Exploring Problem Areas of Elderly Patients with Diabetes and the Support Provided by Their Family

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ABSTRACT

Objective: Diabetes increases problems in emotional areas particularly among the elderly patients by aggravating negative emotions such as loss, anxiety and fear and makes these patients need higher level of family support. This study aims at exploring problematic areas of the elderly diabetic patients and their family support levels.

Methods: The data of this descriptive study were collected by the researcher by conducting a face to face interview with 218 elderly diabetic patients who presented to Endocrine Polyclinics of State Hospital between October 2015 and October 2016. To collect the data, "Patient Information Form", "Problem Areas in Diabetes Scale (PAID)" and "Hensarling's Diabetes Family Support Scale (HDFSS)" were used.

Results: Although problem areas among the patients were found to be fewer than expected; it was found that there were significant differences between problem areas and "sex, diabetes time, treatment type, length of oral antidiabetic medicine use and insulin use, development of diabetes-related complication and hospitalization due to these complications in the recent year" ($p<0.05$). Besides, the family support levels of the elderly patients were below the moderate level, and "the number of individuals the patients live together with", "the number of people receiving support due to diabetes" and "the number of people who received support from their spouses because of diabetes" was a significant variable that affected HDFSS total score and the subscale scores ($p<0.05$).

Conclusion: For a better diabetes management, sex and diabetes related variables should be taken into consideration while delivering health services and increasing family support levels can make positive contributions to the mood of the elderly patients.

Keywords: Affective symptoms, aged, diabetes mellitus, family, nursing,

1. INTRODUCTION

Diabetes is a metabolic disease that requires continuous medical care; it is characterised by chronic hyperglycaemia, in which the organism cannot sufficiently benefit from carbohydrates, fats and proteins owing to the lack of insulin or disorders that affect insulin secretion (1). According to the ninth Diabetes Atlas, this condition has a high incidence in the elderly; there are 135.6 million patients with diabetes aged 65–99 years in 2019, whereas this number is expected to reach 276.2 million 2045 (2).

It has been reported that physical damage caused by diabetes and its complications adversely affect psychological well-being of elderly, and these feelings trigger the progression of diabetes complications (3,6). In order to minimize complications and to maximize quality of life among the elderly who are the main target group in diabetes care;

the elderly should be supported, accepted and understood (7,8). In the management and control of chronic diseases, the importance of family support on the health status of the elderly rural population should be taken into account. Family support has a major impact on a patient's ability to self-manage their chronic condition. Family support can improve health by affecting the daily behavior of the elderly, and loss of support can negatively affect health. (9,10). Regardless of the presence of a chronic disease, ageing, physical and psychosocial changes, decrease in psychomotor skills, need for help in performing daily life activities and decrease in emotional and social relations occur. Due to increasing risk of mortality in the elderly who are trying to adapt to the period of these losses, providing elderly individuals with a strong family support is essential (11-13). After the diagnosis of diabetes, vital regulations such as diet, activity,

and health control create anxiety, fear, guilt and emotional stress in elderly individuals. Emotional stress is an important cause of increased blood sugar in older people.Therefore, a comprehensive approach to the management of diabetes is required. Family support in the diabetes care of the elderly has an important effect on protecting the health of the elderly by reducing complications and emotional stress (7).

Allowing the elderly to express feelings such as anxiety, guilt, fear and pessimism caused by diabetes and expressing that these feelings are correctly understood by a family member are assurance that the individual can be provided with empathetic support by the family. Therefore, it is important for the family members to monitor blood sugar, remind the elderly to take their medicines on time, encourage them to undergo routine health checks for complications and support them (9,14,15).

The family's support to the elderly in the care and treatment of diabetes, such as purchasing nutritional supplements for their diet, encouraging them to exercise and assisting them in taking their medicines, was identified as facilitating factors for the elderly to cope with diabetes. Family members should share responsibilities in providing assistance so that the elderly can avail appropriate health services (7,10,13,14).

A better understanding of the emotional problems of patients is necessary to guide healthcare initiatives in improving the treatment and monitoring of diabetes and in strengthening support systems. In the literature, it has been shown that many health workers cannot detect and evaluate psychological problems and thus do not provide the patients with the support they need (16).

For the complex nature of diabetes and effective management of the disease, the participation of nurses with multiple roles in providing care is very important. Diabetics are often in serious contact with the healthcare system, and most of their direct contact is with nurses. In a variety of settings at all levels of the healthcare system, from routine clinical visits to inpatient care, nurses play a central role in the care of diabetic patients. One of the important roles of nurses stated in the literature in the care of diabetes is to support diabetic patients with their emotional problems (17). This study determines the emotional problems experienced by elderly patients with diabetes and the variables affecting them; determining the family and other variables, which are the most important sources of support that can help the elderly, will contribute to the nurse's fulfillment of this role. The aim of this study is to identify the problem areas of diabetes mellitus patients, their levels of family support and the variables that affect them; it also aims to the planning and implementation of appropriate nursing interventions by creating awareness.

2. METHODS

Ethics committee approval was obtained for this descriptive study from the Scientific Research Ethics Committee of Karadeniz Technical University Faculty of Medicine with the

decision dated 19.10.15 and numbered 24237859-602. The universe of the study consisted of 500 patients aged 65 years and above who applied to State Hospital Endocrine Polyclinic with the diagnosis of Type 2 diabetes, with reference to January 2014–January 2015 data. The sample of the study was determined by the formula used to determine the number of individuals in the sample in cases where the number of individuals in the universe was known, and 218 patients who matched the research criteria were found to represent the universe (18). More than 50% of the patients was reached with the sample of the study. The inclusion criteria for this research are as follows: individuals aged 65 years and above; individuals diagnosed with diabetes; individuals who can communicate verbally; individuals without psychiatric disorder requiring treatment; individuals who are oriented to person, place and time; and individuals accepting to participate in the study were identified.

2.1. Data Collection Tools

2.1.1. Patient Information Form

This form was made by the researcher through a literature review, and this form was used for the patient sociodemographic interface (age, gender, education level, marital status, number of children, family type) and diabetes mellitus (the duration of diabetes, the duration of diabetes treatment, the duration of oral antidiabetic drugs, insulin use, the cause of diabetes hospitalization in the past year, including complications to diabetes) and family (the number of people living at home, helping family members due to diabetes) it includes related questions (4,19,20).

2.1.2. Problem Areas in Diabetes Scale (PAID)

The PAID Scale was developed in 1995 by Polonsky and friends (21). In studies abroad, the internal consistency of the PAID Scale was found to be 0.90, the Turkish validity and reliability of the scale was reported in a study by Yilmaz with a Cronbach's alpha value of 0.80. This scale is a 20-item test that questions the areas of emotional stress of patients with diabetes and long-term diabetes treatment. Emotional stress areas are hate, guilt, depressive mode, anxiety and fear. Scoring of the scale is between 0 and 100. Low scores indicate minimal emotional problems. In our study, PAID Cronbach's alpha internal consistency coefficient was calculated as 0.79.

2.1.3. Hensarling's Diabetes Family Support Scale (HDFSS)

This scale was developed by Janice Hensarling (14); HDFSS measures perceived family support, especially for adults with Type 2 diabetes. HDFSS showed an item–item correlation mean of 0.52, an item–total score correlations between 0.49 and 0.87 and measurements supporting internal consistency of Cronbach's alpha value of 0.96. Pearson's correlation coefficient examined the relationship between the factors. These factors were within the expected range (0.50–0.79) for the dimensions of the concept Diabetes Family Support.

The validity and reliability study of the scale in Turkish was performed by Akin, and the Cronbach's alpha value was found to be 0.79–0.96. The total score of HDFSS is between 0 and 96. The higher the total score obtained from this scale, the higher the family support the individual perceives. In our study, Cronbach's alpha internal consistency coefficient total is 0.90 for HDFSS; 0.88 for empathetic support; 0.75 for encouragement support; 0.67 for facilitative support and 0.58 for participative support.

2.2. Data Collection

The questionnaire forms were given to patients aged 65 and above who applied to State Hospital Endocrine Polyclinic between October 2015 and October 2016 with the diagnosis of Type 2 diabetes.

2.3. Statistical Analysis

In evaluating the findings of the study, SPSS (Statistical Package for Social Sciences) Windows 18.0 programme was used. Continuous variables were presented as mean and standard deviation, and categorical variables were presented as number (percentage). When the parametric test assumptions are provided, the analysis of variance, which tests the significance of the difference between two averages, was used to compare independent group differences; when the parametric test assumptions were not provided, Mann–Whitney U test and Kruskal–Wallis Variance Analysis were used to compare the independent group differences. The results were evaluated at 95% confidence interval, and p value < 0.05 was considered significant.

3. RESULTS

61.0% of the patients included in the study were female (n = 133), 77.1% were in the 65-74 age group (n = 168), 41.7% were primary school graduates (n = 91), 73.4% were married (n = 160), 47.7% have five or more children (n = 104), 75.2% are core families (n = 164), 84.4% received help due to diabetes (n = 184). The mean PAID score of the patients was 37.46 ± 9.53. There was statistically significant difference between PAID mean scores and gender and family type (p<0.05) (Table 1). Table 2 shows the duration of diabetes, type of treatment, oral antidiabetic drug (OAD) used, duration of insulin use and diabetic complications (p<0.05); a significant difference was found between the mean PAID scores and hospitalisation (p<0.0001) in the last year due to these complications. In Table 3, the mean HDFSS score of the patients was 57.13 ± 13.75; the highest mean score in the sub-dimensions was 23.01 ± 6.11 for empathetic support. The mean scores for HDFSS, empathetic and encouragement support were significantly higher in patients who received diabetes education (p<0.05). The mean score for empathetic support (p<0.05) was found to be high in the diabetic elderly who developed diabetes-induced hypoglycaemia, whereas the mean scores for empathetic support (p<0.01), facilitative

support (p<0.05) and total HDFSS (p<0.01) in the elderly who developed diabetic foot or neuropathy were found to be significantly low. As a result of these complications, the mean score for encouragement support, facilitative support, participative support and total HDFSS were significantly lower in hospitalization caused by diabetic foot/neuropathy in the last one year (p<0.05) (Table 4). There was a significant difference in the mean number of patients with the home together with empathetic support, encouragement support, facilitative support, participative support and total HDFSS (p<0.0001; p<0.01). There were significant differences in the empathetic support, facilitative support, participative support and total HDFSS mean scores of elderly patients who were helped by their spouses. In addition, there were significant differences in the empathetic support, encouragement support, participative support and total HDFSS mean scores of elderly patients who were helped by their child (p<0.05; p<0.01) (Table 5).

Table 1. *Average PAID scores of the elderly diabetic patients and average PAID scores according to socio-demographic characteristics*

PAID[†]		$\bar{X} \pm SD$	Med (Min – max)	
Total		37.46±9.53	37.50 (14 – 65)	
	n	**%**	**PAID[†] $\bar{X} \pm SD$**	**Test Value**
Gender				
Female	133	61.0	39.01±9.66	t=3.048
Male	85	39.0	35.05±8.87	p=0.003
Age				
65-74	168	77.1	37.76 ±9.38	t=0.830
75 years and above	50	22.9	36.48±10.07	p=0.407
Educational status				
Illiterate	88	40.4	38.17±9.37	
Literate	24	11.0	35.58±9.38	KW=3.991
Primary education	91	41.7	37.66±10.30	p=0.262
High school/ University	15	6.9	35.13±4.64	
Marital status				
Married	160	73.4	37.63±9.54	t=0.431
Unmarried	58	26.6	37.00±9.58	p=0.667
The Number of the children				
No	9	4.1	36.11±7.01	
1-2	18	8.3	38.06±8.19	F=0.368
3-4	87	39.9	38.17±9.72	p=0.776
5 and above	104	47.7	36.88±9.83	
Family type				
Core	164	75.2	36.51±9.18	t=-2.601
Broad	54	24.8	40.35±10.07	p=0.010
Receiving help due to diabetes				
Yes[‡]	184	84.4	37.54±9.31	t=0.288
No	34	15.6	37.03±10.80	p=0.773

† Problem Areas in Diabetes Scale ‡ Doing activities of daily living, transportation to hospital, measuring blood glucose.

Table 2. Average PAID scores of the elderly diabetic patients according to diabetic features

	n	%	PAID[†] X̄ ± SD	Test Value
Length of diabetes				
Less than 1 year	8	3.7	30.63±11.07	
1-5 years	47	21.5	35.11±9.52	KW=10.403
6-10 years	61	28.0	37.39±10.24	p=0.034
11-15 years	39	17.9	39.85±9.84	
More than 16 years	63	28.9	38.68±7.80	
Type of diabetes treatment				
OAD[‡] + diet	69	31.6	35.04±10.13	F=3.810
Insulin + diet	85	39.0	39.24±8.39	p=0.024
OAD[‡] + insulin + diet	64	29.4	37.72±9.89	
Length of OAD[‡] use				
Less than 1 year	7	5.3	24.43±12.16	
1-5 years	42	31.5	35.20±8.57	F=3.897
6-10 years	39	29.1	37.72±10.66	p=0.005
11-15 years	21	16.0	40.33±9.66	
More than 16 years	24	18.1	35.96±8.96	
Length of insulin use				
Less than 1 year	28	18.8	33.00±8.35	F=4.654
1-5 years	60	40.3	39.05±9.03	p=0.001
6-10 years	32	21.5	41.56±8.11	
11-15 years	14	9.3	38.00±10.09	
More than 16 years	15	10.1	42.33±6.84	
Presence of complication caused by diabetes (n=198) [§]				
Yes[‖]	198	90.8	37.92±9.30	t=2.268
No	20	9.2	32.90±10.8	p=0.024
Hospitalization caused by diabetes in the last one year (n=110)[§]				
Yes[¶]	110	50.5	39.68±9.25	t=3.560
No	108	49.5	35.20±9.32	p=0.0001

[†]Problem Areas in Diabetes Scale [‡]Oral antidiabetic drug [§]Multiple answers [‖] Hyperglycemia, cardiovascular disease [¶]Hyperglycemia, diabetic foot, retinopathy

Table 3. Average total score and average subscale scores of HDFSS of the elderly diabetes patients

HDFSS[†]	X̄ ± SD	Med (Min – Max)
Empathetic support	23.01±6.11	24 (5-36)
Encouragement support	14.00±4.96	14 (1-27)
Facilitative support	14.25±3.68	14 (3-23)
Participative support	5.87±1.90	6 (1-8)
Total HDFSS*	57.13±13.75	57 (10-92)

[†]Hensarling's Diabetes Family Support Scale

Table 4. Average total score and average subscale scores of HDFSS of the elderly diabetes patients in terms of their diabetic characteristics

		n	%	HDFSS[†] X̄ ± SD	Test Value
Status of receiving diabetes education					
Empathetic support	Yes	147	67.4	23.63±5.92	t=2.170
	No	71	32.6	21.73±6.34	p=0.031
Encouragement support	Yes	147	67.4	14.62±4.96	t=2.688
	No	71	32.6	12.72±4.74	p=0.008
Facilitative support	Yes	147	67.4	14.38±3.55	z=-0.278
	No	71	32.6	13.99±3.94	p=0.781
Participative support	Yes	147	67.4	5.83±1.94	z=-0.321
	No	71	32.6	5.94±1.84	p=0.748
Total HDFSS[†]	Yes	147	67.4	58.46±13.84	t=2.070
	No	71	32.6	54.38±13.24	p=0.040
Complications caused by diabetes					
Hypoglycemia					
Empathetic support	Yes	143	65.6	23.62±5.98	t=2.021
	No	75	34.4	21.87±6.23	p=0.044
Encouragement support	Yes	143	65.6	14.04±4.79	t=0.172
	No	75	34.4	13.92±5.30	p=0.864
Facilitative support	Yes	143	65.6	14.33±3.47	z=-0.359
	No	75	34.4	14.11±4.07	p=0.720
Participative support	Yes	143	65.6	5.97±1.94	z=-1.417
	No	75	34.4	5.67±1.82	p=0.156
Total HDFSS[†]	Yes	143	65.6	57.96±13.39	t=1.225
	No	75	34.4	55.56±14.38	p=0.222
Diabetic foot / neuropathy					
Empathetic support	Yes	22	10.1	19.77±5.85	z=-2.596
	No	196	89.9	23.38±6.05	p=0.009
Encouragement support	Yes	22	10.1	12.45±4.38	t=-1.545
	No	196	89.9	14.17±5.00	p=0.124
Facilitative support	Yes	22	10.1	12.14±4.23	z=-2.524
	No	196	89.9	14.49±3.55	p=0.012
Participative support	Yes	22	10.1	5.55±1.95	z=-0.925
	No	196	89.9	5.90±1.90	p=0.355
Total HDFSS[†]	Yes	22	10.1	49.91±13.16	t= − 2.634
	No	196	89.9	57.94±13.61	p=0.009
Hospitalization caused by diabetic foot/neuropathy in the last one year					
Empathetic support	Yes	8	3.7	18.88±7.30	z=-1.496
	No	210	963	23.17±6.03	p=0.135
Encouragement support	Yes	8	3.7	10.50±3.38	z=-2.152
	No	210	96.3	14.13±4.97	p=0.031
Facilitative support	Yes	8	3.7	10.25±4.71	z=-2.478
	No	210	96.3	14.40±3.56	p=0.013
Participative support	Yes	8	3.7	4.50±1.20	z=-2.148
	No	210	96.3	5.92±1.90	p=0.016
Total HDFSS[†]	Yes	8	3.7	44.13±13.88	z=-2.537
	No	210	96.3	57.63±13.53	p=0.011

[†]Hensarling's Diabetes Family Support Scale.

Table 5. Average total score and average subscale scores of HDFSS of the elderly diabetic patients in terms of their characteristics related to their families

		n	%	HDFSS[†] X̄ ± SD	Test Value
The number of the individuals with whom patients lived at home					
Empathetic support	Alone	21	9.6	17.43±6.8	F=7.142
	1-2	82	37.6	23.83±5.72	p=0.0001
	3-4	53	24.4	23.70±5.69	
	5 and above	62	28.4	23.24±5.88	
Encouragement support	Alone	21	9.6	10.33±4.62	F=4.618
	1-2	82	37.6	14.12±4.84	p=0.004
	3-4	53	24.4	14.74±4.63	
	5 and above	62	28.4	14.45±5.08	
Facilitative support	Alone	21	9.6	10.62±4.21	KW=20.512
	1-2	82	37.6	14.78±3.42	p=0.0001
	3-4	53	24.4	15.19±2.61	
	5 and above	62	28.4	13.98±3.91	
Participative support	Alone	21	9.6	4.57±2.25	KW=11.515
	1-2	82	37.6	5.96±1.81	p=0.009
	3-4	53	24.4	6.34±1.78	
	5 and above	62	28.4	5.77±1.83	
Total HDFSS[†]	Alone	21	9.6	42.95±15.09	F=9.568
	1-2	82	37.6	58.70±12.89	p=0.0001
	3-4	53	24.4	59.96±10.90	
	5 and above	62	28.4	57.45±14.02	
Family members that give assistance due to diabetes[‡]					
Spouse					
Empathetic support	Yes	111	50.9	24.29±5.86	t=3.202
	No	107	49.1	21.69±6.11	p=0.002
Encouragement support	Yes	111	50.9	14.55±4.62	t=1.672
	No	107	49.1	13.43±5.25	p=0.096
Facilitative support	Yes	111	50.9	14.85±3.26	z=-2.072
	No	107	49.1	13.64±3.99	p=0.038
Participative support	Yes	111	50.9	6.18±1.66	z=-2.103
	No	107	49.1	5.54±2.08	p=0.035
Total HDFSS[†]	Yes	111	50.9	59.86±12.50	t=3.044
	No	107	49.1	54.30±14.46	p=0.003
Children					
Empathetic support	Yes	69	31.7	24.45±5.52	z=-2.071
	No	149	68.3	22.35±6.27	p=0.038
Encouragement support	Yes	69	31.7	15.00±4.25	t=2.197
	No	149	68.3	13.54±5.21	p=0.029
Facilitative support	Yes	69	31.7	14.93±2.94	z=-1.310
	No	149	68.3	13.94±3.95	p=0.190
Participative support	Yes	69	31.7	6.25±1.91	z=-2.342
	No	149	68.3	5.69±1.87	p=0.019
Total HDFSS[†]	Yes	69	31.7	60.62±11.13	t=2.846
	No	149	68.3	55.52±14.56	p= 0.005

[†]Hensarling's Diabetes Family Support Scale [‡]Doing activities of daily living, transportation to hospital, measuring blood glucose.

4. DISCUSSION

In our study, the scale of the problem areas that help assess the quality of life of patients with diabetes, who are sensitive to emotional distress and can benefit more from psychological help, has been used, and it has been found that the problem areas of elderly diabetes patients are not as high as expected (3). In the literature, it was found that elderly patients perceived emotional problems less than younger patients included in the studies (3,4,16,22,23). This situation has been associated with increased acceptance and adaptability with ageing. Elderly diabetes patients were found to need more family support, and empathic support was more likely to be higher than other sub-dimensions; however, it was found that older people are more likely to express feelings such as anxiety, guilt, fear and pessimism caused by diabetes (14).

In our study, it was determined that older women experienced more problems related to diabetes than men. In the literature, it is stated that women have higher diabetes load, have more power with diabetes and have more problems compared with men (3,16,20,23). Traditionally, women have more roles in the family and society to carry out their care and coordination duties, and it is stated that women are more fragile and their welfare levels are worse (16).

When considering gender in evaluating family support, the significantly higher share of participative support in older women is related to the need for more help from a family member in accessing health services than men (14). It has been determined that the problem areas of the elderly with large families are significantly higher than the elderly with small families. It has been found that for the elderly with extended families, the members of the family have experienced confusion in sharing responsibilities, and thus support in the care of the elderly becomes insufficient.

While the emotional problem areas of the elderly with diabetes duration of up to 15 years have increased, it has been observed that the emotional problem areas decreased 16 years and after. This situation has been associated with the fact that the negative meaning given to the disease in the first encounter may prevent the individuals to cope with the problems, but this meaning can be perceived more positively in the following periods. For less than a year, the elderly using OAD and insulin has been found to be significantly less problematic. In the elderly, the increase in the duration of diagnosis; long-term use of medication; difficulty in accessing drugs; dementia, depression and cognitive dysfunctions; neglecting treatment or not and the use of multiple medications, increase the development of retinopathy and neuropathy. Due to these negatives, older people need more support from someone else since these factors disrupt compliance with treatment and increases problem areas. For the elderly who received diabetes education, a significant increase in total HDFSS, empathetic and encouragement support sub-dimensions shows that the family also supports the elderly in attending diabetes education. In this study, total HDFSS, empathetic and encouragement support levels

including monitoring blood glucose levels, reminding them to take medication on time and encouraging to them to undergo routine health checks were found to be high. In this case, elderly patients with diabetes education are presumed to have families that are supportive of managing and adapting to diabetes. In addition, it is stated that the participation of the family in the diabetes education of elderly diabetes patients will increase the empathy ability of the family (14,19). In our study, the problem areas of the elderly with complications were found to be significantly higher. Studies have shown that many patients with diabetes are suffering not only from depression but also from emotional distress related to diabetes, and patients develop serious complications that may be caused by diabetes such as serious emotional problem (4,5).

In our study, participative support was found to be significantly higher in the elderly with diabetes complications. High level of participative support suggests that the elderly with complications develop more awareness on accessing health services in order to control diabetes by educating their families about diabetes and its complications. Hospitalisation was evaluated as an indicator of non-adherence in all age groups and especially in the elderly (24). In our study, it was found that in the last year, a high degree of significance in the problem areas of the hospitalised elderly was observed. In the literature, it is often stated that being in a hospital environment causes fear and anxiety with regard to the disease; not knowing what to do and uncertainty of recovery from the disease are the causes of anxiety to the patient and his or her family (25). This information suggests that hospitalisation may cause intense stress in elderly patients, may make them feel aloof, may cause anxiety and may increase problem areas related to diabetes. The fact that the empathetic support is significantly higher in the elderly who have diabetes-induced hypoglycaemia shows that the family feels empathy and supports the elderly because the hypoglycaemia requires urgent intervention.

The total HDFSS, empathetic and facilitative support levels of the elderly who developed diabetic foot were significantly lower than those who did not develop diabetic foot. In elderly patients hospitalised due to diabetic foot, total HDFSS, encouragement, facilitative and participative support levels were found to be significantly lower than those who were not hospitalised. This situation shows that if the family support, which is the most important part of social support, is low or insufficient; moreover, it can increase the development of diabetic foot, which may cause fear, worsen the quality of life, cause organ dysfunction, and lead to recurrent hospitalisations. In the literature, it has been reported that financial and moral support provided by the spouse, family members and friends are important resources in dealing with the psychosocial problems brought about by the old age as well as other diseases (26,27). In our study, family support in terms of total HDFSS, empathetic and facilitative support scores were found to be significantly low for elderly patients living alone compared with the other groups living with one or more family members. In a previously conducted study,

the social support from spouses was higher in married elderly individuals (27); in another study, it was found that the social support perceived by the elderly, friends and private people in the nursing home was lower than that of the elderly living in their own homes (28).

According to the elderly who received help from the family due to diabetes those who did not receive help from the family total HDFSS and empathetic, encouragement and participative support scores were found to be significantly higher. Baykal and Orak discussed that patients with diabetes who have received spousal and/or child help were found to have significance in family support (8). The family is an important source of support, particularly in the elderly, where health deterioration and associated physical and psychosocial problems can be overcome with minimal damage and may enable the elderly to adapt to the new situation (28). In our study, total HDFSS, empathetic, facilitative and participative support were found to be significantly higher than the support received from their spouses due to diabetes. Polat and Kahraman have found that social support of the elderly living with their spouses is higher (26). When the relationships within the family are further privatised , in other words, when the marital relationship is examined, spouses often get a different importance than the other sources of social support. The fact that spouses deal with each other, solve problems together and give mutual support to each other emotionally, financially and mentally is the most important factor in maintaining physical and psychosocial health of spouses (29). Total HDFSS, empathetic, encouragement and participative support scores of elderly with diabetes were found to be significantly higher in those who received help from their child. Children who are the support sources in old age and who have increased their role and importance have a positive effect on the physical and psychological health of the elderly; support from children also provides positive feelings such as respect for the elderly, high morale, life satisfaction and positive coping with stressful events (30).

5. CONCLUSIONS

It has been observed that the problem areas related to diabetes are low in elderly diabetic patients, but as the duration of diabetes, the type of treatment and complications increase, the emotional problems related to diabetes increase in the elderly. Family support has a great role in the management of some complications such as diabetes and hypoglycemia and neuropathy in the elderly. Families need to be informed that women experience more emotional problems with diabetes and need more family support. Since the elderly are more sensitive to emotional problems in the early years of diabetes, it is of great importance to address diabetes-specific problems. The help of family members, especially spouses and children, in protecting the health of the elderly shows the importance of the family in the management of diabetes. It is necessary to strengthen family ties and ensure that family members understand their role in controlling diabetes. The family members are told which

behaviors help the management of diabetes, and that they should have supportive behaviors rather than controlling behaviors. In order to understand and reach both sides in the management of diabetes, information should be collected from both patients and their family members, and periodic training programs should be implemented.

Limitations

Our study has some limitations. The limitations of this study are that elderly patients have low sociocultural levels and have difficulties in expressing themselves. Also, our research represents part of the universe. Therefore, the results cannot be generalized to all elderly diabetic patients.

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Conflict of interest

The authors declare no conflict of interest.

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