ISSN: 2708-4841(Print), 2708-7042 (Online)

Volume: 2, Issue: 5
Page: 37-50
YEAR: 2021

Commonwealth Journal of Academic Research (CJAR.EU)

Clinical Predictors of Health-Related Quality of Life Among Patients with Type-2 Diabetes Mellitus at Federal Medical Centre Abeokuta

AUTHOR(S): MALOMO, Olufunke Olawumi (RN, RM, RNA, BNSc.)
AND
Dr. NWOZICHI, Chinomso (RN, RM, RPHN, PhD)

Abstract

The rising incidence of diabetes mellitus worldwide and its possible impact on the health-related quality of life of the individuals affected constitute a serious cause for concern. Type-2 Diabetes Mellitus (T2DM) has been described as a chronic metabolic disease with an increasing prevalence worldwide, which is contributing to increasing cases of morbidity, mortality and negatively impacts on the health-related quality of life of the sufferers. The clinical predictors include the presence of co-morbidities, duration of illness, Body Mass Index (BMI) and glycosylated haemoglobin (HBA1c). The study utilized the descriptive survey design. Total enumeration was used to recruit 200 patients with T2DM. Research instrument consist of a self-developed questionnaire incorporating the WHOQOL-BREF. Descriptive and inferential statistics were used to analyze the collected data. Findings revealed that 108 (54%) of the participants were males while 92 (46%) were females. The health-related quality of life of the participants revealed 22% relatively high, 64.5% moderate, and 13.5% low. Comorbidity (ß=0.144, t=2.046, p<0.005), Presence of foot ulcer (ß=0.155, t=2.419, p<0.005) and hemoglobin A 1c (HbA1c) (ß=0.178, t=2.563, p<0.005) significantly predicted the health-related quality of life among patients with T2DM, while BMI (ß=0.023, t=0.323, p>0.005) did not show any significant prediction. In conclusion the study revealed the health-related quality of life of the majority of the patients with T2DM as moderate, although most of the participants rated their quality of life as good many were not satisfied with their health. It is therefore recommended that there is

CJAR
Accepted 18 May 2021
Published 20 May 2021
DOI: 10.5281/zenodo.4777166

a need for patients with type-2 diabetes mellitus, nurses, and health-care providers to intensify efforts in the education, care management and prevention of complications in other to sustain and improve the health-related quality of life of patients.

Keywords: Diabetes Mellitus, Health-related Quality of Life, Clinical Predictors,

About Author

Author(s):
MALOMO, Olufunke Olawumi (RN, RM, RNA, BNSc.)
Department of Adult Health Nursing,
School of Nursing Science,
Babcock University, Ilishan-Remo, Ogun State, Nigeria.

And

Dr. NWOZICHI, Chinomso (RN, RM, RPHN, PhD*)*
Department of Adult Health Nursing,
School of Nursing Science,
Babcock University, Ilishan-Remo, Ogun State, Nigeria.

Introduction

Quality of life is an individual's cognition of their position in life alongside the culture and values system of their immediate environment concerning their goals, expectations, standards, and concerns. The prevalent increase in the occurrence of some diseases in both developed and developing countries in recent times has stressed the need for individuals to be dynamic, proactive, and aware of at-risk health behaviors that can deprive such individuals of having a worthwhile quality of life (QoL). This is needed to survive the challenges that are related to contemporary health issues of the 21st century; especially among patients with chronic diseases.

Diabetes mellitus has been described as a chronic disease with a skyrocketing prevalence worldwide, which is contributing to increasing cases of morbidity and mortality. The International Diabetes Federation (2020) stipulated that 1 in 11 adults aged 20–79 years (425 million adults; 451 million if the age is expanded to 18–99 years) had DM globally in 2017 and 90% of them were with type 2 diabetes mellitus. In 2016, an estimated figure of 1.6 million deaths was directly caused by diabetes. Another 2.2 million deaths were earlier attributed to high blood glucose in 2012. In Nigeria, the prevalence of DM is 3.1%; whereas, the ratio of doctor-patient is low with about 18.5 per 100,000 patients.

Health-related quality of life (HRQoL), which refers to the sociocultural and time-specific sense of well-being, is assessed in different areas of life mainly comprising; physical, psychological, social, and environmental domains that are related to health. The onset, progression, and prognosis of most chronic diseases are key determinants of HRQoL. Diabetes mellitus is one of such NCDs, which has continued to make a significant contribution to the high burden of disease and adverse impact on HRQoL in both developed and developing countries (Enang, et al., 2021)

Diabetes mellitus not only reduces the quality of life and life expectancy but is also a major cause of several microvascular and macrovascular complications that leads to; blindness, renal failure, myocardial infarction, stroke, which could lead to the need to amputate limbs (Kanter & Bornfeldt, 2016). Trikkalinou, Papazafiropoulou, and Melidonis. (2016) opined that the progression of diabetes and especially poor glycemic control leads to numerous potentially life-threatening complications. Almost half of the number of adults with chronic kidney disease is gotten from the diabetic population. Likewise, 9.8% of people suffering from diabetes have experienced a heart attack, 9.1% suffer from coronary artery disease (CAD), 7.9% have congestive heart failure, 6.6% have a stroke while more than a quarter of the 27.8% suffer from chronic kidney disease, almost a quarter 22.9% have foot problems while the remaining 18.9% have eye damage.

However, Type 2 diabetes mellitus patients deserve a good quality of life despite the chronicity of the disease condition. In contrast to this, several studies reviewed the poor quality of life, patients with chronic diseases such as Type 2 diabetes mellitus usually have a relatively poor quality of life, because the cost of care (living expenses and health) or diet restrictions are heavily felt by these patients; in which patient factors (employment status, empowerment score, BMI, DM knowledge score, and medication adherence score), disease factors (glycemic control, presence of co-morbidities and duration of disease) were examined (Ababio, et al, 2017)

It is evident that in both developed and developing countries there is an increasing prevalence of diabetes. In Nigeria, the number of people with diabetes is rapidly increasing due to changing lifestyles as a result of food intake, level of health awareness, economy among others. Living with diabetes has a significant impact on the Health-Related Quality of Life (HRQOL) of those affected (Siersma, et al., 2014). The evidence shows that people with

diabetes have a poor quality of life particularly in physical and psychological functions (Sanjari, et al 2011) compared to those with no chronic illness (Holland, 2012; Hosseini, et al, 2013).

While there is a plethora of research on the HRQOL among people with diabetes living in developed countries there is limited published literature in developing countries such as Nigeria, despite the rapidly increasing prevalence of T2DM in the country. Specifically, research on the role of clinical factors on health-related quality of life is scanty and none has been conducted in the study area. This a gap identified in the literature. Therefore, this study aims to determine clinical predictors of HRQOL in patients with T2DM who are attending the clinic at Federal Medical Centre Abeokuta. This may help to inform strategies to improve HRQOL among people with T2DM and reduce the incidence of diabetes complications. This study specifically:

1. assessed the clinical profiles of patients with type-2 diabetes mellitus at FMC, Abeokuta;
2. determined the level of health-related quality of life among patients with type 2 diabetes mellitus;
3. examined if clinical predictors predict health-related quality of life among patients with type 2 diabetes mellitus in FMC Abeokuta; and
4. determined the relationship between the clinical predictors and health-related quality of life among patients with type 2 diabetes mellitus.

Research Questions

The following research questions were raised for this study:

1. What are the clinical profiles of patients with type-2 diabetes mellitus at FMC, Abeokuta?
2. What is the level of health-related quality of life among patients with type 2 diabetes mellitus?

Research Hypotheses

The following hypotheses were postulated for this study:

1. Clinical predictors do not significantly predict health-related quality of life among patients with type 2 diabetes mellitus in FMC Abeokuta
2. There is no significant relationship between the clinical predictors and health-related quality of life among patients with type 2 diabetes mellitus at FMC Abeokuta.

Methodology

A quantitative descriptive research design was used for the study. This design was well-thought-out and selected for the study due to its merit to describe, examine, analyze and interpret the studied variables. The study was conducted at the Federal Medical Centre, Abeokuta, Ogun State, Nigeria. The target population for this study comprised patients with type 2 diabetes mellitus attending the Endocrinology clinic at Federal Medical Centre Abeokuta. The Endocrinology clinic is run on Mondays with an average of about 50 patients with T2DM in attendance amongst other patients. Clinic appointments are usually given on an average of 4 weeks interval. The total clinic attendance in a month equals 50 x 4 = 200 patients. The total enumeration of patients of the clinic attendance for a period of one month will be used for the study since clinic appointments are mostly given on a 4 weeks interval basis with an average of 50 patients per clinic day, and clinic days on an average of 4 times per month. The total participants for the study are 200 participants.

A self-developed questionnaire incorporating the WHOQOL-BREF Quality of Life Scale will be used as instrument for data collection in this study. The questionnaire was presented

to experts in Nursing Science Department for objective criticisms, correction, and opinion. The essential corrections were effected to ensure clarity of all items before the administration of the instruments to ascertain the face and content validity in relation to the specific objectives, research questions and hypotheses. In order to determine the reliability of the instrument, the validated version of the questionnaires were administered on twenty (20) patients with type 2 diabetes mellitus not within the coverage of the study, but share the same characteristics with the population for the study. The data collected were thereafter subjected to Cronbach alpha to determine the reliability coefficient. Section B yielded a value of 0.71, and section C yielded a value of 0.72 which was accepted for the study. After the collection of data from the field, it was properly compiled, coded and processed using Statistical Package for the Social Sciences (SSPS) version 22. The data were analysed using descriptive and inferential statistics.

Results

Research Question 1: What are the clinical profiles of patients with type-2 diabetes mellitus at FMC, Abeokuta?

Table 1: Participants clinical characteristics on co-morbidity

		Yes		No	
S/n	**Question Items**	**Freq.**	**%**	**Freq.**	**%**
1.	Visual impairment	81	40.5	119	59.5
2.	Hypertension	109	54.5	91	45.5
3.	Heart disease	12	6.0	188	94.0
4.	Arthritis	50	25.0	150	75.0
5.	Chronic back ache	38	19.0	162	81.0
6.	Depression	6	3.0	194	97.0
7.	Stroke	5	2.5	195	97.5
8.	Kidney disease	32	16.0	168	84.0
9.	Acid peptic disease	21	10.5	179	89.5
10.	Obesity	25	12.5	175	87.5

Table 1 revealed that 81(40.5%) of the respondents had visual impairment, 109(54.5%) had hypertension, 12(6.0%) had heart disease, 50(25.0%) had arthritis, 38(19.0%) had chronic back ache, 6(3.0%) had depression, 5(2.5) of the respondents had stroke, 32(16.0%) had kidney disease, 21(10.5%) had Acid peptic disease and 25(12.5%) had obesity.

Table 2: Summary of results on clinical profile of patients with T2DM at FMC Abeokuta

S/N	Variables	Categories	Interpretation	Frequency	Percentages {%)
1	BMI	<18.5	Underweight	11	5.5
		18.5-<25	Normal	123	61.5
		25.0-<30	Overweight	41	20.5
		30.0 or higher	Obese	25	12.5
2	HBA1C	<7.0%	Good glycaemic control	114	57.0
		>7.0%	Poor glycaemic control	86	43.0
3	Duration of illness	<5 years	-	61	30.5
		5-10 years	-	88	44.0
		11-20 years	-	41	20.5
		>20 years	-	10	5.0
4	Presence of diabetic foot	Yes	-	18	9.0
		No	-	182	91.0

Table 2 revealed that, 11 (5.5%) respondents were underweight, 123 (61.5%) had normal weight, 41 (20.5%) were overweight, while 25 (12.5%) were obese. This means that most of the respondents had normal BMI. Table 4.2a further revealed that 114(57.0%) of the respondents had HbA1C level <7.0%, while 86(43%) HbA1C above >7.0%. This implied that, most of the respondents had good glycaemic control, 61(30.5%) respondents duration of illness was less than 5 years, 88(44%) had illness duration within the periods of 5-10years, 41(20.5%) had been within 11-20years, while 10(5.0) had been more than 20years. This implies that majority of the respondents duration of illness had been a period within 5 to 10 years. Table 4.2a revealed that 18(9%) of the respondents had diabetic foot ulcer, while 182(91%) did not have. Hence, most of the respondents do not have diabetic foot ulcer.

Research Question 2: What is the level of health-related quality of life among patients with type 2 diabetes mellitus?

Table 3: Summary of result on Health-Related Quality of life

Overall Quality of life	Very poor/ very dissatisfied 1	Poor/ dissatisfied 2	Neither poor nor good 3	Good/ satisfied 4	Very good/ very satisfied 5	Mean	S.D
Perception of quality of life.	4 (2%)	17 (8.5%)	60 (30.0%)	94 (47%)	25 (12.5%)	3.41	1.12
Satisfaction with general health.	5 (2.5%)	48 (24.0%)	70 (35%)	59 (29.5)	18 (9.0%)	2.94	1.09
Limitations due to pain.	0 (0%)	103 (51.5%)	66 (33.0%)	20 (10.0	11 (5.5%)	2.94	1.04

				%)			
Need for medical treatment to function.	15 (7.5%)	60 (30.0 %)	70 (35.0%)	43 (21.5%)	12 (6.0%)	2.73	1.21
Level of enjoyment of life.	6 (3.0%)	82 (41.0%)	63 (31.5%)	41 (20.5%)	8 (4.0%)	2.68	1.14
Meaningfulness of life.	0 (0%)	45 (22.5%)	78 (39.0%)	55 (27.5) %	22 (11.0 %)	3.05	0.95
Ability to concentrate.	0 (0.0%)	40 (20.0%)	36 (18.0%)	50 (25.0%)	74 (37%)	2.54	1.19
Safety in daily life.	0 (0%)	7 (3.5)	83 (41.5%)	97 (48.5%)	13 (6.5%)		
Physical environment.	0 (0%)	0 (0%)	80(40.0%)	98(49) %	22(11.0 %)	3.5500	0.50
Energy level.	0(0%)	21(10.5%)	79(39.5%)	93 (46.5%)	7 (3.5%)	3.8000	.51
Acceptance of body appearance.	0(0%)	32(16%)	98 (49%)	57 (28.5%)	13 (6.5%)	3.4500	.74
Financial resources	12(6)	59 (29.5%)	108 (54%)	11(5.5%)	10(5%)	2.3500	.79
Availability of information needed for day-to-day life.	2(1)	18(9%)	71(35.5)	109 (54.5)	0(0%)	3.9500	.74
Opportunity for leisure activities.	11(5.5%)	49(24.5%)	88(44%)	39(19.5 %)	13(6.5)	2.3000	.64

Table 3 revealed that majority of the participants (47.0%) rated their QoL good, 4 respondents (2%) rated their QoL very poor, 17 (8.5%) respondents rated their quality of life as poor, 60 (30.0%) indicated Neither poor nor good, 94 (47.0%) stated good, while 25 (12.5%) respondents expressed that their quality of life was Very good with a mean of 3.41 (S.D 1.12). In addition, 5 (2.5%) of the respondents were very dissatisfied with their health, 48 (24%) indicated that they were dissatisfied, 70 (35%) were neither satisfied nor dissatisfied, 59 (29.5%) were satisfied while 18 (9.0%) expressed that they were very satisfied with their health with a mean score of 2.94 (S.D = 1.09). With regards to how much the participants feel that physical pain prevents them from doing what they need to do, findings revealed that, 20 (10.0%) indicated very much, 103 (51.5%) stated a little, 66 (33.0%) indicated moderate, while 11 (5.5%) stated an extreme amount with a mean score of 2.94 ± 1.04.

Table 3 further revealed that 15 (7.5%) of the respondents indicated that, they do not at all need any medical treatment to function in their daily life, 60 (30%) indicated a little, 70 (35.0%) expressed a moderate amount, 43(21.5%) affirmed very much, while 12 (6.0%) expressed that they need an extreme amount of medical treatment to function in their daily life. Moreover, it was revealed that 6 (3.0%) respondents indicated that, they do not enjoy life at all, 41 (20.5%) enjoyed life very much, 63 (31.5%) indicated a moderate amount, 82 (41.0%) expressed a little, while 8 (4.0%) enjoyed life in an extreme amount with a mean score of 2.68± 1.14.

In the same vein, it was revealed that none of the respondents indicated that they do not at all feel their life to be meaningful, 55 (27.5%) indicated very much, 78 (39.0%) expressed a moderate amount, 45 (22.5%) indicated a little, while 22 (11.0%) expressed that their life was extremely meaningful. More so, none 0 (0.0%) of the respondents indicated that they are not able to concentrate at all, 40 (20.0%) indicated a little, 36 (18.0%) expressed a

moderate amount, 50 (25.0%) stated very much, while 74 (37.0%) were able to concentrate at an extreme amount with mean 2.54 ± 1.19. Furthermore, none of the respondents indicated that they do not at all feel safe in their daily life, 7 (3.5.0%) indicated a little, 83 (41.5%) expressed a moderate amount, 97 (48.5%) very much, while 13 (6.5%) stated that they feel safe in their daily life at an extreme amount.

Table 4: Levels of health-related quality of life N=200

Category	Levels	Frequency	Percentage
>65	Relatively high	44	22
45-65	Moderate	129	64.5
<45	Low	27	13.5

Mean =79.6., Std. dev. = 7.73

With regards to the overall categories of participants' health-related quality of life, table 4 shows the various distribution of HRQoL among respondents. It can be seen that majority 129 (64.5%) had moderate QoL, 44 respondents (22%) had relatively high HRQoL while 27 (13.5%) had low HRQoL.

Test of Hypotheses

Hypothesis 1: Clinical predictors do not significantly predict health-related quality of life among patients with type 2 diabetes mellitus in FMC Abeokuta

Table 5: Summary of result on clinical predictors of HRQOL

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Remark
		B	Std. Error	Beta			
	(Constant)	97.959	4.448		22.024	.000	
	Comorbidity	-.439	.215	-.144	-2.046	.042	Sig.
	Presence of foot ulcer	-.399	1.215	-.155	-2.419	.037	Sig
	BMI	.351	1.084	.023	.323	.747	Not Sig.
	Hemoglobin A1c (HbA1c)	-3.030	1.182	-.178	-2.563	.011	Sig.
Dependent Variable: quality of life							

Table 5 showed the clinical variables, the unstandardised regression weight (ß), the standardized error of estimate (SEß), the standardized coefficient, the t-ratio and the level at which the t-ratio are significant. As indicated in the table, comorbidity (ß=0.144, t=2.046, $p<0.05$), Presence of foot ulcer (ß=0.155, t=2.419, $p<0.05$) and hemoglobin A 1c (HbA1c) (ß=0.178, t=2.563, $p<0.05$) were tested significant on quality of life, while BMI (ß=0.023, t=0.323, $p>0.05$) did not show any significant prediction. This means that comorbidity, presence of foot ulcer and hemoglobin A1C (HbA1c) were clinical variables that predicted of quality of life among persons with type 2 diabetes mellitus in FMC, Abeokuta.

Hypothesis 2: There is no significant relationship between the clinical predictors and health-related quality of life among patients with type 2 diabetes mellitus at FMC Abeokuta.

Table 6: Summary of result on relationship between presence of co-morbidity and HRQOL

	Quality of life	Co-morbidity	Sig. (*p* value)	N	Remark
Quality of life	1	.166**	.042	200	Sig.
Co-morbidity	.166**	1			
Mean	87.57	7.92			
S.D	11.10	3.94			

Table 6 showed the correlational matrix of the relationship between quality of life and Co-morbidity. The finding revealed that, Co-morbidity had significant and negative relationship with quality of life among patients with type-2 diabetes mellitus in FMC, Abeokuta (r=0.166, p<0.05). Hence, the null hypothesis was rejected. This implied that Co-morbidity of various respondents in the study was associated with their quality of life.

Table 7: Summary of result on association between HbA1c and quality of life

	Quality of life	HbA1c	Sig. (*p* value)	N	Remark
Quality of life	1	.193**	.006	200	Sig.
HbA1c	.193**	1			
Mean	87.57	2.56			
S.D	11.10	0.71			

Table 7 showed the correlational matrix of the relationship between quality of life and HbA1c. The finding revealed that, HbA1c had significant and positive relationship with quality of life among people with type 2 diabetes mellitus in FMC, Abeokuta (r=0.193, p<0.05). Hence, the null hypothesis was rejected. This implied that the HbA1c of various respondents in the study was associated with the quality of life of the respondents.

Table 8: Summary of result on association between levels of BMI and HRQOL

	Quality of life	BMI	Sig. (*p-value*)	N	Remark
Quality of life	1	.047	.505	200	Not Sig.
BMI	.047	1			
Mean	87.57	2.40			
S.D	11.10	0.78			

Table 8 showed the correlational matrix of the relationship between quality of life and BMI. The finding revealed that, BMI had no significant relationship with quality of life among people with type 2 diabetes mellitus in FMC, Abeokuta (r=0.047, p<0.05). Hence, the null hypothesis was accepted. This implied that the BMI of various respondents in the study was not associated with the quality of life of the respondents.

Discussion

The finding of the study revealed that, most of the respondents in FMC, Abeokuta had co-morbidities with visual impairment and hypertension been the most commonly occurring as revealed through the responses of most of the respondents. In addition, it was revealed that, most of the respondents had normal Body Mass Index. Also, the result on hemoglobin A1C (HBA1c) revealed that, most of the respondents had good glycaemic control. The finding of the study revealed that, the quality of life levels among people with type 2 diabetes mellitus

was moderate. The result from the study agreed with the finding of Jelinek, et al (2017) which discovered that 83.40% of their studied population had hypertension. The outcome of this study was similar to the finding of Pati, et al (2020) which revealed that the quality of life among diabetic patients with comorbid conditions is lower than individuals with only diabetes.

According to the outcome of this study, majority 129(64.5%) had moderate HRQoL, 44 respondents (22%) had relatively high HRQoL while 27(13.5%) had low HRQoL. The impaired HRQoL is mainly in terms of pain/discomfort and impaired mobility as a result of visual impairment and stroke. This is consistent with the findings of Alshayban and Joseph (2020) who reported that majority of the participants demonstrated moderate quality of life with more than a quarter of patients with severe-extreme health state in some or all domains. It also agrees with Dhyfer and Royes (2020) who documented that the HRQoL among patients with T2DM was moderate. The result is in contrast to Khunkaew, Fernandez and Sim (2019) study which revealed that, people with T2DM have a poor HRQOL; in which the presence of diabetic foot ulcers and smoking status were identified as significant predictors of low HRQOL. From the present study, majority of the participants confirmed that they felt that their life was meaningful only to a moderate extent.

In terms of all domains, the HRQOL score of this study is higher than that of Palestine, Gaza, which used similar tools (Eljedi, 2020). The Possible explanation might be differences in psycho-social, cultural, economic, and environmental conditions. For instance, the participants of the present study lived in a stable and peaceful environment and expressed a high level of satisfaction with personal and social relationship compared to refugee patients in Gaza who depended on refugee camp supplies. Studies in Benin, Nigeria and Uganda (Odili, et al, 2020) also have lower scores than the current study. A possible explanation might be differences in measurement tools.

Finding of this study revealed that, co-morbidity had significant and negative relationship with quality of life among people with type 2 diabetes mellitus in FMC, Abeokuta. This implies that the co-morbidity of various respondents in the study was associated with the quality of life of the respondents with patients having multiple or major comorbidities like stroke and visual impairment reporting more negative impact on their quality of life. The finding further revealed that, HbA1c had significant and positive relationship with quality of life among people with type 2 diabetes mellitus in FMC, Abeokuta. This implies that the HbA1c of various respondents in the study was associated with the quality of life of the respondents. The finding revealed that, BMI had no significant relationship with quality of life among people with type 2 diabetes mellitus in FMC, Abeokuta. This implied that the BMI of various respondents in the study was not associated with the quality of life of the respondents. In addition, the finding revealed that comorbidity, hemoglobin A1C (HbA1c) were tested significant on quality of life, while BMI did not.

This means that comorbidity and hemoglobin A1C (HbA1c) were clinical variables that predicted quality of life among persons with type 2 diabetes mellitus in FMC, Abeokuta. The outcome of this study on comorbidity was in line with the finding of Pati, et al (2020) that, visual and auditory impairment had a high impact on HRQL due to limitation to mobility and daily activities. The prevalence of hypertension as a very common comorbid condition in patients with diabetes mellitus has been explored by other researchers, Jelinek, et al (2017) also discovered that 83.40% of their studied population had hypertension while Beraho, et al (2012) found the prevalence rate of hypertension to be 70.4% among type 2 diabetic patients studied in Morocco. In addition, the outcome of this study on BMI was not in line with the

finding of Zurita-Cruz, et al (2018) that obesity was not considered as comorbidity in their study as it is strongly related to diabetes mellitus.

The finding revealed that, BMI had no significant relationship with quality of life among people with type 2 diabetes mellitus in FMC, Abeokuta. This implied that the BMI of various respondents in the study was not associated with the quality of life of the respondents. In addition, the finding revealed that comorbidity, hemoglobin A1C (HbA1c) were tested significant on quality of life, while BMI did not. This means that comorbidity and hemoglobin A1c (HbA1c) were clinical variables that predicted quality of life among patients with type 2 diabetes mellitus in FMC, Abeokuta. The outcome of this study on comorbidity was in line with the finding of Pati, et al (2020) that, visual and auditory impairment had a high impact on HRQL due to limitation to mobility and daily activities. In addition, the outcome of this study on BMI was not in line with the finding of Zurita-Cruz, et al (2018), that obesity was not considered as comorbidity in their study as it is strongly related to diabetes mellitus.

Conclusion

The study concludes that most of the respondents had co-morbidities with visual impairment and hypertension been the most common, while most of the respondents had normal Body Mass Index. Also, the result on hemoglobin A1C (HBA1C) revealed that, most of the respondents are within the good glycaemic control range, while the health-related quality of life levels among people with type 2 diabetes mellitus was moderate. In addition, the study concludes that comorbidity and hemoglobin A1c (HbA1c) were identified as clinical predictors.

Recommendations

Based on the findings of the study, the following recommendations were made:

- The healthcare providers should intensify efforts aimed at educating, counselling and supporting patients with type-2 diabetes mellitus in maintaining their treatment, preventing complications and promoting their quality of life.
- Patients with T2DM should be enlightened on the predictors of quality of life and their role in promoting their health-related quality of life.
- The healthcare facility (FMC Abeokuta) should organize regular health screening outreach for people within the community to promote early diagnosis of T2DM and commencement of treatment to promote control and prevent/delay the onset of complications.

References

Ababio GK, Bosomprah S, Olumide A, Aperkor N, Aimakhu C, Oteng-Yeboah A, Agama J., Chaplin W. F., Okuyemi K. S., Amoah G.B., & Ogedegbe G. (2017) Predictors of quality of life in patients with diabetes mellitus in two tertiary health institutions in Ghana and Nigeria. *Niger Postgrad Med Journal*, 24, 48-55

Alshayban, D. & Joseph, R. (2020) Health-related quality of life among patients with type 2 diabetes mellitus in Eastern Province, Saudi Arabia: A cross-sectional study. *PLoS ONE*, 15(1), e0227573. https://doi.org/10.1371/journal.pone.0227573

Beraho M, Achhab Y, E, Benslimane A, Rhazi K.E, Chikri M., & Nejjari C. (2012) Hypertension and type 2 diabetes: a cross-sectional study in Morocco (EPIDIAM Study) https://www.panafrica-med-journal.com

Dhyfer, A. & Royes, J. (2020). Health-related quality of life among patients with type 2 diabetes mellitus in Eastern Province, Saudi Arabia: A cross-sectional study. https://doi.org/10.1371/journal.pone.0227573

Eljedi A.Y. (2020) Diabetes mellitus and quality of life of the Palestinian diabetic refugees in the refugee camps in Gaza strip. https;//scholar.goggle.com

Enang O., Omoroniya O., Asibong U., Ayuk A, Nwafor K., & Legogie A. (2021) A case-control study of pattern and determinants of quality of life of patients with diabetes in a developing country. Link.springer.com/article10.1186/s42506-020-00061-y

Holland, C.M. (2012). Diabetic peripheral neuropathy: a barrier to quality of life. *Commun Nurs Res*. 45:405.

Hosseini Nejhad Z, Molavi Vardanjani H, Abolhasani F, Hadipour M, Sheikhzadeh K. (2013). Relative effect of socio-economic status on the health-related quality of life in type 2 diabetic patients in Iran. *Diabetes Metab Syndr*. 2013;7 (4):187–90

International Diabetes Federation. (2020). Diabetes facts & figures. IDF Diabetes Atlas, Ninth edition 2019. https://idf.org

Kanter J. E. & Bornfeldt K. E. (2016). Impact of Diabetes mellitus. www.ahajournals.

Jelinek H.F., Osman W.M., Khandoker A.H., Khalaf K., Lee S., Almahmeed W., & Alsafar H.S., (2017). Clinical profiles, comorbidities and complications of type 2 diabetes mellitus in patients from United Arab Emirates. https://drc.bmj.com

Khunkaew S, Fernandez R, Sim J. (2019). Health-related quality of life among adults living with diabetic foot ulcers: a meta-analysis. *Quality of Life Research*, 28(6), 1413-1427.

Pati, S., Pati, S, Van den Akker, M., Schellevis, F.G., Jena, S. & Burgers, J.S. (2020). Impact of comorbidity on health-related quality of life among type 2 diabetic patients in primary care. *Primary Health Care Res Dev*. 21:e9

Sanjari M, Safari S, Shokoohi M, Safizade H, Rashidinezhad H, Mashrouteh M, et al. (2011). A cross-sectional study in Kerman, Iran, on the effect of diabetic foot ulcer on health-related quality of life. *Int J Low Extrem Wounds*, 10(4), 200–206.

Siersma V, Thorsen H, Holstein PE, Kars M, Apelqvist J, Jude EB, et al. (2014). Health-related quality of life predicts major amputation and death, but not healing, in people with diabetes presenting with foot ulcers: the Eurodiale study. Diabetes Care, 37(3), 694–700. https://doi.org/10.2337/dc13-1212.

Trikkalinou A., Papazafiropoulou A.K., & Melidonis A. (2016) Type 2 diabetes and quality of life. https://www.ncbi.nlm.nih.gov

Zurita-Cruz JN, Manuel-Apolinar L, Arellano-Flores ML, Gutierrez-Gonzalez A, Najera-Zoungas S, Woodward M, Li Q, Cooper ME, Hamet P, Harrap S, et al. (2018). Impact of age, age at diagnosis and duration of diabetes on the risk of macrovascular and microvascular complications and death in type 2 diabetes. *Diabetologia*. 57(12), 2465–74.

Cite this article:

Author(s), MALOMO, Olufunke Olawumi (RN, RM, RNA, BNSc.), Dr. NWOZICHI, Chinomso (RN, RM, RPHN, PhD*)*, (2021). *"*Clinical Predictors of Health-Related Quality of Life Among Patients with Type-2 Diabetes Mellitus at Federal Medical Centre Abeokuta"*.*
Name of the Journal: Commonwealth Journal of Academic Research, (CJAR.EU), P, 37- 50. DOI: http://doi.org/10.5281/zenodo.4777166 , Issue: 5, Vol.: 2, Article: 5, Month: May, Year: 2021. Retrieved from https://www.cjar.eu/all-issues/

Published by

AND

ThoughtWares Consulting & Multi Services International (TWCMSI)