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Management Of Self-Care Among Patients With Type 2 Diabetes And Its Relationship To Their Quality Of Life

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Abstract

Background: In these exceptional circumstances the country is going through; Self-care management for patients with Type 2 diabetes mellitus (DM2) may be affected by many factors that may affect their quality of life, this contributes to the deterioration of their health and psychological conditions and has negative effects on various aspects of their lives.
Aims of the study: This study aims to determine the relationship between self-care management and quality of life among patients with DM2.
Methodology: In this study, a descriptive method research design was used. The study was started on 22/10/2022 through 14/12/2022. A nonprobability (possible) sample was selected of 50 patients with T2DM; those who followed their health condition in the Teshreen teaching hospital during the mentioned period. Data were collected using some previously prepared two questionnaires. Descriptive statistics (frequencies, percentages, mean and standard deviation) and inferential statistics (contingency coefficient) were used in data analysis.
Results: The study showed that the highest percentage of participants had a good level of self-care measure, and that the highest percentage of them had a moderate level of quality of life, and there was no significant statistically significant relationship between self-care measure and patient quality of life.
Conclusion: The study showed that there is no statistically significant relationship between the level of self-care management and patient quality of life.
Recommendation: Improving self-care measures in patients with type 2 diabetes requires a multifaceted effort, and it is important to follow the recommendations to promote general health and improving the quality of life in these patients, such as exercising regularly and eating a healthy balanced diet.
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INTRODUCTION

Diabetes is a metabolic disorder in which the hormone insulin is deficient, ineffective, or absent, resulting in abnormally high blood glucose levels and significant damage to the body's vascular system. (Moura et al., 2015). Type 2 diabetes mellitus (DM2) is a disease that is prevalent worldwide. It is estimated that by 2030, worldwide, 300 million people will suffer from diabetes and that this disease will be one of the leading causes of death. (Diógenes et al., 2012). Management of diabetes includes pharmacological and nonpharmacological measures. With the help of pharmacological management, we can control blood sugar levels, increase insulin secretion, and also help prevent long-term damage, dysfunction, and failure of various organs that otherwise leads to increased morbidity and mortality.

(WHO,2021). but the only problem with medication is that we cannot cure the whole condition and there are side effects of hypoglycemic drugs such as nausea, vomiting, abdominal pain, etc. We can only prevent damage, so with the help of non-pharmacological management such as lifestyle modification and self-care practice, the patient has a better quality of life. Self-care in diabetes is an evolutionary process of developing knowledge or awareness by learning to survive with the complex nature of diabetes in a social context. (Cooper et al., 2003). Self-care for diabetes is essential for controlling the disease and improving the quality of life of patients. Self-care activities are behaviors that people with or at risk of diabetes are engaged in order to successfully manage the disease on their own. However, research indicates that 50% to 80% of people living with diabetes worldwide have substantial knowledge deficits about the management of their condition. (Strine et al., 2005). The focus of healthcare providers should not only be on increasing the "quantity" of life but also on improving the quality of life of the patient, so several studies have been conducted to determine the quality of life and self-care behavior among people living with diabetes. The results of these studies show that most patients enjoy a good quality of life. (Bazpour et al., 2021). A study investigated the potential relationship between depression, diabetes knowledge, and self-care management with quality of life in diabetic patients. The results showed an unfavorable state of knowledge, physical and mental health in diabetic patients and a strong relationship between depression, diabetes knowledge, self-care management, and quality of life. (Khajebishak et al., 2021). In summary, self-care management is crucial for good glycaemic control, reduced complications, and improved quality of life of patients with DM2. Studies show that most diabetic patients enjoy a good quality of life, but there is a lack of awareness and adherence to self-care in some countries. Depression, knowledge of diabetes, and self-care management are also important factors that affect the quality of life of diabetic patients. (Khajebishak et al, 2021).

MATERIALS AND METHODS

Design of the Study

In this study, a descriptive method research design was used. The study was started on 22/10/2022 through 14/12/2022.

Setting of the Study

The study was carried out in the endocrinology clinic at the Tishreen Teaching Hospital in Lattakia, Syria.

The Sample of the Study

A nonprobability (purposive) sample of (50) patients was selected from endocrinology clinic at the Tishreen Teaching Hospital.

Data collection

Data were collected using a questionnaire by means of direct interview with patients from 22/10/2022 to 14/12/2022.

The Study Instrument

To implement this study and achieve all its objectives two tools were used. The first tool: a questionnaire was prepared and modified after a thorough review of the relevant literature. The final study questionnaire covers three parts as follows:

Part 1: Socio-demographic of patients: This part included the following (age, gender, marital status, educational level, place of residence, economic status).

Part 2: patient health data: This part included the following (disease history, weight, height, BMI, medical history, current medications, etc.).

Part 3: This part included an assessment of the level of self-care of the participating patients according to four domains, was prepared and modified after a thorough review of the relevant literature.: The first domain (diet) included eight phrases. The second domain (medicine) included eight phrases. The third domain (exercises) included eight phrases. The fourth domain (diabetic foot care) also included eight phrases. The scale was based on the method of answering according to the triple Likert as (rarely = 1, sometimes = 2, always = 3). Based on the mean, the level of self-care was determined as follows: <1.66 =low, 1.67-2.33= medium, >2.33=high.

The second tool: It is a questionnaire developed by (Mohamed) to assess the level of quality of life of diabetic patients (MDQoL)-17 questionnaire. It consisted of 17 phrases. The scale was based on the method of answering according to the triple Likert as (rarely = 1, sometimes = 2, always = 3). Based on the mean, the level of quality of life was determined as follows: <1.66 =low, 1.67-2.33= medium, >2.33=high.

Statistical data analysis:

Data were analyzed using IBM Statistical Package of Social Sciences (SPSS). which included descriptive statistics (frequency (F) Percentage (%), Mean, and Standard Deviation; and inferential statistics (contingency coefficient), Spearman law.

RESULTS

Table (1) reveals the high percentage of the participant at age groups (> 40) years (52%). Showed that 62% of them were males, 58% of them are married, and regarding the level of education the highest percentage is 52% of the sample in study is secondary. In addition, the table shows that the highest percentages of participants live in city 76%, their economic level is Moderate. Table (2) shows that the highest percentage of participants contracted the disease between 2-5 years ago (48%), their weight ranges between (60-80) kg (58%) and their (BMI) 62% are normal, most of them have hypertension and take oral antidiuretics. Table (3) shows that the highest percentage of participants had a high level of self-care related to diet, medication, and diabetic foot care (48%) (48%) (42%) respectively and had a low level of exercise-related self-care (40%), and overall had a high level of total self-care (42%). Figure (1) shows that the highest percentage (72%) of participants has a moderate level of quality of life. Table (4) shows that there is no statistically significant relationship between the level of self-care of participating diabetic patients and their level of quality of life ($p>0.05$).

Table (1) Distribution of the study sample (patients) according to their Demographic Characteristics.

Gender	**F**	**%**
Male	31	62
Female	19	38
Age (years)	F	%
20-30	6	12
31-40	18	36
>40	26	52
Marital Status	F	%
Married	29	58
Single	15	30
Widower	6	12
Educational Level	F	%
University Level	12	24
Preparatory	12	24
Secondary	26	52
Place of residence	F	%
City	38	76
Countryside	12	24
Economic Level	F	%
Good	9	18
Moderate	32	64
Low	9	18

Table (2) Distribution of the study sample (patients) according to their Health data.

Disease history	**F**	**%**
< one year	9	18
2-5 years	24	48
>5 years	17	34
Weight	F	%
<60 kg	15	30
60-80 kg	29	58
>80 kg	6	12
Height (cm)	F	%
150-179	37	74
>170	13	26
BMI	F	%
Normal	31	62
Abnormal	19	38
Medical History	F	%
Cardiac	18	36
Hypertension	23	46
Neurological complications	12	24
Current Medication	F	%
Antihypertensive	19	38
Hypoglycemic drugs	24	48
Anticoagulants drugs	7	14

Table (3) Distribution of the study sample (patients) according to their self-care level.

Domain	**Level**					
	high		moderate		Low	
	F	%	F	%	F	%
diet	24	48	17	34	9	18
Exercises	15	30	15	30	20	40
Medicine	24	48	17	34	9	18
Diabetic foot	21	42	13	26	16	32
Total level	21	42	20	40	9	18

Figure (1) Distribution of the study sample (patients) according to their quality of life.

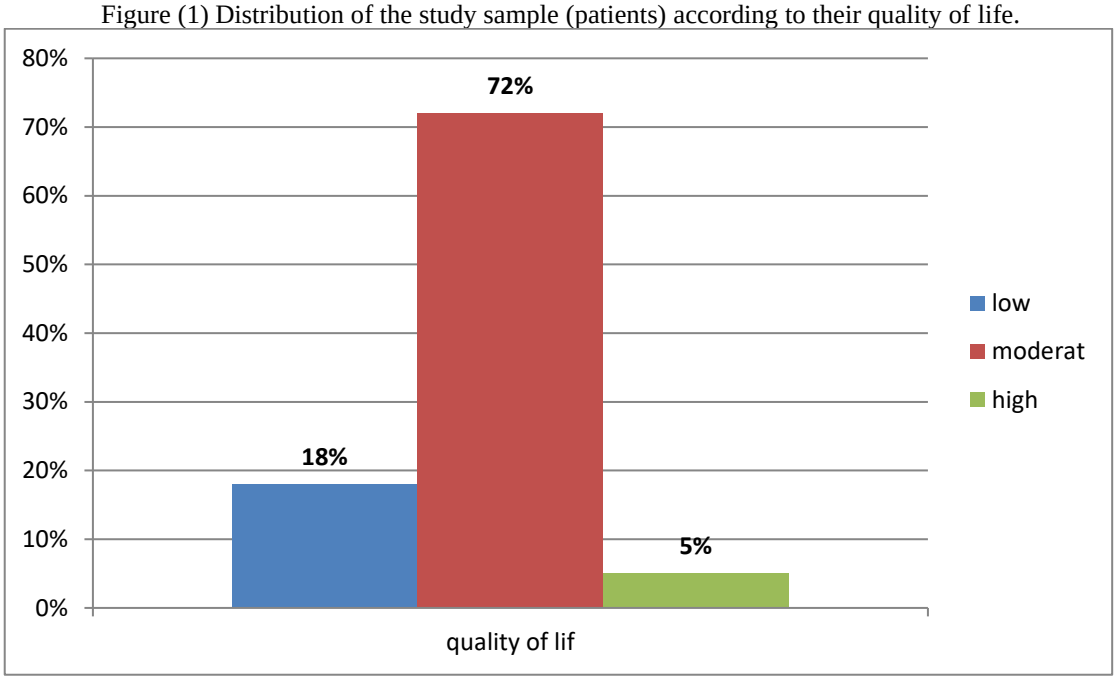

Table (4) relationship between the level of self-care management and their quality of life according to Spearman's rho.

Variable	F	SD±M	R	P (sig)
Total level of self-care	50	2.24±0.744	-0.110	0.446
Quality of life level	50	1.92±0.528		

DISCUSSION

The current study aims to evaluate the level of self-care among patients with DM2 and its relationship to their quality of life .We found that patients had a high level of total self-care (42%). This result agreed with the study results (Bazpour et al, 2020), which aimed to evaluate the quality of life and self-care behaviors in patients with type 2 diabetes mellitus in Mashhad, Iran; it showed that the highest percentage of participants had a high level of total self-care. However, this result did not agree with the study (Yumuşak et al, 2023) on assessing self-care levels and affecting factors in diabetes patients, which showed that the highest percentage of participants had a low level of self-care related to DM2. The current results also indicated that the quality-of-life levels of (72%) of the participants have a moderate level of quality-of-life. This result is consistent with the results of a study conducted by (Manjunath et al., 2014) to assess the level of quality of life of a patient with type 2 diabetes in rural south India.; that study indicated that most of the participants had a moderate level of quality of life. On the other hand, the current result was not consistent with the results of a study conducted by (Abu Alhommos et al, 2021) to assess the Health-Related Quality of Life of Patients with Type 2 Diabetes in Saudi Arabia, that study showed that the highest percentage of participants had a low level of quality of life. The results explain that there is no statistically significant relationship between the level of self-care of participating diabetic patients and their level of their quality of life. This result is in agreement with the results of a study conducted in India by (Jochi et al, 2021) Which aimed to assess quality of life and self-care behavior among people living with diabetes; Its results showed that there was no statistically significant relationship between the level of self-care of diabetic patients and the level of their quality of life. On the other hand, the current result did not agree with the results of an Iranian study conducted by (Bazpour et al, 2020) to assessment of the quality of life and self-care behaviors in patients with type 2 diabetes mellitus; the results of that study showed that there was a high statistically significant relationship between the level of self-care of diabetic patients and the level of their quality of life.

RECOMMENDATIONS

Living with diabetes can be challenging and can have a significant impact on a person's quality of life. Several recommendations can be made to improve the quality of life of patients with diabetes as following a healthy diet, engaging in regular physical activity, monitoring blood sugar levels regularly, taking medications as prescribed, managing stress levels, getting enough sleep, and connecting with support resources.

DECLARATION SECTION

Ethical Considerations

This study was completed after obtaining consent from the University of Teshreen

Conflict of interest

None to be declared

Funding:

None to be declared.

Data availability:

Data are available by contacting the corresponding author by email.

Author's Contributions

All authors have read and approved the manuscript.

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