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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 unprecedented times, individuals with Type 2 diabetes mellitus (DM2) may face challenges in managing their self-care due to various factors that can negatively impact their quality of life. This can lead to a decline in their physical and mental health and affect different aspects of their lives in adverse ways.

Aims of the Study: This Study investigates the relationship between self-care management and quality of life in patients with type 2 diabetes.

Methodology: This Study utilized a descriptive research method. It was conducted from 22/10/2022 to 14/12/2022. A non-probability sample of 50 patients with T2DM who received treatment at the Teshreen Teaching Hospital during this period was selected. Two questionnaires were administered to gather data. Descriptive statistics, such as frequencies, percentages, mean, and standard deviation, were used for data analysis, and inferential statistics, such as the contingency coefficient, were used for data analysis.

Results: The Study found that while most participants had excellent self-care, their quality of life was only moderate. There was no significant relationship between self-care and quality of life.

Conclusion: The Study discovered no significant correlation between the level of self-care management and the quality of life in patients with type 2 diabetes. Therefore, to improve the overall health and well-being of individuals with type 2 diabetes, it is essential to adopt a multifaceted approach. One must follow recommendations such as regular exercise and a balanced diet to promote general health and improve the quality of life of these patients.

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INTRODUCTION

Diabetes is a disorder that happens when the body cannot produce enough insulin or when it cannot use it properly, resulting in high blood glucose levels. DM2 is a common type of Diabetes that affects people worldwide. It is estimated that by 2030, Diabetes will be one of the leading causes of death, with 300 million people affected worldwide (Diógenes et al., 2012). The management of Diabetes involves both pharmacological and non-pharmacological measures. Pharmacological management helps to control blood sugar levels, increase insulin secretion, and prevent long-term damage, dysfunction, and failure of various organs. Doing so reduces the chances of increased morbidity and mortality (WHO, 2021). Medication can help prevent damage caused by Diabetes, but it cannot cure the entire condition. Hypoglycemic drugs may have side effects such as nausea, vomiting, and abdominal pain. Non-pharmacological management enhances patients' quality of life, including lifestyle modifications and self-care practices. Self-care in Diabetes is an ongoing process that involves developing knowledge and awareness. It requires individuals to learn how to manage the complexity of Diabetes within a social context (Cooper et al., 2003). Self-care is essential for

managing Diabetes and improving patients' well-being. Self-care activities are actions that individuals with or at risk of Diabetes undertake to regulate the disease effectively on their own. Research shows that 50% to 80% of people with Diabetes worldwide lack knowledge on managing their condition (Strine et al., 2005). Healthcare providers are responsible for prioritizing their patients' length and quality of life. To gain a better understanding of the quality of life and self-care behaviors of those living with Diabetes, multiple studies have been conducted. These studies have consistently indicated that most patients can maintain a good quality of life. (Bazpour et al., 2021). A recent study examined the possible connection between depression, diabetes knowledge, self-care management, and the quality of life of individuals with Diabetes. The results demonstrated that diabetic patients experienced poor physical and mental health, as well as inadequate knowledge about their condition. The study also revealed a strong correlation between depression, diabetes knowledge, self-care management, and quality of life. Proper self-care management is essential for reasonable glycemic control, reduced complications, and improved quality of life for patients with Type 2 diabetes. Although most diabetic patients have a decent quality of life, some countries lack awareness and adherence to self-care. Therefore, depression, diabetes knowledge, and self-care management are critical factors that affect the quality of life of diabetic patients. Khajebishak et al. (2021) conducted the Study. (Khajebishak et al, 2021).

MATERIALS AND METHODS

Design of the Study

A descriptive research method was utilized from 22/10/2022 to 14/12/2022.

The setting of the Study

The study was conducted at the endocrinology clinic of Tishreen Teaching Hospital in Lattakia, Syria.

The Sample of the Study

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

Data collection

Data was collected from patients using a direct interview questionnaire between October 22, 2022, and December 14, 2022.

The Study Instrument

Two tools were used to conduct the Study: a questionnaire was prepared after reviewing relevant literature covering three parts.

Part 1: Socio-demographic information of patients: This section lists demographic information, including age, gender, marital status, educational level, place of residence, and economic status.

Part 2: Patient health data: This section contains essential health information, including disease history, weight, height, BMI, medical history, and current medications.

Part 3 The participating patients' self-care level was assessed using four domains. These domains were prepared and modified after thoroughly reviewing relevant literature. The first domain (diet) comprised eight phrases. The second domain (medicine) also comprised eight phrases. The third domain (exercises) included eight phrases as well. 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 follows: rarely (1), sometimes (2), and always (3). Based on the mean, the level of self-care was determined as follows: less than 1.66 =low, 1.67-2.33= medium, and greater than 2.33=high.

The MDQoL-17 questionnaire is a tool developed by Mohamed to evaluate the quality of life of diabetic patients. It includes 17 phrases, with answers based on the triple Likert scale (rarely = 1, sometimes = 2, always = 3). The mean score determines the quality of life, with <1.66 indicating low, 1.67-2.33 indicating medium, and >2.33 indicating high quality of life.

Statistical data analysis:

Data analysis was conducted using IBM SPSS, which involved descriptive and inferential statistics, including frequency, percentage, mean, standard deviation, contingency coefficient, and Spearman's rank correlation coefficient.

RESULTS

Table (1) reveals the high percentage of the participants in age groups (> 40) years (52%). Showed that 62% of them were males, 58% were married, and regarding the level of education, the highest percentage, 52% of the sample in the Study, is secondary. In addition, the table shows that the highest % of participants live in the city, 76%, and 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) is 62% average; 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 have a moderate quality of life. Table (4) indicates 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.

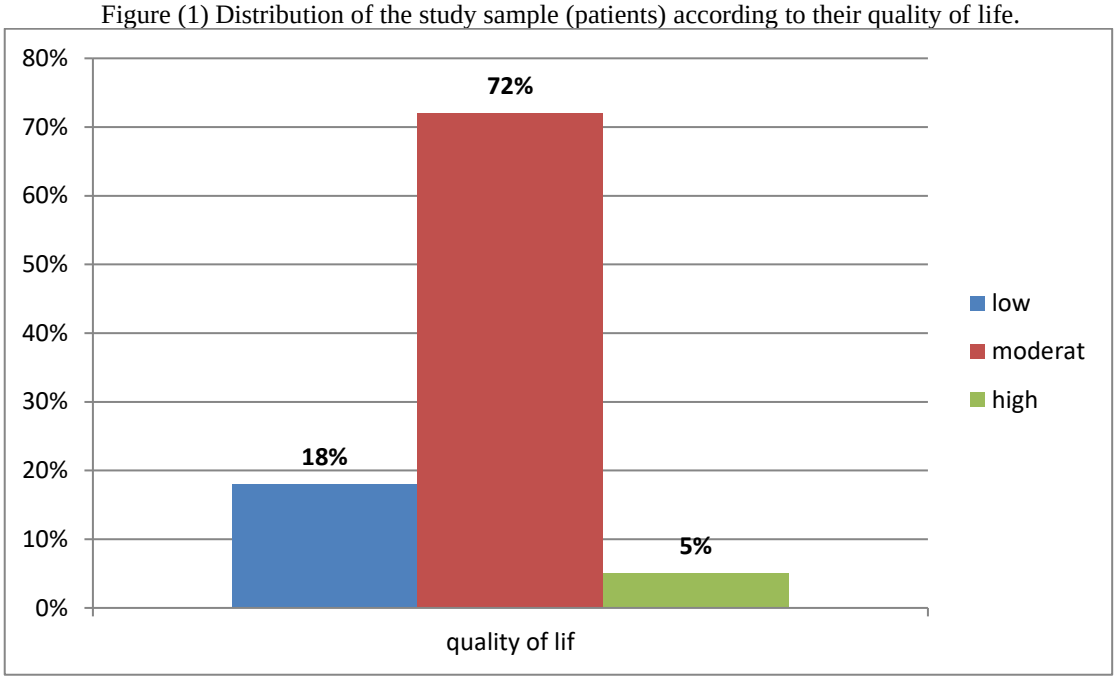

Table (4) shows the relationship between the level of self-care management and quality of life according to Spearman's rho.

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

DISCUSSION

This study aimed to evaluate the level of self-care among patients with Type 2 diabetes mellitus (DM2) and its correlation with their quality of life. The research revealed that patients had a high level of total self-care, accounting for 42%. This result was consistent with a study by Bazpour et al. (2020), which found that most participants had a high level of total self-care. However, this finding was inconsistent with the Study by Yumuşak et al. (2023), which found that most participants had a low level of self-care related to DM2.

The study also revealed that 72% of the participants had a moderate quality of life, consistent with a survey by Manjunath et al. (2014). However, this result was inconsistent with a study by Abu Alhommos et al. (2021), which found that most participants had a low quality of life.

The study found no statistically significant relationship between the level of self-care of participating diabetic patients and their quality of life. This finding was consistent with a study conducted in India by Jochi et al. (2021), which also found no statistically significant relationship between the level of self-care of diabetic patients and the level of their quality of life. However, this finding was not consistent with the results of an Iranian study conducted by Bazpour et al. (2020), which found 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 difficult and can have a considerable impact on an individual's well-being. Several recommendations can be made to enhance the quality of life for those with Diabetes, such as adhering to a nutritious diet, engaging in regular physical activity, consistently monitoring blood sugar levels, taking medications as per prescription, managing stress levels, getting enough rest, and seeking support from available resources.

DECLARATION SECTION

Ethical Considerations

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

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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