Assessment of Diabetes Patient Adherence to Dietary Recommendation in Diabetics Center in Al-Najaf City

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Abstract

Objective: This study aimed to assess of diabetes patient adherence to dietary recommendation in Diabetics center in Al-Najaf city and to find out the relationship between the diabetic patient adherence to dietary recommendation and their demographic and clinical data.

Methodology: Descriptive analytic design was carried out to assess of diabetics patient adherence to dietary recommendation in Al-Najaf City/ Health Directorate of Al-Najaf Al-Ashraf / Al-Sadder Medical City / Al-Najaf Center for Diabetes and Endocrine. The study was carried out from February 1st, 2018 up to March 28th, 2018. A non-probability (accidental) sampling technique was used consisting of (100) female and male those who visit Al-Najaf Center for Diabetes and Endocrine. Data collected through using of a well-designed questionnaire consist of three parts: Part I: Socio-demographic Characteristics, Part II: Clinical Data: consists of (6) items and Part 111: Patient adherence to dietary recommendation. This part of the questionnaire consists of (16) items.

Conclusion: It is concluded that the Majority of the stay sample have fair adherence to diabetics dietary recommendations.

Recommendation: Based on study conclusion, its need for a good relationship between the patient and health- care provider in order to provide more understanding and knowledge about the disease and its non-medical management and diabetic's patients need dietary recommendations with means of education, such as published materials with regard to dietary regimen.

Keywords: *Diabetes, Patient, Dietary Recommendation, Diabetics Center*

Introduction

Diabetes mellitus (DM) consist an enormous public health problem globally, associated with high morbidity and mortality [1]. Normally, a certain amount of glucose circulates in the blood. The major sources of this glucose are absorption of ingested food in the gastrointestinal tract and formation of glucose by the liver from food substances. 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 [2]. The exact mechanisms that lead to insulin resistance and impaired insulin secretion in type 2 diabetes are unknown, although genetic factors are thought to play a role. Regardless of the specific cause, the destruction of the beta cells results in decreased insulin production, unchecked glucose production by the liver and fasting beta cells cannot keep up with the increased demand for insulin, the glucose level rises and type 2 diabetes develops Despite the impaired insulin secretion that is characteristic of type 2 diabetes, there is enough insulin present to prevent the breakdown of fat and the accompanying production of ketone bodies [3]. The treatment of diabetes should start with non-pharmacological therapies such as lifestyle interventions. Diet plays a major role in the therapeutic strategy to keep patients with diabetes in good glycemic control and prevent micro and macro vascular complications [4]. According to the American Diabetes Association (ADA) and the European Association for the study of Diabetes

(EASD) prescribed dietary recommendations for the treatment of this disease since many years [4]. Type 2 Diabetes is defined as chronic hyperglycemia resulting from either decreased insulin secretion, impaired insulin action or both in the absence of autoimmune destruction of the pancreatic beta cell. Classically, type 2 diabetes occurs in the older, obese patients in the setting of strong family histories of diabetes and in association with other components of the metabolic syndrome [5]. Unhealthy practices and perception for diabetic patients can lead to increase the effect of the disease and complications which can be prevented. The diabetic complications such as nephropathy and retinopathy and neuropathy can affect the quality of life of the patients and can lead to a significant effect on patient's quality of life and productivity [6]. Healthy dietary habits and lifestyle modifications the cornerstones of type 2 diabetes prevention and management [7]. Adherence to lifestyle modification recommendations lessens the disease burden and reduces the morbidity and mortality associated with type 2 diabetic complications [8]

Methodology

Design of the study: Descriptive analytic design was carried out to assess of diabetics patient adherence to dietary recommendation in Al-Najaf City/ Health Directorate of Al-Najaf Al-Ashraf / Al-Sadder Medical City / Al-Najaf Center for Diabetes and Endocrine.

Study objectives: This study aimed to assess of diabetes patient adherence to dietary recommendation in Diabetics center in Al-Najaf city and to find out the relationship between the diabetic patient adherence to dietary recommendation and their demographic and clinical

Duration of the study: The study was carried out from February 1st, 2018 up to March 28th, 2018.

Sample of the Study: A non-probability (accidental) sampling technique was used consisting of (100) female and male those who visit Al-Najaf Center for Diabetes and Endocrine. **The Study Instrument:** Data collected through using of a well-designed questionnaire consist of three parts: Part I: Socio-demographic Characteristics: This part consists of (7) items, including (gender, age, and marital status, level of education, occupational status, residency and socio-economic status) and Part II: Clinical Data: consists of (6) items, including (duration of disease since diagnosis, treatment, health education regarding self-care activities, complications, smoking and body mass index). Part 111: Patient adherence to dietary recommendation. This part of the questionnaire consists of (16) items, the items include assessing patients' adherence to dietary recommendation.

Ethical consideration: This is essential value and should be obtained before collecting the information, to respect the patient's dignity and values. The investigator can achieve this permission from the moral committee at the Nursing Department in the faculty of Nursing / University of Kufa. Also another agreement from Al-Najaf Al-Ashraf Health Directorate / Al-Sadder medical city / Al-Najaf Center for Diabetes and Endocrine. In addition to above, the researcher told each participant that this is an involuntary work, and they can leave any time even the interview process uncompleted.

Questionnaire Validity: The questionnaire validity faces validity for the initial developed instrument which is specified through panel of (5) experts (4) Experts from faculty of Nursing/University of Kufa (with experience of > 5 yrs at their jobs field). Who were asked to review the instrument, and to inspect relevancy, clarity, and sufficiency of the questionnaire to measure the concept of interest. The data was collected through the applying of the developed questionnaire with aid of structured interview technique with the subjects as they are individually interviewed. The data collection process started from March 1st, 2018 to March, 20th, 2018.

Statistical Analysis: In this study, the data were analyzed by using of (SPSS) program version 19 (Statistical Package for Science Service), and the statistical package (Excel 2013).

Result

Table (1) shows the Study Sample Demographic Data and their discussion

Demographic data	Rating and intervals	Frequency	Percent
Gender	Female	46	46.0%
	Male	54	54.0%
	Total	100	100.0%
Age / years	30-34	1	1.0%
	40.00 - 44.00	1	1.0%
	45.00 - 49.00	12	12.0%
	50.00+	86	86.0%
	Total	100	100.0%
Marital status	Married	86	86.0%
	Single	4	4.0%
	Divorced	9	9.0%
	Widowed	1	1.0%
	Total	100	100.0%
Levels of education	Illiterate	31	31.0%
	Able to read and write	16	16.0%
	Primary school	20	20.0%
	Intermediate school	14	14.0%
	High school	8	8.0%
	Institute and college	11	11.0%
	Total	100	100.0%
Occupational status	Student	1	1.0%
	Government employee	12	12.0%
	Retired	12	12.0%
	Free job	19	19.0%
	Housewife	45	45.0%
	Jobless	11	11.0%
	Total	100	100.0%
Economic status	Sufficient	27	27.0%
	Barely sufficient	47	47.0%
	Insufficient	26	26.0%
	Total	100	100.0%
Residency	Urban	84	84.0%
	Rural	16	16.0%
	Total	100	100.0%

Freq= Frequency, %= Percent.

According the above table, the majority (54.0%) of sample were male, (86.0%) of patients were (50) years old and more. (86.0%) of patients were married. Concerning the level of education (31.0%) of sample was illiterate. (45.0%) of patient housewife. (47.0%) of sample economic status were barely sufficient. (84.0%) of patients live in urban area.

Table (2) statistical analysis of diabetic patient's clinical data and their discussion

Clinical data	Rating and intervals	Frequency	Percent
Duration of disease / years	1-3	23	23.0%
	4-6	11	11.0%
	7-9	10	10.0%
	10 And More	56	56.0%
	Total	100	100.0%
Treatment	Oral hypoglycemia	34	34.0%
	Injection	14	14.0%
	Diet	3	3.0%
	All of them	11	11.0%
	Oral hypoglycemia & Injection	13	13.0%
	Oral hypoglycemia& Diet	17	17.0%
	Injection & Diet	8	8.0%
	Total	100	100.0%
Education regarding self-care	Yes	72	72.0%
	No	28	28.0%
	Total	100	100.0%
Smoking	Yes	16	16.0%
	No	84	84.0%
	Total	100	100.0%
BMI	Obese	37	37.0%
	Overweight	38	38.0%
	Normal	25	25.0%
	Total	100	100.0%

Table (3) overall assessment of diabetic patients' adherence to dietary recommendations

Overall assessment for patients' adherence	Freq.	%
Good adherence	5	5.0%
Fair adherence	91	91.0%
Poor adherence	4	4.0%
Total	100	100.0%

Table (1) reveals that the majority (56.0%) of patient's duration of disease were 10 years and more. The most of patients used tablets route to taking drugs (34.0%). About (72.0%) of patients received self-care education. (84.0%) of sample are not smoking. Around (38.0%) of patient were overweight.

Table (3) show, that majority (91.0%) of sample with fair adherence to dietary recommendations

Table (4) Relationship between the diabetic patients' adherence to dietary recommendations and their demographic and clinical data

Demographic And Clinical Data	Chi-Square Value	Df	P-Value
Gender	0.099	2	.952 NS
Age / years	6.412	6	.379 NS
Marital Status	8.045	6	.235 NS
Levels of education	16.241	10	.093 NS
Occupation	24.608	10	.006 HS
Economic Status	0.469	4	.976 NS
Residency	0.326	2	.849 NS
Duration Of Disease	4.672	6	.587 NS
Treatment	32.755	14	.003 HS
Education	3.835	2	.147 NS
Complications	67.251	46	.022 S
Smoking	0.326	2	.849 NS
BMI	2.963	4	.564 NS

Related to table (4) there were good relationships between the patient (occupation, type of treatment and complications) with their adherence to dietary recommendations.

Discussion

According to (Table 1) in the results, the study shows that the entire study sample (54%) are male. The finding is consistent with results of [9] which mentioned in their study result that majority of the study subject were male. Regarding their age, the majority (86%) of the research samples are at age group of (50) yrs and more. This result is in agreement with other study [10] in their study found that a third of the participants, (26.9%) aged 50 to 59 years. Concerning the marital status the majority (86%) of the study subjects are married. This finding reinforced with the study result of [11] which mentioned majority of the study sample were married. In related to the level of education the most of the study samples (31%) are illiterate while regarding the diabetic patient occupational status, about (45.0%) are house wife. These results matching with the study result of [8]. Concerning socio-economic status, about half of the sample (47%) reveals their economic status that is barely sufficient, while concerning the residency the study result show that highest percentage (84%) of the study sample are lived in urban area. These result reinforced with the study of [2] which mentioned that 80% of people with diabetes live in low- and middle-income countries

Concerning duration of disease in the (table 2), the higher percentage (56%) is for those who are suffering from the diabetic for period from 10 years and more. This result comes along with the findings of other study which is carried out by [12].

Regarding the type of treatment, the results of the study display that the highest percentage (34%) of the study subjects are with oral hypoglycemia treatment. This result matching with the study result of [9] which mentioned the majority of participants were taking oral hypoglycemic medications. The present study shows that in regards to the education related to self-care, the most of the study subject (72%) are not received education related to self-care. This finding may related to the lack of nursing education and instruction to the patient about the dietary and exercise recommendation for the management of the diabetic disease and to reduce the complications related to disease. Related to the smoking, the majority of the study samples (84%) are not smoker. These findings matching with the study done by [13] who represents the majority of their study sample were not smoker. In regard to the study subject body mass index, the most of the study subject (38%) are overweight. These result agreements with the study finding done by [14] that represent the majority of their sample were overweight. Concerning the complications related to disease, the highest percentage of the study sample suffers from Neuropathy & Eye problems.

According to the above (table 3) in the result, the overall assessment of diabetic's patient adherence to dietary recommendation is fair. This outcome is reinforced by a study done by [12] who concluded in their study results that the level of adherence to dietary recommendations in the study group was moderate

Table (4) in the result shows that there are high significant relationship between two items (occupation and treatment) and patient's adherence to dietary recommendation at p-value less than 0.05, in addition there were significant relationship between the complication related to the disease and patients adherence to dietary recommendation at p-value less than 0.05. While there are non-significant relationship between the other items of diabetic patients demographic and clinical data and their adherence to dietary recommendation at p-value more than 0.05

Conclusions:

It is concluded that the most of the research sample are male and their dominant age are within 50 years and more, the most of them are illiterate. It was summaries that the most of the study sample taking oral-hypoglycemia medication, most of them not received education related to the disease and their dietary recommendation and in regard to their BMI it's concluded that most of them are overweight. It is concluded that the Majority of the stay sample have fair adherence to diabetics dietary recommendations. It is concluded that there are significant relationship between the patient (type of treatment, occupation and complication related to disease) and their adherence to dietary recommendations.

Recommendations:

Based on study conclusion, its need for a good relationship between the patient and health- care provider in order to provide more understanding and knowledge about the disease and its non-medical management. Encourage the diabetic patients who visit the diabetic center to follow the healthy dietary recommendations. Diabetic's patients need dietary recommendations with means of education, such as published materials with regard to dietary regimen. It is recommended to design proper booklet by the diabetic's center to guide the visitors about the non-medical management of diabetic's disease.

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Conflict of Interest: None to declare.

Ethical Clearance: All experimental protocols were approved under the Faculty of Nursing and all experiments were carried out in accordance with approved guidelines.

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