ORIGINAL ARTICLE

A Survey about Self-Care of Diabetic Patients Referring a healthcare center in Yazd (Iran)

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Abstract

Objective: Diabetes is one of the most prevalent disorders in human. During recent years the rate of diabetes had been increased in the world and it will be increased by 122% from 1995 to 2025. The aim of this study was to determine the self-care of diabetic patients referred to Rahmatabad health care center in Yazd city, Iran.

Materials and Methods: This was a descriptive study done on 152 diabetic patients referred to Rahmatabad health care center, Yazd, Iran in 2011. Data were collected through a questionnaire consisting of demographic data (age, sex, level of education, job, and types of diabetes) and also the questions about self-care. The questionnaire was developed in consultation with three health educators and three questionnaire validation experts. After entering into SPSS, data were analyzed using descriptive statistics, t-test and ANOVA.

Results: Their behavior about using the rate of the insulin, physical activity, using weekly food plan and using food was not suitable, but they used their oralantidiabetic drugs and insulin suitably. Results showed there was significant relation between self-care and job of participants (P=0.02).

Conclusion: Results of our study and also other studies revealed that self- care in diabetic patients is very important and can decrease the cost of treatment and complication of diseases. More than 75% of diabetic patients are type 2, and their self-efficacy is not suitable, there is need to stress on type 2 patients in education program.

Keywords: Diabetes, Behavior, Self-Care.

Introduction

Diabetes is one of the most prevalent disorders in human. This disorder is about the imbalance between secretion and demand for insulin in body (1). During recent years the rate of diabetes has been increased in the world and it will be increased by 122% from 1995 to 2025. In the first decades of 21th century the diabetic patients in the world were 150 million, and in Iran there are about two million diagnosed diabetic patients. Correct care and preventive efforts by diabetic patients as control of blood sugar, suitable food and physical activity can prevent dangerous complications of diabetes. Some studies showed that educational programs which modify the lifestyle, decreased incidence of diabetes type 2 by about 30% in 6 years (2). The most popular method to control

this chronic disease is self-efficacy (3,4). Treatment is by using different tablets with different mechanisms and insulin injection, diet, and suitable physical activity (5,6). Self-care can improve the general health condition of patients, their participation in self-care and decrease the costs of treatment (7). Rubbin et al. showed that self-care as physical activity, suitable food, control of blood sugar and regulating the insulin during a six month period decreased the blood sugar and hemoglobin A1c (HbA1C) that was maintained in safe range during next year (8). The aim of this study was to determine the self-care of diabetic patients referred to Rahmatabad healthcare center in Yazd, Iran.

Materials and Methods

This descriptive cross sectional study was done on diabetic patients referred to Rahmatabad healthcare center, Yazd, Iran in 2011. From 180 diabetic patients, 152 subjects who used oral antidiabetic drugs or insulin completed the questionnaire.

Data were collected by a researcher by using a questionnaire consisting of demographic questions (age, sex, level of education, job, and types of diabetes). There were also 15 questions about self-care. The scores of each questions were 1-5 (1 for never and 5 for always). The questionnaire was developed after consultation with three health educators and three questionnaire validation experts. The validity of the questionnaire was assessed by a and measuring related Cronbach's alpha ($\alpha=$ 0.74). Some questions about self-care were about healthy diet, type of treatment for diabetes, blood sugar tests results and physical activity. After entering into SPSS, data were analyzed using descriptive statistics, t-test and ANOVA.

Results

Mean age of patients was 53.38±9.39 years. (75%) patients were women and 38 (25%) were men. Sixty-two (40.8%) participants were illiterate, 78 (51.3%) had primary school graduation, 8 (5.3%) finished guidance school and 4 (2.6%) had high school graduation. One hundred and sixteen (76%) participants were housekeepers, 12 (7.9%) retired and 8 (5.3%) were employees. One hundred and fourteen (75%) of patients were type 2 diabetic patients and 38 (25%) were of type 1. Their behavior about using the dose of insulin, physical activity, weekly food plan and diet was not suitable, but they used their antidiabetic drugs (tablets and insulin) suitably (Table 1). There was no significant relationship between self-efficacy and sex (p=0.96) (Table 2). Results showed there was significant relation between self-care and job of participants (p=0.02).

Table 1- Scores of questions regarding self-care behaviour of diabetic patients

Self- efficacy behaviors	Always n (%)	Often n (%)	Sometimes n (%)	Solely n (%)	Never n (%)
Testing the blood sugar with Glucometer	10 (6.6)	14 (9.2)	24 (15.8)	16 (10.5)	88 (57.9)
Registering the blood sugar	2 (1.3)	8 (5.3)	6 (3.9)	14 (9.2)	122 (80.3)
Attention to changes of blood sugar	38 (25)	30 (19.7)	34 (22.4)	22 (14.5)	28 (18.4)
Measuring Ketone levels in type 1 diabetic patients	2 (1.3)	2 (1.3)	18 (11.8)	2 (1.3)	128 (84.2)
Using the tablets and insulin correctly	110 (72.4)	26 (17.1)	2 (1.3)	6 (3.9)	8 (5.3)
Using the tablets and insulin on time	76 (50)	54 (35.5)	10 (6.6)	4 (2.4)	8 (5.3)
Using regimen correctly	16 (10.5)	30 (19.7)	32 (21.1)	36 (23.7)	38 (25)
Eating the foods on time	20 (13.2)	42 (27.6)	58 (38.2)	18 (11.8)	14 (9.2)
Using the program of weekly food	2 (1.3)	2 (1.3)	4 (2.6)	16 (10.5)	128 (84.2)
Reading calorie labels of foods	10 (6.6)	4 (2.6)	8 (5.3)	20 (13.2)	110 (72.4)
Sweaty food in Hypoglycemia	48 (31.6)	32 (21.1)	4 (2.6)	10 (6.6)	58 (38.2)
Having a fast acting sugar like glucose for emergency contolling of hypoglycemia	18 (11.8)	34 (22.4)	10 (6.6)	14 (9.2)	76 (50)
Referring to healthcare on time	36 (23.7)	44 (28.9)	38 (23.7)	28 (18.4)	8 (5.3)
Physical activity	8 (5.3)	14 (9.2)	26 (17.1)	42 (27.6)	62 (40.8)
Adjusting the insulin with food and physical activity	0 (0)	6 (3.9)	6 (3.9)	14 (9.2)	12 (7.9)

Table 2- Scores of self-care of diabetic patients based on sex

Sex	n	Mean	SD	P
Men	114	36	7.87	
				0.96
Women	38	36.7	7.99	

Table 3- Scores of self-care of diabetic patients based on job

Job	n	Mean	SD	P
Housekeeper	116	36.1	7.93	
Employee	12	35.5	3.07	0.002
Self-employed	16	32.87	5.98	
Retired	8	41.5	10.4	

The behavior of patients who were retired was more suitable than patients in other job groups (Table 3). There was significant difference between self-care and level of education in participants (Table 4). The data revealed that self-care was significantly different type 1 and 2 diabetic patients and behavior of type 1 diabetic patients was better than type 2 (p<0.001) (Table 5).

Discussion

Results of this study showed that women consisted 75% of the patients and also 75% of them affected with type 2 diabetes. These results are in accordance with some other studies (2,9) showed that more than 25% of diabetics patients were women and of about 90% of them had diabetes type 2. The data showed that participants used the tablets suitably that this result is similar to the results of Morovati et al. study (10). These results revealed that diabetic patients adhere to their tratment, but do not have adherence to preventive factors; because their behavior in regards of diet and physical activity was not suitable. Bernal (11) showed that participation in a class for diabetes increased the self-efficacy, especially in using insulin and diet. The results of two other studies showed that health education could increase the self-care. The behavior of self-efficacy increased quality

of life of participants and decreased the cost of treatment and complication of their disease (10,12). There was no significant difference between self-efficacy and sex, which is in agreement with the result of Morovati et al. survey (10). The results of our study revealed that the self-care of retired patients was better than the others and there was significant difference between self-efficacy and job. These results revealed that with increasing the age, patients have more adherence to the self-care. Our results showed significant difference between self-care and level of education, which is same as the results of Collins et al. (13) and Morovati et al. studies (10). Their results revealed that with increasing the education, the self-care behavior will be increased as well. Also, this study showed significant difference between self-care and types of diabetes in patients (p<0.001) .The self-care of type 1 diabetic patients was better than type 2 diabetic subjects And these results were similar to the results of Collins et al. (13).

Conclusion

Results of our study showed that more than 75% of diabetic patients are of type 2 and their self-efficacy is not suitable. So, there is need to put emphasis on type 2 diabetic patients's educational programs.

Table 4- Scores of self-care of diabetic patients based on levels of education

Level of education	n	Mean	SD	P
Illiterate	62	34.45	7.57	
Primary school	78	37.82	7.97	
				0.003
Guidance school	8	33	9.14	
High school	4	32.5	1.73	

Table 5- Scores of self-care of diabetic patients based on type of diabetes

Type of diabetes	n	Mean	SD	P
Type 1	38	41.89	7.9	
				0.001
Type 2	114	34.1	6.9	

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