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Investigation of the Relationship between Social Support and the Level of Hopelessness in Diabetic Patients: Descriptive Research

Diyabetik Hastalarda Sosyal Destek ile Umutsuzluk Düzeyleri Arasındaki İlişkinin İncelenmesi: Tanımlayıcı Araştırma

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ABSTRACT

Study aimed to investigate the relationship between social support and the level of hopelessness in diabetic patients. The study was carried out as descriptive research in the internal medicine clinic and polyclinics of a state hospital located in the southeast of Turkey. The population of the research consisted of adult patients diagnosed with Diabetes Mellitus who were followed up in the internal medicine clinics of the said hospital. The sample of the research was composed of 252 patients through power analysis with 0.05 error, 0.95 confidence interval and 0.95 representative power of the universe. In the collection of the data, Personal Information Form developed by the researchers, Multidimensional Scale of Perceived Social Support, and Beck Hopelessness Scale were employed. In the analysis of the data, descriptive statistics, t-test in independent groups, One-Way ANOVA, Mann-Whitney U test, correlation and Cronbach's alpha reliability analysis were used. In the study, the patients' mean scores obtained from Multidimensional Scale of Perceived Social Support and Beck Hopelessness Scale were found to be 65.2±15 and 11.2±1.8, respectively. It was determined that the patients had high levels of perceived social support and moderate levels of hopelessness. In the study, a negative and significant relationship was found between the mean scores obtained from Multidimensional Scale of Perceived Social Support and Beck Hopelessness Scale. It was also determined that as the patients' perceived social support levels increase, their levels of hopelessness decrease.

Keywords: Diabetic Patient, Social Support, Hopelessne

ÖZ

Bu çalışma kapsamında diyabetik tanısı almış erişkin hastalarda sosyal destek ile umutsuzluk düzeyi arasındaki ilişki araştırılmaktadır. Tanımlayıcı araştırma olarak Türkiye'nin Güneydoğu Anadolu Bölgesi'nde yer alan bir devlet hastanesinin dahiliye klinik ve polikliniklerinde gerçekleştirilmiştir. Bu araştırmanın evrenini, söz konusu devlet hastanesinin dahiliye klinik ve polikliniklerinde takip edilen diyabet tanısı almış erişkin hastaları oluşturmaktadır. Araştırmanın örneklem sayısı, 0,05 hata, 0.95 güven aralığı ve 0.95 evrenin temsil gücü ile güç analizi yapılarak 252 kişi olarak belirlenmiştir. Veri toplama aşamasında Çok Boyutlu Algılanan Sosyal Destek Ölçeği, Beck Umutsuzluk Ölçeği ve bu çalışmanın araştırmacıları tarafından geliştirilen Kişisel Bilgi Formu kullanılmıştır. Verilerin analiz aşamasında ise tanımlayıcı istatistikler, bağımsız gruplarda t-testi, One-Way ANOVA, Mann-Whitney U testi, korelasyon analizi ve Cronbach alfa güvenirlik analizi kullanılmıştır. Araştırma kapsamında hastaların Çok Boyutlu Algılanan Sosyal Destek Ölçeği ve Beck Umutsuzluk Ölçeği puan ortalamaları sırasıyla 65.2±15 ve 11.2±1.8 olarak bulunmuştur. Diyabet tanısı almış erişkin hastaların, algılanan sosyal destek düzeylerinin yüksek ve umutsuzluk düzeylerinin orta düzeyde olduğu belirlenmiştir. Çok Boyutlu Algılanan Sosyal Destek Ölçeği ile Beck Umutsuzluk Ölçeği'nden alınan puan ortalamaları arasında negatif yönde ve anlamlı bir ilişki bulunmuştur. Ayrıca diyabet tanısı almış erişkin hastaların algılanan sosyal destek düzeyleri arttıkça umutsuzluk düzeylerinin düştüğü belirlenmiştir.

Anahtar Kelimeler: Diyabetik Hasta, Sosyal Destek, Umutsuzluk

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INTRODUCTION

Developments in diagnosis and treatment methods has extended the length of life in today's world. Along with the increased length of life, there has been an increase in the incidence and prevalence of chronic diseases.[1] Diabetes Mellitus (DM), one of the most prevalent diseases, is listed among the most important public health problems of the millennium by the World Health Organization.[2] The changes in lifestyles brought about by the increase in the socio-cultural levels of societies have been effective in the prevalence of DM. According to the 2017 data, there were 451 million DM patients worldwide, and this figure is expected to go up to 693 million by 2045.[3] This rate in Turkey ranges between 12.3% and 17.3%.[4] In addition to being a physical chronic disease, DM can lead to mental, emotional, and social problems. While dealing these types of problems, social support is a highly significant factor. The presence of relatives, friends and significant others encourages the patients and gives them the strength to fight against the disease.[5]

In the study managed by Karakurt et al., it was reported that social support played an essential role in the treatment and care of diabetic patients.[6]

Hope is a concept that has significant effects on body and soul. Studies conducted on hope demonstrated that it is related to the quality of life.[7] In a study they conducted, Aslan et al. revealed that patients with high level of hope have longer lives and live longer periods without a disease.[8] Individuals with high level of hope have higher living energy and are more willing to achieve their goals.[9]

Hope, which prevents the feelings of desperation and pessimism stemming from disease, can be affected by various factors. Among these factors are place of residence, age, socio-economic status, gender, the presence of the disease, self-care power, the degree of accepting the disease, and the severity of the disease.[7] In this regard, the aim of the study is to explain investigate the relationship between social support, one of the above factors, and hopelessness.

MATERIAL AND METHODS

Research Design and Participants

The study was carried out as a descriptive and relational screening research in the internal medicine clinic and polyclinics of a hospital located in the southeast of Turkey. The study sample size consisted of 252 patients chosen through power analysis with 0.05 error, 0.95 confidence interval and 0.95 representative power of the universe of the study. The patients were chosen through non-probability random sampling method. The study was limited in that it was carried out with the participations of patients in only one hospital in a province due to time and financial limitations.

Data Collection

The data were collected through face-to-face interview technique between June-December 2018. Each interview lasted approximately 15-25 minutes. In the collection of the data, Personal Information Form developed by the researchers, Beck Hopelessness Scale (BHS) and Multidimensional Scale of Perceived Social Support (MSPSS) were used.

Data Collection Tools

Personal Information Form: The Personal Information Form was created by the researchers in order to obtain information about socio-demographic attributes of the patients included in the study. In the form, there is a total of 7 questions querying the patient with DM about gender, occupation, place of residence, educational status, marital status, the time of the diagnosis and age.

Multidimensional Scale of Perceived Social Support (MSPSS)

The scale was developed by Zaimet et al. (1988).[10] The scale, the reliability and validity studies of which was carried out by Eker et al.

in 2001, consists of 12 items.[11] Each item has a 7-point Likert type scoring system. The scale is made up of 3 sub-dimensions, which are family, friends and a significant other. To total score acquired from the sub-dimensions makes up the scale total score. Higher scores obtained from the scale are indicative of high level of perceived social support. The original Cronbach's alpha co-efficient of the scale was found to be 0.89.[11] In the present study, the Cronbach's alpha co-efficient of the scale was found as 0.90.

Beck Hopelessness Scale (BHS)

The scale was developed by Beck et al.[12] The reliability and validity studies were performed by Seber et al.[13] Later, new additions related to the validity and reliability of the scale were introduced to the scale by Durak. Some items in the scale are scored as positive and some items as negative. High scores indicate a high level of hopelessness.

The original Cronbach's alpha co-efficient of the scale was found to be 0.86.[14] The Cronbach's alpha coefficient of this study was calculated as 0.80.

Statistical Analysis

Descriptive statistics, T test in dependent and independent groups, Mann-Whitney U and One-Way ANOVA tests and correlation tests were used in the analysis of the coded data of this study. Cronbach's alpha reliability analysis of the scales used in the study was performed. The results were evaluated at $p<0.05$ significance level and in 95% confidence interval.

Ethical Aspect of Research

Our study was conducted in accordance with the Helsinki declaration. Before the implementation of the study, written permission was obtained from Diyarbakır Gazi Yaşargil Training and Research Hospital Head Physician, and ethics approval was taken from Health Sciences University Gazi Yasargil Training and Research Hospital Ethics Committee (Decision No: 2018/90).

RESULTS AND DISCUSSION

In the study, it was determined that the mean age of the patients was 49.4±14.4, 57.1% were female, 76.6% were single, 27.8% had primary school education, 60.3% lived in the provincial center, 45.2% were housewives, 46% lived together with 4-6 people in the same household, and 35.3% had been diagnosed with DM for 11 years and above (Table 1).

Table 1. Distribution of the Socio-Demographic Data of the Participants

Patient Characteristics	N	%
Age (X̄±SS)	**49.4±14.4**	
Gender		
Female	144	57.1
Male	108	42.9
Marital Status		
Single	193	76.6
Married	59	23.4
Educational Status		
Illiterate	45	17.9
Literate	42	16.7
Primary School	70	27.8
High School	60	23.8
Undergraduate-Postgraduate	35	13.9
Place of Residence		
Village/Town	36	14.3
District Center	64	25.4
Provincial Center	152	60.3i
Occupation		
Worker	35	13.9
Government Employee	43	17.1
Housewife	114	45.2
Self-employed	26	10.3
Other	34	13.5
Number of people in the household		
1-3 People	88	34.9
4-6 People	116	46
7 and above	48	19
Duration of the disease		
Less than 1 year	35	13.9
1-5 years	80	31.7
6-10 years	48	19
11 years and above	89	35.3

It was found that the mean scores obtained from MSPSS and family, significant other and friend's sub-dimensions were 65.2±15, 23.3±4.5, 23.1±6.8, 18.8±7.1, respectively, and the patients had high levels of perceived

social support in the study. It was also identified that BHS mean score of the patients was 11.2±1.8, demonstrating a moderate level of hopelessness (Table 2).

Table 2. Mean Scores of the Participants Obtained From MSPSS and BHS

Scale	X̄±SS	Min.-Max. Scores Obtained
MSPSS	65.2±15	12-84
Family sub-dimension	23.3±4.5	6-28
Significant other sub-dimension	23.1±6.8	4-28
Friends sub-dimension	18.8±7.1	4-28
BHS	11.2±1.8	8-20

It was found that the MSPSS mean scores were accurate, family sub-dimension and significant other sub-dimension differed statistically significantly in terms of the patients' marital status($p<0.05$). Between the mean scores obtained from MSPSS, there was also a statistically significant difference, family sub-dimension, friend's sub-dimension and BHS according to their educational status ($p<0.05$). As a result of Bonferroni correction performed, the difference was found to arise from the group with undergraduate and post-graduate educational level. A statistically significant difference was found between SPSS, and all sub-dimensions mean scores in terms of the patients' occupation ($p<0.05$, $p<0.001$). Bonferroni correction revealed that the source of the difference was the government employee group. It was found that there was no statistically insignificant difference between the MSPSS and BHS total score averages according to the duration of DM diagnosis ($p<0.05$) (Table 3).

Table 3.Comparison of MSPSS and BHS Mean Scores According to Patients Characteristics

Patient'sCharacteristics	MSPSS	Family Sub-dimension	Significant other Sub-dimension	Friends Sub-dimension	BHS
Gender					
Female	65.9±15.8	22.9±4.8	23±6.7	18.1±7.6	12.6±1.9
Male	68.6±13.9	23.9±4.1	23.2±7.1	19.7±6.4	12.1±1.9
Statistical Test and significance	t=-1.478 p=0.141	t=-1.89 p=0.06	t=-0.319 p=0.75	t=-1.816 p=0.071	**t=2.056 p=0.041**
Marital Status					
Married	69.8±13.5	23.9±4	24.8±5.3	19.1±7.1	12.3±2
Single	58.2±16.5	21.4±5.4	17.4±8.2	17.8±7.2	12.7±1.8
Statistical Test and Significance	**t=4.909 p=0.000**	**t=3.336 p=0.001**	**t=6.434 p=0.000**	t=1.187 p=0.238	t=-1.281 p=0.203
Educational Status					
Illiterate	61.6±16	21.3±5.5	21.6±6.7	16.6±7	13.6±2
Literate	65.2±14.8	23.4±4.2	22.5±7.3	16.9±7.6	12.6±2.1
Primary School	67±14.8	23.7±4	22.8±7.4	18.7±7	12±1.6
High School	68.3±14.6	23.6±4.1	23.5±6.6	19.8±6.3	12.2±1.8
UG – Post-Graduate	74.2±12.7	24.6±4.5	25.6±5.3	22.7±6.6	11.9±1.9
Statistical Test and Significance	**F=3.846 p=0.005**	**F=3.174 p=0.014**	F=1.825 p=0.125	**F=5.003 p=0.001**	**F=6.082 p=0.000**
Place of Residence					
Village/Town	62.5±17	23.1±4.1	21.1±8.9	16.1±7.5	12.7±2.4
District Center	66.6±16.2	23.2±5.2	22.8±7.1	19.1±7.4	12.1±1.7
Provincial Center	68.3±13.9	23.4±4.3	23.7±6.1	19.4±6.8	12.4±1.9
Statistical Test and Significance	F=2.18 p=0.115	F=0.13 p=0.878	F=2.028 p=0.134	F=3.034 p=0.051	F=1.012 p=0.365
Occupation					
Worker	65.3±16.7	23.5±3.5	20.9±9.3	18.9±7.2	12±1.81
Government Employee	75±10.4	25.3±3.2	25.9±4.5	22.9±4.6	12.9±1.7
Housewife	64.4±16	22.5±4.8	22.7±6.6	16.9±7.5	12.7±1.9
Self-employed	67±14.5	23.1±5.1	23.2±6.5	19.1±6.3	12±2.15
Other	67.8±12.3	23.5±4.6	23.1±6.6	19.8±7	12.8±2.1
Statistical Test and Significance	**KW=18.355 p=0.001**	**KW=12.527 p=0.014**	**KW=12.05 p=0.017**	**KW=21.165 p=0.000**	KW=11.318 p=0.063
Number of people in the household					
1-3 People	67.2±15.8	23.6±4.2	23.2±7.4	18.5±7.5	12.5±2.2
4-6 People	66.7±14.9	22.9±4.7	23.3±6.3	18.8±7.1	12.3±1.7
7 people and above	67.5±14.4	23.9±4.6	22.3±7	19.5±6.5	12.6±1.8
Statistical Test and Significance	F=0.053 p=0.948	F=1.067 p=0.346	F=0.345 p=0.708	F=0.274 p=0.76	F=0.419 p=0.658

Table 3. (Continuation)

Duration of Disease					
Less than 1 year	70.8±14.4	24.6±3.9	25±5.8	21.6±6	12.2±1.9
1-5 years	69.2±13.4	23.6±4.4	24±5.9	20.1±6.6	12.5±2
6-10 years	64.2±14.7	22.5±4.3	22.2±7.3	17.4±6.5	12.3±2.2
11 years and above	64.4±16.1	23.1±4.8	22±7.5	17.4±7.9	12.5±1.7
Statistical Test and Significance	F=3.811 p=0.061	F=1.679 p=0.172	F=2.456 p=0.064	F=4.66 p=0.053	F=0.333 p=0.802

The MSPSS and all sub-dimensions mean scores as well as the BHS mean scores were shown to be negatively and significantly related in the study. ($p<0.001$). As the levels of the social support as perceived by patients increase, their levels of hopelessness decrease (Table 4).

Table 4. Examination of the Relationship Between MSPSS and BHS Mean Scores

	MSPSS	**Family. sub-dimension**	**Significant sub-dimension**	**Friends sub-dimension**
BHS	r=-248 p=0.000	r=-0.22 p=0.000	r=-0.23 p=0.000	r=-0.176 p=0.005

Diabetes is a chronic disease affecting individuals both physically and psychologically. Social support provided to them has a positive impact on their mental and physical health. It has been reported that social support diminishes anxiety levels in patients and promotes their well-being. Hope is a powerful factor in coping with diabetes' effects in addition to social support.[15]

The results of the study showed that the social support surfaces of the patients were high. In the study conducted by Rashid et al., which examined the social support levels of individuals, they concluded that they had a high level of social support.[16] Similarly, Olabode et al. discovered that the patients had high levels of social support in the study they conducted on DM patients in a state hospital in the city of Lagos, Nigeria.[17] Our results are consistent with the literature.

Hope contributes positively to patient's health by reducing symptoms and accelerating the recovery process. Hopelessness in patients diagnosed with Type 2 DM can develop because of changes in lifestyle, chronic disease status, and drug therapy.[18] In the study conducted by Albanese and Morales, hopelessness level of the patients was determined to be high.[19] In the study, hopelessness levels of patients with DM were found to be moderate, which can be considered to have stemmed from the sample characteristics.

In the study, it was observed that social support did not differ according to gender, but that the level of hopelessness varied significantly. In the study conducted by Kök and Demir, like our study, it was found that hopelessness level did not differ in terms of gender.[20] Başaran et al. reported that females were significantly more hopeless than males.[21]

In the study, it was observed that there were differences in the perceived social support levels according to the marital status of the patients and that married individuals had higher levels of perceived social support. Softa et al. in their study conducted in 2016 reported similar results to the results of our study.[22] The results of the study were not statistically significant when considering the hopelessness levels of the patients according to their marital status. In the study conducted by Başaran et al., they did not determine a difference between hopelessness levels of married and single patients, which is consistent with our finding.[21]

In the study, it was discovered that patients with undergraduate and post-graduate degrees had higher perceived social support than other groups., but their hopelessness levels were lower. While some studies in the literature found that educational status did not affect social support.[20,23] Softa et al. and

Koçak et al. reported high levels of perceived social support in individuals with

undergraduate degree.[22,24] In their study, Mitchell et al. reported low levels of hopelessness in individuals with higher education.[25] In a study on hemodialysis patients by Başaran et al., it was discovered that the level of hopelessness decreased as education levels increased.[21]

In the study, it was determined that occupation influenced perceived social support but did not affect hopelessness levels. Like our study, Avşar et al. found that perceived social support was affected by occupation, while Kılınç et al. in their study reported no relationship between occupation and hopelessness level.[23,26]

In the study, the relationship between the number of people living in a household and the perception of hopelessness and social support was insignificant. There were no studies on the topic of the relationship between the number of people living in a household and levels of perceived social support and hopelessness in the literature. It might be claimed that the level of perceived social support and hopelessness is affected not by the number of people living in the household but by the relationship with those people. In the study, there was no relationship between perceived social support and hopelessness levels in the time elapsed since the diagnosis of DM. Similarly, Korkmaz and Tel and Aras and Tel reported in their studies that the duration of the chronic disease did not affect perceived social support.[27,28] Another similar study by Tan et al. revealed that the level of hopelessness did not change significantly over the duration of the disease.[29]

The MSPSS and BHS mean scores of the patients were found to have a negative and significant relationship in the study. As social support levels of the patients increase, their levels of hopelessness decreases. Like this study, Peker and Karaöz revealed in their study that there was a negative and significant relationship between patients with diabetic foot patients' perceptions of social support and their levels of hopelessness.[30]

CONCLUSION AND RECOMMENDATIONS

The study's findings revealed a negative and significant correlation between patients' perceptions of social support and their levels of hopelessness. It was determined in the study that marital status, educational status, and occupations of the patients affected their perceived social support. It was also identified that gender and educational status of the patients had an impact on their levels of hopelessness. In line with these findings, it is recommended that patients' levels of perceived social support and hopelessness be determined, the factors affecting social support level should be examined, appropriate initiatives should be planned to increase social support and hope levels of patients, health professionals' awareness and knowledge levels about this issue should be raised through training, and that similar research should be conducted with different and larger samples

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