# The Quality of Life of Type 2 Diabetic Women at Al-Diwanyiah City, Iraq

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**Abstract**
Background: Diabetes mellitus is a common chronic condition that has a well-known influence on one's quality of life (QOL). The quality of life of diabetic women has never been studied before. Previous international research, on the other hand, have found that QOL is linked to socioeconomic position as well as other characteristics. The goal of this study was to determine the quality of life of women with type 2 diabetes. Material/Methods: A sample of 100 type 2 diabetic women who treated in the Diabetes Specialist Center at AL- Diwaniyah Teaching Hospital. The study was began from November, 2nd , 2018 to April, 1st, 2019. Participants were given the World Health Organization quality of life questionnaire-short version (WHOQOL-BREF). were acquired to assess QoL domains that included physical and psychological health, social relationships, and environmental domains. Means, standard deviations, and statistical tests for differences were performed to compare between QoL and socio-demographic Results: The study showed that the highest percentage of diabetes women in the elderly was (33%) at the age of (51-60) and the majority of them were married ( 63%) and they have a moderate economic status (57%) and (43%)of them were illiterate education level, while the results had indicated that physical and psychological health domains was rated at low level, while social and environment health domains were rated at moderate level of QoL. Conclusions: Based on the findings of the current study, it can be concluded that, type 2 diabetes mellitus among women associated with a lower quality of life especially physical and psychological health domains and a moderate level of social and environment domains with a high significant relationship between the quality-of-life level and all the demographic characteristic at p. value 0.05. Recommendations: Implementation of a health education program about lifestyle modification and glycemic control for these women, and measures to improve quality of life of type 2 diabetic patients are highly needed.
Keywords: Quality of life, Type 2 diabetes mellitus, Women

## 1. Introduction

Diabetes is a rapidly growing public health concern and the world's fourth major cause of disability. Diabetes affects an estimated 425 million persons worldwide, with 203.9 million of them being women1(Moeineslam et al.,2019). Diabetes, a significant long-term illness, is regarded as one of the world's most pressing public health issues in the twenty-first century. Diabetes affected an estimated 463 million people in 2019, with that number anticipated to rise to 578 million by 2030 and 700 million by 2045 2(Ramasamy etal.,2021). The prevalence of diabetes mellitus is increasing at an alarming rate all across the world. Globally, 415 million individuals, or 8.8% of adults aged 20 to 79, had diabetes, 192.8 million of whom were undiagnosed, and 75% of whom resided in low- and middle-income countries; by 2040, this number will have risen to 642 million people. Diabetes claimed the lives of six people every six seconds. As a result, the expected impact of the condition in these countries is larger and more severe than in more prosperous parts of the world3(International Diabetes Federation) (IDF, 2015). Despite advances in research, the prevalence of type 2 diabetes continues to rise, particularly in developing countries, and this disease is a major public health issue worldwide, both in terms of the number of people affected and the socio-economic implications of managing and treating the disease and its complications4(Mshunqane et al., 2012; and 5Mustapha et al., 2014).

Patients' quality of life must be examined on a regular basis because diabetes is a chronic illness. Diabetes complications damage the organ system and are responsible for the majority of the disease's morbidity and mortality6(Power, 2008). The World Health Organization (WHO) has established two main goals for diabetic patients' care: first, maintaining the health and quality of life of diabetic patients through effective patient care and education; and second, treating and preventing disease complications, which should reduce morbidity and mortality as well as treatment loss7(Chaveepojnkamjorn et al., 2008).

## 2. Material and Methods

The present study was conducted in the Diabetes Specialist Center at AL- Diwaniyah Teaching

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Hospital. 100 type 2 diabetic women were included who agreed to participate in this study and were selected using probability systematic sampling technique. Data was collected through the use of two tools: Tool 1: A structured- interview questionnaire was developed by the researcher and included Socio-demographic data: It was constructed by the researcher and included sociodemographic characteristics of the study group such as age, social status, educational level, and economic status. Tool 2: World Health Organization Quality of Life Questionnaire abbreviated version (WHO QoL-Bref): This questionnaire consisted of 26 items: two individual items that evaluate overall quality of life and satisfaction with health, and 24 items clustered into four domains (physical health, psychological health, social relationships, and environment which was adopted from 8(Abdel Hai et al., 2004).

A total score was determined by summing scores across all items. Thus, scores on the WHO QOL-BREF could range from 26 to 130. The following values of scores were extracted from the reviewed studies and were applied in the current study: score ≤ 45, low QOL; score 46–65, moderate QOL; and score > 65, relatively high QOL 9(Bani-Issa, 2011).

Data entry and analysis were done using the Statistical Package for Social Sciences version22. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables and means and standard deviations for quantitative variables as well as inferential statistics. Values were considered as statistically significant at $P < 0.05$.

## 3. Results

Table 1: distribution of the participants by demographic characteristic.

| Variables of Sample | Groups | Frequency | Percent | P-value |
|---|---|---|---|---|
| Age Groups Yrs. | 10----20 yrs. | 10 | 10% | t = 4.58 P=0.007 S |
| | 21----30 yrs. | 10 | 10% | |
| | 31----40 yrs. | 12 | 12% | |
| | 41----50 yrs. | 25 | 25% | |
| | 51----60 yrs. | 33 | 33% | |
| | 61 ≥ yrs. | 10 | 10% | |
| | | 100 | 100% | |
| Social Status | Married | 63 | 63% | $\chi^2$= 20 P=0.00 S |
| | Divorced | 9 | 9% | |
| | widowed | 14 | 14% | |
| | Single | 14 | 14% | |
| Economic status | Low | 34 | 34% | $\chi^2$= 18 P=0.00 S |
| | Moderate | 57 | 57% | |
| | High | 9 | 9% | |
| Level of education | Illiterate | 43 | 43% | $\chi^2$= 15 P=0.01 S |
| | Elementary | 36 | 36% | |
| | Intermediate | 12 | 12% | |
| | Institute &University degree | 9 | 9% | |

(Table 1) The results had indicated, most of the study sample (33%) were at age (51----60 yrs), which have reported significance differences between age groups and most of the sample were married (63%) and have significance differences between them, most of study sample have moderate economic status (57%) and at illiterate education level of education (43%) with a significance difference in regard these variables.

Table 2: Distribution of the study group according to quality-of-life domains (n = 100).

| Quality of life | Low Quality | | Moderate | | high | |
|---|---|---|---|---|---|---|
| | NO. | % | NO. | % | NO. | % |
| Physical health domain | 65 | 65% | 20 | 20% | 15 | 15% |
| Psychological health domain | 56 | 56% | 24 | 24% | 20 | 20% |
| Social health domain | 30 | 30% | 45 | 45% | 25 | 25% |
| Environment health domain | 26 | 26% | 53 | 53% | 21 | 21% |

(Table 2) the results had indicated that physical health domain more than half (65%) and psychological health domain with (56 %) of the study group was rated at low level, while social and environment health domains (45%) (53%) of them were rated at moderate level

Table (3): The relationship between quality-of-life level for diabetic patients and their demographic characteristics.

| quality of life level | | | | | | |
|---|---|---|---|---|---|---|
| levels | Poor | | Moderate | | Good | |
| Demographic characteristic | r | Sig | r | sig | r | Sig |
| Age | -.501 | .034 | -.842 | .000 | -.618 | .006 |
| Social Status | -.197 | .434 | -.778 | .000 | -.297 | .232 |
| Economic status | -.442 | .066 | -.571 | .013 | -.667 | .002 |
| Level of education | -.381 | .119 | -.902 | .000 | -.574 | .013 |

Table (3) reveals that the high significant relationship between the quality of life level and all the demographic characteristic of the patients at p. value 0.05.

## 4. Discussion

Diabetes is becoming more common throughout the world as a result of population growth, aging, urbanization, and rising rates of physical inactivity and obesity. According to the International Diabetes Federation 3(IDF, 2015), the Middle East and North Africa (MENA) area has the highest diabetes prevalence rate in the world. The distribution of socio-demographic variables revealed that the majority of the study sample (33%) was between the ages of 51 and 60. (Table 1). This reflects the reality that type 2 diabetes frequently strikes people when they turn 40. The preponderance of these age groups corresponds to findings from 2003 South African demographic and health surveys, which revealed that the majority of South Africans who attended public health facilities in the previous 30-day period were over 45 years old 10(Department of Health, Republic of South Africa, 2014).

A study of global diabetes prevalence by 11Wild et al. (2004) found that the majority of patients with diabetes in developing nations are between the ages of 45 and 65 years. In terms of marital status, more than half of the participants were married, less than half were illiterate, and more than half had just enough money (Table 1). These findings were in line with those of 12ElSaid (2014), who discovered that the majority of their study group were married, that three-quarters were illiterate, and that more than half had only an adequate income. Also, these findings were coincided with 9Bani-Issa (2011) study in the United Arab Emirates, which indicated that less than three-quarters of the participants were married, more than half had an average salary, and less than one-third were illiterate.

These findings matched those of a previous study conducted in Oman by 13Al-Maskari et al. (2011), which indicated that less than three-quarters of the study group were married, but more than a third were illiterate. According to the current study, more than three-quarters of the participants had poor socioeconomic positions (Table 1). This is supported by 14Hwang and Shon (2014), who found that poor educational attainment may limit access to information and resources related to healthy behaviors and environmental exposures.

According to the findings (Table 2), in terms of quality-of-life domains, the study group had low QoL in the physical and psychological health domains and moderate QoL in the social health and environmental domains. This could be explained by the fact that type 2 diabetics have a higher rate of problems that impair physical function. Physical function limitations, particularly due to vision problems, peripheral neuropathy, and/or heart disease, can have a negative impact on quality of life, whereas the moderate impact of diabetes on social relationships can be attributed to our society's high priority of intimate family relationships.

These findings contradict those of 15Gholami et al. (2013), who said that the psychosocial domain had the lowest quality of life scores for the study group. Furthermore, these findings reverse 16Bakry (2006), who claimed that the social interactions category had the lowest scores among type 2 diabetic patients. These findings were partially in line with those of 17BosiZivanovi et al. (2012), who discovered that diabetic patients had low scores in all four dimensions of quality of life, with physical health being the most affected. These findings contradict those of 15Gholami et al. (2013), who found that the psychosocial domain had the lowest quality of life scores for the study group. Also, corroborated by studies conducted by 18Gautam et al. (2009) and 19Anumol et al. (2014), both of which found that diabetes had a negative impact on the patient's QOL.

The current study demonstrates a highly significant relationship between women quality of life and all demographic characteristics, as given in the table (3), at p. value 0.05. In Saudi Arabia, 20Al Hayek et al. (2014) implemented a study with a sample of 283 patients with DM2 in Riyadh and found that greater DM complications, gender, and economic situation all correlate to decreased HRQoL. While a study conducted by 21Pichon et al. (2015) in Argentina, in a sample of 183 individuals with DM2 found that the usage of insulin may affect the QoL of patients with DM2 regardless of sociodemographic and clinical characteristics.

## 5. Conclusions

Based on the findings of the current study, concluded that, type 2 diabetes mellitus among women associated with a lower quality of life especially physical and psychological health domains and a moderate level of social and environment domains with a high significant relationship between the quality-of-life level and all the demographic characteristic at p. value 0.05.

## 6. Recommendations

Implementation of a health education program about life style modification and glycemic control for these women, and measures to improve quality of life of type 2 diabetic patients are highly needed.

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