



Assessment of Diabetic Self-Management among Patients with Diabetic Type II

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Abstract.

Background: Diabetes mellitus (DM) is a chronic progressive metabolic disorder characterized by hyperglycemia mainly due to absolute (Type 1 DM) or relative (Type 2 DM) deficiency of insulin hormone. The study objective to assess the daily living activities don by patient to management diabetic include diet, exercise, blood-glucose testing.

Methodology: A descriptive study design was used to adopted current study. The study extended from (10/11/2023) to (15/4/2024). Non-probability sampling method purposive sample was used to select (190) male and female patients with diabetic type II from Al Wafaa specialized health center. Data were collected through face-to-face interview by questionnaire was developed based on the previous study related to the research problem. A deceptive analyses method was used to find the study results through SPSS program version 26.

Results: the study revealed that the diabetic self-management regarding all aspect were accepted includes, glucose monitoring (54.21%), and regarding diet (70%), (81.05%) regarding Medication adherence, (44.73%) about Physical activity, and (52.10%) about physician visit.

Conclusions: the researchers concluded that the majority of participants demonstrate acceptable levels of self-management across various aspects. These findings highlight the need for tailored interventions to enhance self-management practices among individuals with diabetes, particularly in areas such as physical activity promotion and regular physician follow-ups.

Keywords: Assessment, Diabetic, Self-Management, Diabetic Type II.

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Introduction:

Diabetes mellitus (DM) is a chronic progressive metabolic disorder characterized by hyperglycemia mainly due to absolute (Type 1 DM) or relative (Type 2 DM) deficiency of insulin hormone. DM virtually affects every system of the body mainly due to metabolic disturbances caused by

hyperglycemia, especially if diabetes control over a period of time proves to be suboptimal⁽¹⁾. Until recently it was believed to be a disease occurring mainly in developed countries, but recent findings reveal a rise in number of new cases of type 2 DM with an earlier onset and associated complications

in developing countries⁽²⁾. Diabetes is associated with complications such as cardiovascular diseases, nephropathy, retinopathy and neuropathy, which can lead to chronic morbidities and mortality⁽³⁾. Globally, diabetes mellitus affects approximately 415 million adults⁽⁴⁾. According to Ghavami et al. (2018), by 2040, the prevalence of T2DM is expected to rise to 642 million. Nationally, diabetes impacts an estimated 37.3 million people, or 11.3% of the United States (U.S.) population, and it impacts people from all socioeconomic and ethnic backgrounds (Centers for Disease Control and Prevention. The undiagnosed people with diabetes are estimated at 8.5 million, 23.0% of the adult population⁽⁵⁾. Adult diabetes is a major health problem in the world. World Organization (WHO) is introducing diabetes as an overt epidemic strongly associated with the patient life style and economic conditions. Given the increasing statistics in diabetes prevalence, WHO introduced diabetes as a covert epidemic and has called upon all countries worldwide to fight with this disease ⁽⁶⁾. Self-management of diabetes aims at normalizing blood glucose content and reducing the risks of long-term complications. Ideally, the rationale, implementation and goals of the self-management are formulated in close collaboration between the person with diabetes and the healthcare team. Concordance with the jointly agreed regimen, characterized by the individual's active and responsible role, is considered a prerequisite for the successful management of diabetes. Despite the known benefits of prudent adherence to the treatment regimen, suboptimal levels of glycaemic control are frequently observed⁽⁷⁾. Self-care in diabetes has been defined as an evolutionary process of development of knowledge or awareness by learning to survive with the complex nature of the diabetes in a social context. Because the vast majority of day-to-day care in diabetes is handled by patients and/ or families, there is an important need for reliable and valid measures for self-management of diabetes. There are seven essential self-care behaviors in people with diabetes which predict good outcomes. These are healthy eating, being physically active, monitoring of blood sugar, compliant with medications, good problem-solving

skills, healthy coping skills and risk-reduction behaviors⁽⁸⁾. The aim of the study to identify diabetic self-care management among patients with diabetic type II.

Methods:

Prior to the actual collection of the data, formal administration approval was obtained from department of the clinical science/ college of nursing/ university of Mosul to conduct the study. A descriptive study design was used to adopted current study. The study extended from (10/11/2023) to (15/4/2024). Non-probability sampling method purposive sample was used to select (190) male and female patients with diabetic type II from Al Wafaa specialized health center. The study included all adult patients with type II diabetes of both genders attending Al Wafaa Specialized Center. The researcher excluded all patients with diabetic type I and any patient who refused to participant in the study. The study was conducted at Al Wafaa specialized health center. It is specializing in diabetes, endocrinology, and short stature in the left side in Mosul City. A questionnaire was developed based on the previous study related to the research problem. The instrument consists of two parts: part one includes the demographic variables for diabetic patients consist of (age, gender, educational level, marital status, Address, chronic diseases, and body weight, complication of diabetic). The second part the diabetic self-management questionnaire includes 16 items. A Likert 4 was used to answer the questions it consists of: (4) items to assess self-management regarding food, (3) items to assess self-management regarding glucose monitoring, (3) items about physical activity, (2) items to assess medication adherence, (2) items about to assess the commitment to doctor visits, (2) items to assess patient opinion about self-management about their disease. Validity tested by presenting it to a group of experts in the several fields includes nursing, medicine and medical statistics. The reliability was checked through pilot study was conducted in one 10 patients with diabetic type II and analyzed by person correlation in the data by SPSS program at value (0.77). The data were collected by interviewing the patients and explaining the

questionnaire's vocabulary accurately. The collected data was arranged analyzed and presented in tables by using frequency and percentage, mean,

mean of score, and standard deviation by using SPSS version 26⁽⁹⁻⁶¹⁾.

Results:

Table (1): Distribution of the study sample according to their demographic data.

Variables		No.	%
Age	20-29 Years	44	23.2%
	30-39 Years	28	14.7%
	40-49 Years	40	21.1%
	50 or more	78	41.1%
Gender	Male	128	67.4%
	Female	62	32.6%
Address	Rural	37	19.5%
	Urban	153	80.5%
Occupation	Governmental employment	26	13.7%
	Non-governmental employment	69	36.3%
	House wife	65	34.2%
	Incapable	30	15.8%

Table (2): Distribution of the study sample according to their diabetic complications.

Complication of DM		No.	%
Vision	Yeas	78	41.1%
	No	112	58.9%
Hypertension	Yeas	81	42.6%
	No	109	57.4%
Cardiac dis.	Yeas	109	57.4%
	No	81	42.6%
Peripheral nerves dis.	Yeas	104	54.7%
	No	86	45.3%
kidney dis.	Yeas	138	72.6%
	No	52	27.4%

Table (3): Distribution of the study participants according to their diabetic self-management.

Domin	Poor Management		Accept Management		Good Management		Mean	SD
	No.	%	No.	%	No.	%		
Glucose monitoring	38	20	103	54.21	49	25.78	2.343	0.689
Dieting	22	11.57	133	70	36	18.94	2.324	0.554
Medication	7	3.78	154	81.05	29	15.26	2.541	0461
Physical activity	54	28.42	85	44.73	40	21.05	2.242	0.618
Physician visit	52	27.36	99	52.10	39	20.52	2.232	0.675

Table: (4): Distribution of the study sample according to their opinion about the level of diabetic self-management.

Self-management opinion	No.	%
Applies to me to some extent	64	33.7
Applies to me to some extent	49	25.8
It applies to me to a great extent	38	20.0
It applies to me to a very large extent	39	20.5
Total	190	100.0

Discussion:

Diabetes is the fifth leading causes of death in western countries and the fourth common reasons for a doctor visit^(62,63). Also, approximately 15% of health care expenses in the Unites States have been devoted to diabetes. Diabetes death rate is 1/5-2/5 percent higher than that of the general population. Diabetes causes 75% of death in people under 35. Compared with the general population, people with, particularly women, are 2-4 times more likely to die from cardiovascular diseases caused by diabetes. The ADA endorses diabetes self-

management education and support (DSMES) programs to meet national diabetes standards⁽⁶⁴⁻⁶⁶⁾. In the ADA Consensus Report, DSMES was recommended for individuals with diabetes. According to the ADA, there are four times that DSMES is critical: (1) at initial diagnosis, (2) annually, (3) when complicating factors develop, and (4) when life transitions and care occur⁽⁶⁷⁾. DSMES is an ongoing process that can improve the competencies (i.e., knowledge, skills, and abilities [KSAs]) that are crucial for diabetes care^(68,69). To ensure that various population groups are provided with care. This table indicated that the most of the

study sample age more than 50 years old (67), and the majority of them were female, while more than three quarter (80.5%) live in urban, and more than one third of them non-governmental employment. This table showed that the more than half of the study sample suffer from all complication of diabetic complication, except the vision problems were (41.1%). This table revealed that the diabetic self-management regarding all aspect were accepted includes, glucose monitoring (54.21%), and regarding diet (70%), (81.05%) regarding Medication adherence, (44.73%) about Physical activity, and (52.10%) about physician visit. This table indicated that the It shows the patients' opinion regarding their control of diabetes in terms of food, exercise, adherence to medication, monitoring the level of diabetes in their blood, in addition to organizing their visits to the specialist doctor.

Conclusion:

The study concluded that the majority of participants demonstrate acceptable levels of self-management across various aspects, including glucose monitoring, dieting, medication adherence, physical activity, and physician visits. The majority of participants are aged 50 or older, indicating a higher prevalence of diabetes among older individuals in the population. A significant proportion of participants suffer from various diabetic complications, including hypertension, cardiac disease, peripheral nerve disease, and kidney disease. Vision problems are also prevalent but to a lesser extent and there are still areas for improvement, particularly in physical activity and physician visits, where a sizable portion of participants exhibit poor management practices.

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