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Treatment satisfaction, its relation with beliefs about medicine, quality of life and adherence among diabetic patients.

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Dedication:

I dedicate my master thesis to My Deceased father who gave me a better life and my lovely Mother, who gave me love encouragement and endless support all the way.

Declaration

I certify that this thesis submitted for the degree of Master, is the result of my own research, except where otherwise acknowledged, and that this study (or any part of the same) has not been submitted for a higher degree to any other university or institution.

Signed: .....

Heba Bassam Said Awadallah

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I would like to thank all diabetic patients who took apart in the study and I hope this study will contribute to the improvement of DM management in Palestine.

I also would like to thank my family who motivated me and helped me throughout my research. This thesis is sincerely devoted to my mother whose prayers protect and support me all the time.

Abstract.

Objectives and Background: Diabetes mellitus (DM) is a progressive disease resulted from inadequate insulin secretion, insulin sensitivity problems, or both resulting in increased blood glucose that diabetes distinguish with it. Insulin's function as an anabolic hormone associated with carbohydrate, lipid and protein metabolic disorders .The aim of this study was to assess medication adherence and its association with glycemic control, treatment satisfaction, patients' beliefs about medicines and Health related Quality of life.

Methodology: Three hundred and eighty patients from primary clinic in Ramallah were recruited in the current cross sectional study. Medication adherence were measured using Morisky four-item Medication Adherence Scale (MMAS-4). Last value of HbA1c test was used to measures glycemic control. Treatment Satisfaction Questionnaire for Medication (TSQM 1.4) was used to assess treatment satisfaction. Beliefs about medicines was measured using Beliefs about Medicines Questionnaire (BMQ). Health related quality of life was measured by using EQ-5D (EuroQol 5 Dimensions Patients). Medical records were used to collect the patients' demographic and clinical information.

Results: The result of our study indicated that 220 (57.9%) of the diabetic patients were classified as high adherent to their medications and 160 (42.1%) were classified as low adherent according to MMAS-4. 174, (45.7%) of patients had good glycemic control (HbA1c $\leq$ 7), whereas 206, (54.2%) had poor glycemic control (HbA1c >7). The mean ± SD of satisfaction domains of adherent patients were 78.81±25.8 and for non-adherent were 68.89 ± 36.4 for effectiveness, while mean ± SD of adherence were 41.85 ± 40.8 and non-adherence 44.86 ± 40.2. For side effects satisfaction domains, mean ± SD of adherence were 57.76 ± 38.2 and non-adherence 63.26 ± 37.3 for convenience and the mean ± SD of global satisfaction of adherence were 68.66 ± 34.2 and non-adherence 61.31 ± 36.4. There was a positive significant correlation between effectiveness and adherence level (P =0.04). Mean of Specific necessity scale 17.9 (SD=6.43). This

represent that the patients had a strong belief in their need to their medications to maintain their health. Scores for patient's concerns of their prescribed medication (Specific-Concerns scale), with a mean of 13.81 (SD=6.05). This represents that the patients had medium concerns about the side effects of their mediations .Glycemic control had significant correlation with global Satisfaction domain (p=0.01). The classification of patient's responses to EQ-5D Domains. Pain/Discomfort were the most influenced dimensions (173 patients reported problems, 36.1%), Anxiety and depression (128 patients reported problems, 33.7%) and the mobility (115 patients reported problems,30.3%). Treatment satisfaction had significant association with anxiety domain (p=0.031).

Conclusion: More than half of the patients in this study were classified as high adherent to their medications and believed strongly that their medicines had to be used. Controlled glycemic level was significantly associated with treatment satisfaction. Many patients were satisfied with their treatment; more satisfied patients were more adherent to the medication and had better quality of life.

List of Abbreviations

DM Diabetes Mellitus

BMI Body Mass Index

BMQ Beliefs about Medicines Questionnaire

FPG Fasting Plasma Glucose

GDM Gestational Diabetes Mellitus

HbA1c Glycosylated Hemoglobin

MMAS-4 4-item Morisky Medication Adherence Scale

OGTT Oral Glucose Tolerance Test

PPAR-γ Peroxisome Proliferation Activated Receptor-gamma

T1DM Type 1 Diabetes Mellitus

T2DM Type 2 Diabetes Mellitus

TSQM 1.4 Treatment Satisfaction Questionnaire for Medication

GDM Gestational Diabetes Mellitus

GLP-1–receptor agonists Glucagon-like Peptide-1receptor Agonists

DPP-4 Dipeptidyl peptidase 4

GLP-1 glucagon-like polypeptide-1

GIP glucose-dependent insulinotropic polypeptide

IAPP islet amyloid polypeptide

HRQoL Health related quality of life

WHO	World Health Organization
ADDQOL	Audit of Diabetes-Dependent Quality of Life
WHOQOL-BREF	World Health Organization Quality of Life – Brief
EUROQOL	The European Quality of Life
UNRWA	United Nations Relief and Works Agency
NGO	nongovernmental organizations
UUTH	University of Uyo Teaching Hospital
UCTH	University of Calabar Teaching Hospital
HFS-II	Hypoglycemia Fear Survey
MDQoL	modified diabetes quality of life
EFF	Effectiveness
SE	Side Effects
QoL	Quality of life

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