residence as a result of your physical health as a result of any emotional problems (such as feeling depressed or anxious)

Table (49): Results of Chi Square for relation between didn't do work or other activities as carefully as usual, and Place of residence.

Place of residence	Didn't do work or other activities as **carefully** as usual				D.F	Chi square value	Sig*
	Yes		No				
	Frequency	Percentage	Frequency	Percentage			
Tulkarem	31	77.5	9	22.5	3	4.050	0.256
Qalqilya	29	72.5	11	27.5			
Nablus	24	60	16	40			
Salfit	31	77.5	9	22.5			

* Statically significant at (α = 0.05)

Table (49) indicates that there is no significant relation between didn't do work or other activities as carefully as usual, and Place of residence.

Social function (SF):

Hypothesis (8):

Hypothesis eight say: there is no significant relation at the level (α = 0.05) between during the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors or groups, and Place of residence.

Table (50): Results of Chi Square for relation between during the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors or groups, and Place of residence.

Place of residence	During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors or groups										D.F	Chi square value	Sig*
	Not at all		Slightly		Moderately		Quite a bit		Extremely				
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage			
Tulkarem	5	12.5	21	52.5	7	17.5	3	7.5	4	10	12	15.9	0.194
Qalqilya	6	15	15	37.5	5	12.5	5	12.5	9	22.5			
Nablus	7	17.5	11	27.5	7	17.5	10	25	5	12.5			
Salfit	5	12.5	19	47.5	8	20	7	17.5	1	2.5			

* Statically significant at (α = 0.05)

Table (50) indicates that there is no significant relation between during the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors or groups, and Place of residence.

Bodily Pain (BP):

Hypothesis (9):

Hypothesis nine say: there is no significant relation at the level (α = 0.05) between how much bodily pain have you had during the past 4 weeks, and Place of residence

Table (51): Results of Chi Square for relation between How much bodily pain have you had during the past 4 weeks, and Place of residence

Place of residence	How much bodily pain have you had during the past 4 weeks												D.F	Chi square value	Sig*
	None		Very mild		Mild		Moderate		Severe		Very severe				
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage			
Tulkarem	3	7.5	2	5	1	2.5	13	32.5	13	32.5	8	20	15	49.7	*0.001
Qalqilya	5	12.5	9	22.5	7	17.5	10	25	4	10	5	12.5			
Nablus	7	17.5	7	17.5	15	37.5	8	20	2	5	1	2.5			
Salfit	6	15	1	2.5	9	22.5	17	42.5	7	17.5	0	0			

* Statically significant at (α = 0.05)

Table (51) indicates that there is significant relation between how much bodily pain have you had during the past 4 weeks, and Place of residence.

Chapter Five

V. Results discussion:

The purpose of this study was to assess the quality of life for patient with type 2 diabetes mellitus in North of West Bank, and assess the factors that affect the quality of life such as age, gender, academic qualification and Place of residence.

The study revealed that the age of the participants is 36.3% (35-45 year), 36.9% (46-57), and 26.8% (58-70). Also revealed that the academic qualification of the participants is 26.3% of them primary education, 21.3% Preparatory education, 28.8% secondary education, 14.8% Bachelor, 7.5% Master, and 1.3% PhD. This study was conducted on 80 male (50%) and 80 female (50%).

The study results showed that (30%) of participants are having fair and poor status for their general health. And (38.8%) of participants has shown that their general health is somewhat worse now than a year ago. And we found that (55.6%) Pts didn't know the outcome of their disease.

Also the study results showed that the diabetic patient become nervously and depressed a good bit of the time. On other hand they felt downhearted, blue, tired and worn out in some of times, also they feel happy and more energy in a little of time. A previous study supports this result showed that Patients with DM have statistically significant impairment of all aspects of QOL, not simply physical functioning, DM put a substantial burden on affected individuals by influencing physical, psychological and social aspects of QOL.(Porojan, Poanta et al. 2012) Also other study showed that all domains were strongly reduced in diabetic patients as compared to controls, with stronger effects in physical health and psychological domains and weaker effects in social relationships.(Eljedi, Mikolajczyk et al. 2006) But in some a previous study showed that there was no significant difference between persons with and without diabetes on the Mental Composite scale of the SF-36.(Graham, Stoebner-May et al. 2007)

The study results also showed that the diabetic patient in general suffering from poor functional activities (e.g. Physical function, Role Function-Physical, and Role Function-Emotional). The result showed that pts have limited a lot to do vigorous activity and they have some of limitation to do moderate activity like walking for several blocks, also the pts have limitation in time, achievement, performance, doing their works according to physical limitation. A previous study supports this result showed that Individuals with diabetes had significantly lower scores on the Physical Composite scale of the SF-36 compared to persons without diabetes.(Graham, Stoebner-May et al. 2007) Also other study showed that all domains were strongly reduced in diabetic patients as compared to controls, with stronger effects in physical health and psychological domains and weaker effects in social relationships.(Eljedi, Mikolajczyk et al. 2006)

The study results showed that (30%) of patients have moderately of pain, and (38.2%) of patient showed that pain are moderately interfere with normal work and activities.

Also the study showed that (41.3%) of patients they say the physical health and emotional health problem are interfere slightly with your normal social activities with friends, neighbors or groups. Also (35.6%) of patients answered that social activities are limited in some of the times. A previous study supports this result showed that all domains were strongly reduced in diabetic patients as compared to controls, with stronger effects in physical health and psychological domains and weaker effects in social relationships.(Eljedi, Mikolajczyk et al. 2006) Also other study showed that Patients with DM have statistically significant impairment of all aspects of QOL, not simply physical functioning. DM put a substantial burden on affected individuals by influencing physical, psychological and social aspects of QOL.(Porojan, Poanta et al. 2012)

In general the diabetes type II adversely affect the quality of life for patients, especially in the physical and psychological and social aspect. Previous result showed that all domains were strongly reduced in diabetic patients as compared to controls, with stronger effects in physical health and psychological domains and weaker effects in social relationships.(Eljedi, Mikolajczyk et al. 2006)

Discussion hypothesis results

There are many factors that affect the quality of life, now we will discuss the results of the study based on the hypothesis that have been mentioned previously. We will discuss (age, sex, Academic qualification, and place of residence) and what is the relationship between them and the quality of life through the following aspects physical, social, psychological and body pain.

First, the study results showed that there's significant relationship on the physical, emotional, bodily pain, and social relationship between quality of life and different Gender (male and female). It was found that the female has a poor quality of life compared with males in all aspects of social life, physical, emotional, and feeling of pain. Through this result, we accept first hypothesis that says (female patients are suffering from poor quality of life more than male). A previous study supports this result showed that Females had lower HRQOL than males, possibly because of a higher incidence of obesity.(Al-Shehri, Taha et al. 2008) Also other study showed that HRQOL is strongly reduced in diabetic patients living in refugee camps in the Gaza strip, women and older patients are especially affected.(Eljedi, Mikolajczyk et al. 2006) Also other study showed the most important predictors of impaired HRQOL were female gender, diabetic complications, non-diabetic co-morbidity and years with diabetes.(Papadopoulos, Kontodimopoulos et al. 2007) Also other study showed Type 2 diabetes has negative consequences for HRQL, particularly for women.(Schunk, Reitmeir et al. 2011) But some previous studies opposed this result showed that Greater negative impact of diabetes on QOL was associated with being younger, male, more educated.(Wang and Yeh)

Secondly, the study results showed that there's a significant relationship on the physical and social relationship between quality of life and different Age, but there's no significant relationship with emotional, psychological, bodily pain. It was found that the (58-70year) has a poor quality of life compared with Younger age in social life and physical aspect, and there is no difference between them in emotional aspect, and feeling of pain. Through this result, we accept the second hypothesis that says (Elderly patients suffer from poor in the quality of life compared with younger). A previous study supports this result showed that higher age was associated with lower physical component summary score, but with an increase in mental component

summary score, for subjects with Type 2 diabetes.(Schunk, Reitmeir et al. 2011) Also other study showed that older age, lower education, being unmarried, obesity, hypertension were also associated with impaired HRQOL in at least one SF-36 subscale.(Papadopoulos, Kontodimopoulos et al. 2007) Other study showed that HRQOL is strongly reduced in diabetic patients living in refugee camps in the Gaza strip; women and older patients are especially affected.(Eljedi, Mikolajczyk et al. 2006) Also other study showed that quality of life was most significantly affected by awareness of the complications and risk-factors of diabetes, and by the age, duration of the disease, and BMI of the patient.(Kalda, Ratsep et al. 2008) But some previous studies opposed this result showed that Greater negative impact of diabetes on QOL was associated with being younger, male, more educated.(Wang and Yeh)

Thirdly, the study results showed that there's a significant relationship on the physical and social relationship between quality of life and different educational level, but there's no significant relationship with psychological, bodily pain. It was found that low level of education has a poor quality of life compared with high level education in social life and physical aspect, and there is no difference between them in psychological, bodily pain. Through this result, we accept the Third hypothesis that says (Patients with a low educational level suffer from poor quality of life compared with higher level of education). A previous study supports this result showed that older age, lower education, being unmarried, obesity, hypertension were also associated with impaired HRQOL in at least one SF-36 subscale.(Papadopoulos, Kontodimopoulos et al. 2007) Also other study showed that female gender, lower education, unemployment, long duration of diabetes were significantly associated with lower levels of HRQOL.(Javanbakht, Abolhasani et al. 2012) But some previous studies opposed this result showed that Greater negative impact of diabetes on QOL was associated with being younger, male, more educated.(Wang and Yeh)

Finally, study results showed that there's no significant relationship on the physical, emotional, bodily pain, and social relationship between quality of life and different place of residence and physical. Through this result, we reject the Fourth hypothesis that says (There is a relationship between the quality of life in patients with type II diabetes and different place of residence).

VI. Conclusion:

As a conclusion we study the quality of life for type 2 diabetic patients and the factor affecting their life.

We found that diabetic pt have a lower quality of life because there disease affect their general health, vitality, psychological and social function. And we found there is significant relationship between the quality of life and the gender (Females had lower quality of life than males), and we found there is significant relationship between the quality of life and the ages (58-70 years is the most affected physically), and we found there is significant relationship between the quality of life and educational level (low educational level suffer from poor quality of life), and there is no significant relationship between quality of life and places of resident in the different cities of the north of west bank.

VII. Study limitations:

1- Their insufficient time to take more number of the participants.

2- There is large number of patients not met criteria to enter this study.

VIII. Recommendations:

1- Improving QOL in diabetic patients is important.

2- Assess the quality of life for patients with type II diabetes periodically.

2- There is need to provide psychosocial support for patient.

3- Provide them with effective training program to reduce physical limitation.

4- Provide patient with effective health education about their disease and treatment.

5- Make some of social activities to increase patient social function.

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استبيان صحي

نس☐ ذكر

☐ انثى

مر_____سنة

ؤهل العلمي: ابتدائي ☐

اعدادي ☐

ثانوي ☐

بكالوريوس ☐

ماجستير ☐

دكتوراه ☐

ن فضلك، أجب على كل الأسئلة الموجودة في هذا الاستبيان. في حالة عدم وضوح أي سؤال، أرجو اختيار أقرب اجابة يومك للسؤال.

- بصورة عامة، كيف ترى حالتك الصحية؟

(اختر اجابة واحدة وضع علامة ✓ أمام الاجابة المناسبة)

☐ ممتازة

☐ جيدجدا

☐ جيدة

☐ لا بأس بها

☐ سيئة

- **مقارنة بعام مضى**، كيف تقيم حالتك الصحية **الآن** بصورة عامة؟

(اختر اجابة واحدة وضع علامة ✓ أمام الاجابة المناسبة)

☐ أفضل بكثير مما كانت عليه قبل عام

☐ أفضل نوعا ما من العام الماضي

☐ تقريبا على ما هي عليه

☐ أسوأ نوعا ما من العام الماضي

☐ أسوأ بكثير مما كانت عليه قبل عام

٣- تتعلق البنود التالية بأنشطة يمكن ان تقوم بها خلال يومك العادي. **في الوقت الحالي**، الى اي مدى **تقيدك حالتك الصحية**:	(اختر اجابة واحدة وضع علامة ✓ تحت الاجابة المناسبة)		
	نعم تقيدني كثيرا	نعم تقيدني قليلا	لا تقيدني اطلاقا
أ) من ممارسة **الأنشطة الشاقة** مثل: الجري، حمل الاشياء الثقيلة او مزاولة الأنشطة الرياضية المجهدة جدا؟	☐	☐	☐
ب) من ممارسة **الأنشطة متوسطة الجهد**، كتحريك الطاولة او التنظيف باستخدام المكنسة الكهربائية او تنظيف حديقة المنزل والعناية بها ؟	☐	☐	☐
ج) من حمل المشتريات من البقالة او السوق المركزي (السوبرماركت)؟	☐	☐	☐
د) من صعود الدرج **لعدة ادوار**؟	☐	☐	☐
هـ) من صعود الدرج **لدور واحد فقط**؟	☐	☐	☐
و) من الانحناء او الركوع او السجود ؟	☐	☐	☐
ز) من المشي لأكثر من **كيلومتر ونصف**؟	☐	☐	☐
ح) من المشي لمسافة **نصف كيلومتر**؟	☐	☐	☐
ط) من المشي لمسافة **مئة متر**؟	☐	☐	☐
ي) من الاستحمام او ارتداء الملابس بنفسك؟	☐	☐	☐

الصحة الجسمية

ـ- تتعلق البنود التالية (أ ، ب ، ج ، د) بالمشاكل التي يمكن ان تواجهـــك خلال تأديتك لعملك او للأنشطة اليومية المعتادة نتيجة لحالتك الصحية الجسمية. **خلال الأسابيع الأربعة الماضية**، هل تسببت حالتك **الصحية الجسمية في:**	نعم	لا
أ) **التقليل من الوقت** الذي تقضيه في العمل او اي انشطة اخرى؟	☐	☐
ب) **التقليل** مما تود **انجازه** من العمل أو أي أنشطة أخرى؟	☐	☐
ج) **تقييدك في أداء نوع** معين من الأعمال أو أي أنشطة أخرى؟	☐	☐
د) **أن تجد صعوبة في** تأدية العمل أو أي أنشطة أخرى؟ (على سبيل المثال، احتجت الى جهد اضافي لتأديتها)	☐	☐

(اختر اجابة واحدة وضع علامة ✓ تحت الاجابة المناسبة)

الصحة النفسية

- تتعلق البنود التالية (أ ، ب ، ج) بالمشاكل التي يمكن ان تواجهك خلال تأديتك لعملك او الانشطة اليومية المعتادة كنتيجة لحالتك الصحية النفسية. (مثلا الشعور بالاكتئاب او القلق) **خلال الاسابيع الأربعة الماضية**، هل تسببت حالتك **الصحية النفسية في:**	نعم	لا
أ) **التقليل من الوقت** الذي تقضيه في العمل او اي انشطة اخرى؟	☐	☐
ب) **التقليل** مما تود **انجازه** من العمل أو أي أنشطة أخرى؟	☐	☐
ج) عدم **انجاز** العمل او اي انشطة اخرى **بالحرص المعتاد**؟	☐	☐

(اختر اجابة واحدة وضع علامة ✓ تحت الاجابة المناسبة)

- 4 -

الصحة الجسمية او النفسية

- **خلال الاسابيع الاربعة الماضية**، الى اي مدى تعارضت **صحتك الجسمية او النفسية** مع تأديتك لنشاطاتك جتماعية المعتادة مع عائلتك او اصدقائك او جيرانك او اي من المناسبات الاجتماعية الأخرى؟

(اختر اجابة واحدة وضع علامة ✓ أمام الاجابة المناسبة)

- ☐ لم يكن هناك أي تعارض اطلاقا
- ☐ كان هناك تعارض قليل
- ☐ كان هناك تعارض متوسط
- ☐ كان هناك تعارض كبير
- ☐ كان هناك تعارض كبير جدا

شدة الألم

- ما شدة **الألم الجسمي** الذي عانيت منه خلال **الاسابيع الاربعة الماضية**؟

(اختر اجابة واحدة وضع علامة ✓ أمام الاجابة المناسبة)

- ☐ لم يكن هناك أي ألم
- ☐ كان هناك ألم خفيف جدا
- ☐ كان هناك ألم خفيف
- ☐ كان هناك ألم متوسط
- ☐ كان هناك ألم شديد
- ☐ كان هناك ألم شديد جدا

- **خلال الاسابيع الاربعة الماضية**، الى اي مدى ادى **الألم الجسمي** الى التعارض مع تأديتك لأعمالك المعتادة سواء داخل المنزل او خارجه)؟

(اختر اجابة واحدة وضع علامة ✓ أمام الاجابة المناسبة)

- ☐ لم يكن هناك أي تعارض
- ☐ كان هناك تعارض قليل جدا
- ☐ كان هناك تعارض متوسط
- ☐ كان هناك تعارض كبير
- ☐ كان هناك تعارض كبير جدا

- الأسئلة التالية تتعلق بكيفية شعورك وطبيعة سير الأمور معك
لال الأسابيع الأربعة الماضية، الرجاء اعطاء اجابة واحدة
ل سؤال بحيث تكون هذه الاجابة هي الأقرب الى الحالة التي
ست تشعر بها.

لال الأسابيع الأربعة الماضية، كم من الوقت:

(اختر اجابة واحدة وضع علامة ✓ تحت الاجابة المناسبة)

	في كل الأوقات	في معظم الأوقات	في كثير من الأوقات	في بعض الأوقات	في قليل من الأوقات	لم اشعر في أي وقت من الأوقات
أ) شعرت بأنك ملئ بالحيوية والنشاط؟	☐	☐	☐	☐	☐	☐
ب) كنت شخصا عصبيا جدا؟	☐	☐	☐	☐	☐	☐
ج) شعرت بأنك في حالة اكتئاب الى درجة لم يمكن معها ادخال السرور اليك؟	☐	☐	☐	☐	☐	☐
د) شعرت بالهدوء والطمأنينة؟	☐	☐	☐	☐	☐	☐
هـ) كانت لديك طاقة كبيرة؟	☐	☐	☐	☐	☐	☐
و) شعرت بالاحباط واليأس؟	☐	☐	☐	☐	☐	☐
ز) شعرت بأنك منهك (استُنْفِذت قُواك)؟	☐	☐	☐	☐	☐	☐
ح) شعرت بأنك شخص سعيد؟	☐	☐	☐	☐	☐	☐
ط) شعرت بأنك تعبان؟	☐	☐	☐	☐	☐	☐

١- **خلال الاسابيع الأربعة الماضية**، ما مقدار الوقت الذي تعارضت فيه **صحتك الجسمية او مشاكلك النفسية** مع نشاطاتك الاجتماعية (مثل زيارة الأصدقاء والأقارب وغير ذلك) ؟

(اختر اجابة واحدة وضع علامة ✓ أمام الاجابة المناسبة)

- ☐ كان التعارض في كل الأوقات
- ☐ كان التعارض في معظم الأوقات
- ☐ كان التعارض في بعض الأوقات
- ☐ كان التعارض في قليل من الأوقات
- ☐ لم يكن هنالك تعارض في أي وقت من الأوقات

١- ما مدى **صحة او خطأ كل** من العبارات التالية (أ ، ب ، ج ، د) بالنسبة الى حالتك الصحية؟	(اختر اجابة واحدة وضع علامة ✓ تحت الاجابة المناسبة)				
	صحيحة بلا شك	صحيحة غالبا	لا اعلم	خطأ غالبا	خطأ بلا شك
أ) يبدو أنني أصاب بالمرض أسهل من الآخرين.	☐	☐	☐	☐	☐
ب) حالتي الصحية مساوية لأي شخص أعرفه.	☐	☐	☐	☐	☐
ج) أتوقع أن تسوء حالتي الصحية.	☐	☐	☐	☐	☐
د) حالتي الصحية ممتازة.	☐	☐	☐	☐	☐

****** شكرا لتعاونكم ******