

## Quality of Life of Patients with Type II Diabetes Mellitus in Al- Hilla City-Iraq

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### Abstract

Diabetes mellitus is a global problem nowadays due to increase the disease cases all over the world, in both the developed and developing countries which may affect the quality of life (QOL) of diabetic patients. This study was conducted to assess the quality of life of patients with type 2 diabetes mellitus (DM) and to determine some selected clinical and sociodemographic factors that affect the quality of life of these patients in Al Hilla city-Iraq. This was a cross sectional study in which 100 patients with type 2 diabetes mellitus attending diabetic outpatient clinics of Merjan Teaching Hospital- Al Hilla. To assess the quality of life of those diabetic patients, the World Health Organizations Quality of Life Assessment (WHOQOL) was applied, but in a short version questionnaire and abbreviated form called (WHOQOL-BREF).

Concerning the results of this study, it was found that the patients responded fairly well on the questionnaire used, 39% had good score, 47% had fair score and 14% had poor score. For physical health domain 17% had poor score, for social domain 22% had poor score, for psychological domain 19% and environmental domain 18% had poor score.

It was concluded from the results that although it supports previous reports in which QOL of patients with DM were fairly good but this disease is significantly affects physical health, social relations and environment. Furthermore, there is association with marked impairment in aspects of quality of life relating to mental health and psycho-social functioning and at least some aspects of physical health. Given this, and given its high prevalence, greater attention is needed to watch DM as a public health problem. The fact that DM is "normative" should not be taken to infer that it is benign.

**Keywords:** Diabetes mellitus, Quality of life.

### نمط حياة مرضى السكر النوع الثاني في مدينة الحلة – العراق حيدر فخري التكمجي<sup>1,\*</sup> و ميامين عبد الرضا موسى<sup>\*\*</sup>

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### الخلاصة

من الممكن اعتبار تزايد حالات الاصابه بمرض السكري هذه الايام كمشكله عالميه يعاني منها العالم اجمع ، ويمكن التأثير الأساسي لهذا المرض في التغيرات التي يحدثها مرض السكري في أسلوب وجودة نوعية الحياة في جميع المجالات وخاصة المجال البدني، الاجتماعي والعاطفي.

صممت هذه الدراسة لتقييم نوعية الحياة لمرضى السكري من النمط 2 وتحديد العوامل السريرية والاجتماعية والسكانية التي تؤثر على نوعية الحياة لهؤلاء المرضى. فقد شملت الدراسة 100 مريض من مراجعي العيادة الخارجية للسكري في مستشفى مرجان التعليمي في مدينة الحلة. وقّيمت نوعية الحياة باستخدام استمارة استبيان لمنظمة الصحة العالمية.

خلصت نتائج الدراسة أنه بصورة عامة 39% من المرضى يملكون نوعية حياة جيدة و 47% متوسطة و 14% رديئة. بالنسبة للنشاط البدني كانت رديئة عند 17% من المرضى، وان العلاقات الاجتماعية كانت رديئة عند 22% من المرضى، أما بالنسبة للوضع النفسي فكانت رديئة عند 19% منهم، والبيئي فكانت نوعية الحياة عندهم رديئة بنسبة 18% من المرضى.

من خلال النتائج التي توصلت اليها الدراسة، من الممكن اعتبار بانه بالرغم من ان نوعية الحياة لمرضى السكري في بلدنا تعتبر جيدة. لكن الناحية البدنية والاجتماعية والنفسية و البيئية فقد تأثرت بشكل ملحوظ فضلا عن ذلك ارتباط السكري بالضرر البالغ في أوجه نوعية الحياة المتعلقة بالصحة العقلية والوظائف الاجتماعية والنفسية وبدرجة أقل الأوجه المتعلقة بالصحة البدنية. ونتيجة لذلك ولانتشار مرض السكري الكبير في العالم ، يوجب أن يعطى اهتمام أكبر للسكري باعتباره مشكلة صحة عامة.  
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## Introduction

It is very clear nowadays that Diabetes Mellitus (DM) is one of the chronic non-communicable diseases that can affect all world population whether developed or non-developed countries <sup>(1)</sup>. Many reports from World Health Organization (WHO) stated that the life style and quality of life of diabetic patients can strongly be affected by the disease. Diabetes Mellitus is common both in the developed and the developing world. In Iraq, according to the national chronic non-communicable diseases risk factor survey done in 2006, the prevalence of DM is 10.4%. Women seem to be at a greater risk for type II DM; this may be due to enhanced sensitivity to a Western lifestyle in certain ethnic groups. Traditionally considered a disease of adults, type II DM is increasingly diagnosed in children in parallel with rising obesity rates. Type II DM is now diagnosed as frequently as type I DM in teenagers in the United States <sup>(1-3)</sup>.

In spite of lacking of diabetic patients' assessment incorporating their perception of health status, psycho-social status and other aspects of life are affected by the disease. Quality of Life (QOL) is defined by the WHO as "individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns" <sup>(4-7)</sup>.

The significance of QOL in diabetes can be addressed in the following perspectives. First is to supplement objective clinical or biological measures of disease. The subjective factors are especially important for people with DM because there is a significant difference in how clinicians, diabetes and the general public perceive the effect diabetes has upon QOL <sup>(8)</sup>. Second is to assess the need for health care. The researches have indicated that QOL is a useful surrogate maker for a multitude of factors and can provide useful information of how well a patient is coping with diabetes overall <sup>(9)</sup>. Third is to evaluate the effectiveness of interventions. Because the overall goal for the treatment of all diabetes is to prevent acute and chronic complication, while preserving a good quality of life for the patient the true impact of a successful medical intervention can be understood in the way that the treatment has a positive influence on patients' immediate and/or future well-being <sup>(10)</sup>. Fourth is to predict the health outcome. That is, in individuals with a variety of chronic diseases QOL is known to be diminished and has been shown to predict

long-term outcomes, disease progression, and response to therapy <sup>(11)</sup>.

The diabetes-related changes may cause the disability in physiological, psychological and social function. At first, the mobility impairment and decline of activity of daily life (ADL) related to diabetes complications and common co-morbidities have a significant impact on patients' QOL <sup>(11-13)</sup>. It is already known that people with diabetes are much more likely to have a physical limitation than those without diabetes after controlling possible confounding factors and was one of the strongest direct predictors of recovery of mobility difficulty <sup>(14)</sup>.

It is recommended that use of both general and disease-specific measures of QOL facilitates comparisons of findings across studies and disease treatment as well as providing insight into the mechanisms specific to diabetes self-management <sup>(11)</sup>. Specifically, generic measures are necessary to compare outcomes across different populations and interventions. On the other hand, disease-specific measures are more sensitive for the detection and quantification of small changes that are important to clinicians or patients <sup>(15)</sup>.

## Patients and Method

This study was carried out at Diabetic Outpatient Clinic of Merjan Teaching Hospital . 100 patients enrolled in this cross sectional study which conducted to determine the quality of life of diabetic patients and to find the association between that quality and certain variables including (age, sex, occupation, residence, educational level, marital status, family history of diabetes and duration of diabetes). The study duration continued from June the 1st to September the 1st 2013. All patients visited the diabetic outpatient clinics of Merjan Teaching Hospital during period of data collection .A sample of 100 hundred diabetic patients were collected during that period.

During period of data collection, patients were interviewed by questionnaire from those visited the diabetic outpatient clinics of Merjan Teaching Hospital. In addition to age ,sex ,occupation, residence, educational level ,marital status, family history of diabetes and duration of diabetes , the questionnaire consist of four domains including (physical health, psychological wellbeing , social relationship, environmental status) from them score was obtained to determine the quality of life . for each question there is a score and the median score is calculated in each domain. A score of mean  $\pm$  SD on each domain is considered fair,

a score of  $< \text{mean} - 1 \text{ SD}$  is poor and a score of  $> +1 \text{ SD}$  is good.

The dependent variable for this study was the quality of life of diabetic Patients while The independent variables of this study were including (age, sex, occupation, residence, educational level, marital status, family history of diabetes and duration of diabetes).

Statistical analysis was carried out using SPSS version 18. Categorical variables were presented as frequencies and percentages. Continuous variables were presented as (Means  $\pm$  SD). Pearson's chi square (X<sup>2</sup>) test

**Table (1): Relationship between qualities of life outcomes and sociodemographic variables.**

Variables	Overall quality of life							
	Good	%	Fair	%	Poor	%	Total	%
All patients	39	39%	47	47%	14	14%	100	100%
Sex								
Female	14	26.9	29	55.7	9	17.3	52	52%
Male	25	52	18	37.5	5	10.6	48	48%
Marital Status								
Single	1	33.3	1	33.3	1	33.3	3	3%
Married	32	45	32	45	7	0.098	71	71%
Widowed	4	18.1	12	54.5	6	27.2	22	22%
Divorced	2	50	2	50	0	0	4	4%

The QOL score is high in all the domains except in environmental domain at which the majority of patients had fair to poor score and only (13) patients had good score, in the four domains the QOL score is higher in males than

was used to find the association between the categorical variables.

Analysis of variance (ANOVA) was used to compare means between two groups. A p-value of  $\leq 0.05$  was considered as significant.

## Results

Hundred consecutive attendees of the diabetes clinic met the inclusion criteria during the course of the study; 52 were females and 48 were males. For overall QOL, 39 (39%) had good score, 47 (47%) had a fair score and 14 (14%) had poor score, Table (1).

in females, for example, in physical health domain more than half (27) patients from (42) patients who had good score were males and the remaining were females, Table (2).

**Table (2): Relationship between quality of life outcomes and sociodemographic variables according to domains.**

Variables	Domain 1 Physical health			Domain 2 Psychological well being			Domain 3 Social relationship			Domain 4 Environmental		
	good	fair	poor	good	fair	poor	good	fair	poor	good	fair	poor
Sex	42	28	30	43	34	23	53	33	14	13	63	24
Female	15	15	22	16	19	17	24	19	9	2	40	10
Male	27	13	8	27	15	6	29	14	5	11	23	14
Marital status	42	28	30	43	34	23	53	33	14	13	63	24
Single	1	1	1	1	1	1	0	2	1	2	0	1
Married	36	19	16	34	26	11	43	20	8	9	49	13
Widowed	3	7	12	5	6	11	10	8	4	1	13	8
Divorced	2	1	1	3	1	0	0	3	1	1	1	2

## Discussion

The present study found that the overall perception of (HRQOL) of patients with DM type 2 was affected by the disease. The result of this study showed that (43%) patients with DM experienced a fair QOL. However this study has been agreed with the study that has been done in Mosul<sup>(16)</sup>.

This study it was seen that there is an increase in HRQOL with increasing mean age of the patients; this is different to the results of Mosul study<sup>(16)</sup> as well as another study in Saudi Arabia. This study showed that there is no effect of gender on QOL, however this result was in agreement with other studies which

showed that female highly associated with poor QOL due to high prevalence of obesity in female patients<sup>(17-19)</sup>.

Duration of DM in this study has significant association with QOL, good QOL is related to duration of DM of less than 6 years due to short time for complication of DM to appear. However this finding was in agreement with Mosul study but disagreement with a study in Saudi Arabia showed that the duration of illness had no significant effect on QOL<sup>(17)</sup>. Findings from another study from Sweden showed that there is a strong relationship between the QOL and the duration of disease in which patients suffering from the disease for more than 5 years had better QOL<sup>(20)</sup>. Although, those findings are related to good life style and the good treatment with best control. Issa *et al*, showed in his study in 2006 that environmental domain is the only one that affected by the duration of the illness<sup>(18)</sup>.

In the current study, it has been shown that means of physical health, social relation and environmental domains have been strongly differ by QOL items; meanwhile there was no significant mean different of psychological wellbeing domain by QOL items. The social domain which assesses personal relationships showed a high mean score in (HRQOL) of our patients; this probably is due to a very large extent to high degree of satisfaction to the items of this domain. This finding however was consistent with Mosul study as well as other study by Awadalla *et al* who reported that there is no difference in the score of patients with diabetes in relation to general population on the social relationships domain<sup>(19)</sup>. It is worthy of note that patients with a good level of social support and had strong family care giver support system. It was found from previous studies and researches about the relation between QOL and DM, that good psychological adjustment of the patients is depending on the family members supports<sup>(19)</sup>. Our study showed that environment domain has been demonstrated that the majority of patients got fair score.

However, this was in agreement with previous study, meanwhile differs from the finding of other studies<sup>(21,22)</sup>, which revealed that: the score of the environment domain was much lower than the other three domains and this could be due to bad environmental condition in these localities.

Finally, this was a cross-sectional study. Conceivably, poor quality of life could be conducive to DM. Although the direction of the observed associations cannot be determined on the basis of the present study, it may be noted that findings from prospective

epidemiological studies strongly support the role of (WHOQOLBREEF) in IRAQ, for predicting adverse health outcomes in diabetic patients. Notable strengths of the current study were the recruitment of a large, general population sample of diabetic patient, widely-used measures of quality of life and the assessment of DM symptoms.

## Conclusion

The study is in agreement with other studies and reports that found in spite of affected physical health of diabetic patients, but still those diabetic patients are with fairly good QOL.

For further supporting results concerning the effect of DM type 2 on QOL, it is highly recommended to do future studies on high number of Iraqi diabetic patients.

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