

The effect of perceived social support on acceptance of illness in type 2 diabetes: A cross-sectional study

Tip 2 diyabette algılanan sosyal desteğin hastalığı kabullenme üzerine etkisi: Kesitsel bir çalışma

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ABSTRACT

Objective: This study aims to examine the impact of perceived social support on disease acceptance in individuals with type 2 diabetes. **Methods:** This research was conducted as a descriptive study with 262 type 2 diabetes patients who received treatment in the internal medicine department of a district public hospital between November 10, 2021, and February 1, 2022. Data were collected using a personal information form developed by the researchers, the Acceptance of Illness Scale (AOIS), and the Multidimensional Perceived Social Support Scale (MPSSS). **Results:** A significant relationship was found between participants' disease acceptance and social support levels with variables such as older age, female gender, higher education level, and increasing diagnosis duration. Additionally, our findings revealed a positive correlation between MPSSS and AOIS score averages. **Conclusion:** The findings indicate that several factors influence individuals' perceived social support and disease acceptance levels. It is recommended that appropriate social services be planned and implemented to enhance the social support of patients. Furthermore, healthcare professionals, particularly nurses, should incorporate training and practices that enhance acceptance of illness in their care plans

ÖZ

Amaç: Bu çalışma, Tip 2 diyabetli bireylerde sosyal desteğin hastalığı kabul düzeyi üzerindeki etkisini incelemeyi amaçlamaktadır. **Yöntem:** Bu araştırma, 10 Kasım 2021 ile 1 Şubat 2022 tarihleri arasında bir dahiliye kliniğinde ilaç tedavisi gören 262 tip 2 diyabet hastası ile açıklayıcı bir şekilde yürütülmüştür. Bilgi toplamak için analistler tarafından yapılan Kişisel Bilgi Formu, Hastalığın Kabulü Ölçeği (AOIS) ve Çok Boyutlu Algılanan Sosyal Destek Ölçeği (MPSSS) kullanılmıştır. **Bulgular:** Katılımcıların hastalığı kabullenme ve sosyal destek düzeyleri ile ileri yaş, kadın cinsiyet, yüksek eğitim düzeyi ve artan tanı süresi arasında bir ilişki bulunmuştur. Çalışma sonuçlarımız ayrıca MPSSS ile AOIS puan ortalamaları arasında pozitif bir ilişki olduğunu ortaya koymuştur. **Sonuç:** Bulgular, bireylerin algıladıkları sosyal destek ve hastalığı kabullenme düzeylerini etkileyen çeşitli faktörler olduğunu göstermektedir. Hastaların sosyal desteğini artırmak için uygun sosyal hizmetlerin planlanması ve uygulanması önerilmektedir. Ayrıca, başta hemşireler olmak üzere sağlık çalışanları, bakım planlarına hastalığı kabullenmeyi artıracak eğitim ve uygulamaları dahil etmelidir.

INTRODUCTION

Diabetes is one of the most significant public health problems today. It is a metabolic disease that arises due to insufficient or ineffective use of insulin, leading to various acute and chronic complications and requiring lifelong medical care (Wang et al., 2019; Plotnikoff et al., 2017). The prevalence of diabetes has steadily increased over the past decade, with over 425 million individuals diagnosed worldwide in 2017, a figure projected to reach 642 million by 2040 (Carracher et al., 2018). In Turkey, diabetes prevalence ranges between 12.3% and 17.3% (Yılmaz et al., 2018).

Successful diabetes management requires lifestyle adaptation, disease acceptance, and strong social support (Khin et al., 2021). Social support can be defined as an individual's perception of assistance provided by others, including family, friends, and healthcare professionals (Chew et al., 2015). Various studies have emphasized the crucial role of social support in diabetes management, demonstrating its positive impact on glycemic control, self-care behaviors, and psychological well-being (Ramkisson et al., 2017; Lee et al., 2018; Bakır ve Zengin, 2023). Additionally, disease acceptance is vital in coping

with diabetes, as a low level of acceptance has been linked to inadequate self-care and poor glycemic control (Yilmaz, 2024). Given the limited research comparing social support and disease acceptance in type 2 diabetes patients in Turkey, this study aims to bridge that gap. AOI is accompanied by some limitations and lifestyle changes. And there is evidence that individuals should be supported by their families and people around them in order to effectively cope with these limitations and lifestyle changes (Starczewska et al., 2018; Wang et al., 2019). Subsequently, it is critical for healthcare experts to assess the AOI level and social back of the patients for giving preparing on AOI as well as proper care, and within the light of such assessments, distant better; a much better; a higher; a stronger; an improved" > a stronger course of the bones for the preparing and care of the quiet can be guaranteed. In spite of the fact that there are comparative considers on PSS and AOI in type-2 diabetes patients within the writing, there's no consider comparing these two parameters, particularly in Turkey, so this consider pointed to look at the impact of PSS on AOI levels in the participants

METHOD

Study Design and Participants

This study was conducted to investigate the effect of perceived social support on disease acceptance in individuals with type 2 diabetes. It was carried out between November 10, 2021, and March 1, 2022, among patients receiving outpatient treatment at a district state hospital.

Sample Size and Inclusion Criteria

The sample size was calculated using G-Power 3.1.9.7 software, assuming a correlation of 0.2, $\alpha=0.050$, and power $(1-\beta) = 0.95$, resulting in a required sample size of 262 individuals. Inclusion criteria included a diagnosis of type 2 diabetes for at least six months, voluntary participation, and the absence of communication barriers. Patients who did not complete the survey or withdrew from the study were excluded.

Data Collection and Instruments

Data were collected through face-to-face interviews while adhering to social distancing and mask regulations.

Acceptance of Illness Scale (AOIS): Developed by Felton et al. (1984) and validated for Turkish populations by Besen and Esen (2011), this scale consists of 8 items rated on a 5-point Likert scale, with higher scores indicating greater disease acceptance. In this study, the Cronbach's alpha reliability coefficient was 0.89.

Multidimensional Perceived Social Support Scale (MPSS): Developed by Zimet et al. (1988) and validated in Turkish by Eker et al. (2001), this scale consists of 12 items measured on a 7-point Likert scale, with higher scores reflecting stronger perceived social support. In this study, Cronbach's alpha was 0.97.

Statistical Analysis

Data were analyzed using SPSS 21.0 software. Descriptive statistics were used to summarize data. Since the data were not normally distributed, nonparametric tests such as Kruskal-Wallis and Mann-Whitney U-tests were used for comparisons. A significance level of $\alpha=0.05$ was adopted.

RESULTS

Clear insights with respect to the factors considered inside the scope of the consider, the Cronbach's alpha esteem of the AOIS and MPSS, and the relationship between AOI and multidimensional social bolster were inspected. Graphic investigation comes about of clear characteristics are displayed in Table 1.

When the distribution of type 2 diabetes participants in the study was examined with respect to their personal characteristics, the mean age was 57.25 ± 11.86 , the diagnosis period was 6.46 ± 7.67 , the mean fasting blood glucose was 133.46 ± 49.62 , 52.7% were male, 88.5% were married, 58.8% were primary school graduates, 38.2% were housewives, 50.4% had a chronic disease other than type 2 diabetes, and 78.6% took oral antidiabetic medicine treatment (Table 1).

When table 2 was inspected, the relationship between AOI level and older age, female gender, higher education level and increasing diagnosis time was found statistically. While there was no significant difference between marital status, profession, presence/absence of comorbid disease, treatment type and fasting blood sugar ($P>0.05$). When the relationship of age groups with each other was evaluated, it was observed that the AOI level of individuals over the age of 60 was significantly lower than the other groups, while there was no relationship between the age groups under 50 and 50-60. Likewise, when the relationship of educational status groups with each other was evaluated, it was found that high school and university graduates had a significantly higher AOI level compared to the other groups (Table 2).

In our ponder, the relationship of the participants' social support levels and older age, female gender, higher education level and increasing diagnosis time was found statistically significant. When the pairwise comparisons of the age variable were evaluated, it was observed that the level of social support decreased as the age increased.

Table 1. Descriptive characteristics of the participants (n=262)

Variables	$\bar{X} \pm SD$	
Age	61.0 \pm 8.70	
Diagnosis time	6.9 \pm 3.63	
Fasting blood glucos	133.46 \pm 49.62	
	N	%
Gender		
Female	124	47.3
Male	138	52.7
Marital Status		
Married	232	88.5
Single	30	11.5
Education status		
Primary school	154	58.8
Secondary school	20	7.6
High school	60	22.9
University and more	28	10.7
Occupation		
Housewife	100	38.2
Retired	94	35.9
Officer	50	19.1
Employee	18	6.9
Comorbid chronic disease		
Yes*	132	50.4
No	130	49.6
Treatment method		
Oral Antidiabetic	206	78.6
Insulin	38	14.5
Insulin+Oral Antidiabetic	18	6.9

* Diabetes (56-%43.7), Hypertension (44-%34.3), Heart Failure (14-%10.9), Liver disease (6-%4.6).

Likewise, when the relationship of educational status groups with each other was evaluated, it was found that high school and university graduates had a significantly higher social support level compared to the other groups. When the duration of diagnosis is compared between the groups, it is seen that only those with less than 5 years have a significant difference compared to the other groups (Table 2).

A positive relationship was also demonstrated in Table 3 between MPSSS and AOIS mean scores. A positive and critical relationship was found between the AOIS and the Multidimensional Social Bolster Scale's Family, Companion, and Extraordinary Individual sub-dimensions and add up to cruel ($P < 0.001$).

DISCUSSION

Our findings revealed a significant association between perceived social support and disease acceptance among individuals with type 2 diabetes. Specifically, older patients, women, and individuals with higher education levels exhibited higher levels of social support and disease acceptance. These findings align with previous studies indicating that higher education levels contribute

to better disease management and acceptance (Yilmaz et al., 2019; Sahin and Cingil, 2020; İlaslan et al., 2021). Some studies on the subject reported that social support, which was perceived as similar to our study, was affected by various sociodemographic characteristics (gender, occupation, marital status) (Mohebi et al., 2018; Özkaptan et al., 2019; Özdemir et al., 2019; Sarpooshi et al., 2021). A positive correlation between perceived social support and disease acceptance was also observed. Patients who reported higher social support levels demonstrated better acceptance of their condition. These findings support the notion that social support enhances psychological resilience and disease adaptation (Özkaptan et al., 2019; Bakir and Zengin, 2023). Future interventions should focus on strengthening support networks to improve health outcomes in diabetic patients.

The low level of PSS and AOI especially in patients over the age of 60 was considered to be due to factors such as being a disadvantaged group already in terms of social support and not accepting aging, having difficulties in self-care, and coping with the disease. In studies similar to ours, a positive relationship was observed

Table 2. Results of comparison of descriptive features with Acceptance of Illness Scale' and Multidimensional Scale of Perceived Social Support mean score

Variables	Acceptance of Illness Scale		Multidimensional Scale of Perceived Social Support	
Age				
< 50 yaş	33.8±5.72 ^a	KW=17.402 p=.000	73.51±13.19 ^a	KW=24.061 p=.000
50-60 yaş	31.79±8.06 ^a		67.50±17.19 ^b	
> 60	30.21±6.15 ^{bc}		63.6±15.80 ^c	
Gender				
Female	30.1±7.33	Z=-3.024 p=0.002	64.9±16.22	Z=-2.747 p=0.006
Male	33.0±5.86		69.65±15.49	
Marital Status				
Married	31.6±6.75	Z=-0.087 p=.930	68.48±15.71	Z=-2.985 p=.003
Single	31.5±6.73		59.20±15.94	
Education status				
Secondary school	30.2±7.02 ^a	KW=19.369 p=.000	62.8±15.79 ^a	KW=49.572 p=.000
High school	31.0±6.85 ^a		68.60±14.40 ^a	
University and more	34.3±5.58 ^b		74.86±14.39 ^b	
Secondary school	34.0±5.02 ^c		75.7±11.95 ^c	
Occupation				
Housewife	30.2±7.57 ^a	KW=6.699 p=.082	65.3±15.95 ^a	KW=14.288 p=.003
Employer	33.6±5.08 ^a		73.3±14.20 ^b	
Officer	33.2±6.40 ^b		72.1±15.16 ^c	
Retired	31.9±6.00 ^a		65.9±16.21 ^a	
Diagnosis time				
<5 year	31.6±6.92 ^a	KW=10.072 p=.006	71.6±14.68 ^a	KW=32.128 p=.000
5-10 year	32.3±5.83 ^b		58.6±18.13 ^b	
> 10 year	30.0±6.47 ^c		64.9±12.47 ^c	
Comorbid chronic disease				
Yes	31.1±7.60	Z=-.508 p=.612	66.8±16.20	Z=-.589 p=.556
No	32.0±5.88		67.9±15.84	
Treatment method				
Oral Antidiabetic	31.6±6.92	KW=1.599 p=.449	67.7±16.56	KW=3.397 p=.183
Insulin	32.3±5.83		65.4±13.26	
Insulin+Oral Antidiabetic	30.0±6.47		68.3±14.92	
Fasting Blood Glucos				
<110 mg/dl	32.3±6.25	KW=1.287 p=.525	68.4±16.41	KW=2.172 p=.338
110-140 mg/dl	31.8±6.49		68.0±15.69	
> 140 mg/dl	30.6±7.62		65.1±16.16	

Table 3. Correlation analysis of the Acceptance of Illness Scale and Multidimensional Scale of Perceived Social Support in type 2 diabetes patients

SCALES	Multidimensional Scale of Perceived Social Support			
	Family	Friend	Special Person	Total
Acceptance of Illness Scale	r = 0.574 p=0.000	r = 0.626 p=0.000	r = 0.597 p=0.000	r = 0.670 p=0.000

between educational status and AOI as well as social support (Özkaptan et al., 2019; Iwanowicz-Palus et al., 2019). The high levels of AOI and PSS in high school and university graduate patients were considered to be due to their higher sociocultural level and the fact that they had more arguments such as knowledge and high self-management level in coping with a chronic disease. In a study conducted with diabetes patients in a family health center, it was observed that the level of acceptance of illness decreased as the diagnosis period increased (Artuk and Aydinalp, 2018; Özsaydı et al., 2023). It can be attributed to the fact that patients with a short diagnosis period may be better able to cope with a chronic disease than those with a diagnosis period of more than 10 years, and their coping power may be depleted as the disease/treatment period increases. In a study similar to ours, the AOI level in men was found higher than in women (Sahin and Cingil, 2020). It is thought that the reason why housewives have little social support is because they are constantly at home and have a lot of responsibilities such as child care and house cleaning. For retirees, this may be due to social isolation and the increase in age-related diseases. In the study of Iwanowicz-Palus et al. (2019), it was seen that the social support of the married patients was higher than the single ones. This result is in parallel with our study. The higher PSS of married people compared to single ones may be due to the fact that they consider receiving more support from their spouses and children.

The PSS and AOI were seen to be positively correlated in the study. Accordingly, it can be concluded that the AOI was higher in individuals with higher PSS. Similar results were reported in the subject-based literature examination as well (Akturk and Aydinalp, 2018; Wang et al., 2019). Considering all these results and that individuals with chronic diseases are generally above middle age, it is important to provide proper education and care for these individuals in order to facilitate AOI. Training and practices that will increase social support and AOI may be incorporated more often in the nursing care of these individuals. In addition, it is considered important to plan proper social services, develop and implement social policies in order to improve social support in these disadvantaged groups.

Limitations

The think about had a few confinements. Since the think about was conducted with diabetic people who connected to a single healing center in a certain time period and concurred to take an interest within the consider, the failure to generalize the comes about to its populace is an imperative impediment of the ponder. Prospective studies are needed to determine

whether AOI and social support and the social support perception of disease acceptance are causally related.

CONCLUSION

In conclusion, it was found that the PSS and AOI level of the people were influenced by factors such as age, sexual orientation, instructive, calling, and conclusion period. It was too watched that the PSS was related with the AOI. Considering that medical attendants are the foremost communicated and for the most part counseled healthcare experts approximately the issues experienced by them, it can be proposed that they join more preparing and hones in their care for encouraging AOI. It can too be suggested that legitimate social administrations are arranged and actualized for moving forward social back.

The findings underscore the need for health academics to emphasize the psychosocial dimensions of chronic disease management. Educating healthcare professionals about the significance of social support can enhance patient-centered care and improve diabetes management outcomes. Future research should explore tailored interventions that address specific social support needs in different demographic groups.

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