



The effect of spiritual well-being on acceptance of illness in patients with type II diabetes mellitus

Tip II diyabet hastalarında manevi iyilik düzeyinin hastalığı kabullenmeye etkisi

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ABSTRACT

Aim: The current study was conducted to evaluate the effect of spiritual well-being levels on acceptance of illness in individuals with Type II Diabetes Mellitus (TIIDM).

Methods: The study was conducted in a University Hospital Diabetes Education Center, Endocrine and Metabolism clinic and polyclinic between September and December 2021. The current study was of a cross-sectional type, and it was consisted of 110 individuals with TIIDM. Individual Information Form (IIF), Acceptance of Illness Scale (AIS), and Spiritual Well-being Scale (FACIT-Sp) were utilized to collect data.

Results: It was determined that individuals' acceptance of illness scores were 21.85 ± 3.93 , and their spiritual well-being scores were 21.13 ± 8.66 . A statistically positive weak correlation was determined between the individuals' total mean scores of FACIT-Sp and AIS ($p < 0.05$, $r = 0.434$). The spiritual well-being levels predicted the acceptance of illness by 18%.

Conclusion: It can be said that the individuals with TIIDM had mild levels of acceptance of illness and spiritual well-being. In addition, it was determined that as the individuals' spiritual well-being levels increased, their acceptance of illness levels also increased.

Keywords: diabetes mellitus; morale; perception; nursing

ÖZET

Amaç: Bu araştırma, Tip II Diyabetes Mellituslu bireylerde manevi iyilik düzeyinin hastalığı kabullenmeye etkisinin belirlenmesi amacıyla yapıldı.

Yöntem: Araştırma bir Üniversite Hastanesinin Diyabet Eğitim Merkezi, Endokrin ve Metabolizma kliniği ve polikliniğinde Eylül-Aralık 2021 tarihleri arasında yürütüldü. Kesitsel türde yapılmış olan araştırmanın örneklemini, Tip II Diyabetes Mellitus tanısı almış 110 birey oluşturdu. Verilerin toplanmasında Birey Bilgi Formu, Hastalık Kabul Ölçeği ve Manevi İyilik Ölçeği kullanıldı.

Bulgular: Araştırmada, bireylerin hastalık kabul düzeyi toplam puan ortalamasının 21.85 ± 3.93 ve manevi iyilik düzeyi toplam puan ortalamasının 21.13 ± 8.66 olduğu belirlendi. Hastalık kabul toplam puanı ile manevi iyilik toplam puanı arasında pozitif zayıf bir ilişki olduğu bulundu ($p < 0.05$, $r = 0.434$). Ayrıca, manevi iyilik düzeyinin hastalığı kabullenmeyi %18 oranında yordadığı belirlendi.

Sonuçlar: Bireylerin hastalığı kabullenme ve manevi iyilik düzeylerinin orta düzey olduğu söylenebilir. Bireylerin manevi iyilik düzeyleri arttıkça hastalığı kabul düzeylerinin de arttığı belirlendi.

Anahtar kelimeler: diyabetes mellitus; maneviyat; kabul; hemşirelik

Introduction

Diabetes mellitus "(DM); it is a illness that impairs the quality of life of individuals because of complications". Diabetes is a chronic illness with a high incidence of morbidity and mortality (Üşenmez et al., 2021).

Self-care behaviors (such as glucose monitoring, diet, exercise, weight control, treatment compliance, foot care) that individuals must follow after being diagnosed with diabetes make it necessary for diabetics to make changes in their lifestyles. New lifestyles of individuals can also lead to negative emotional experiences (García-Mayor & García-Soidán, 2017; Nicolucci et al., 2013). Adapting to self-care behaviors of diabetes is an indispensable element in glycemic control (keeping blood glucose level within reference limits) of individuals with diabetes. Today, it is accepted that A1c not only provides information about glycemic control, but also reflects the risk of developing diabetic complications and the quality of diabetic care (Herman & Fajans). It has been emphasized that the adherence of individuals with TIIDM to diabetes treatment is not adequate and the individuals cannot adapt to their new lifestyles (Baltacı et al., 2015; Rahman et al., 2020). It can be difficult for individuals to accept that they

have a chronic illness and therefore need to make changes in their lifestyle. Therefore, individuals with diabetes; spiritual, emotional, social and sexual etc. they may face problems in many areas (Küçük, 2015). Acceptance of individuals with diabetes enables them to develop health-maintaining behaviors and to cope with the illness. Not accepting the illness can cause them not to adapt to treatment and lifestyle changes, to decrease their sense of independence, and to be unable to fulfill their self-care behaviors (Büyükkaya Besen & Esen, 2011). Çelik et al. (2021), İlaslan et al. (2021), Özkaptan et al. (2019) found that individuals with diabetes had a mild level of acceptance of the illness. Diabetes cannot be fully treated and its long-term effects negatively affect individuals. In order to cope with this situation, individuals need to accept the illness and feel good spiritually.

Health is not only a state of physical well-being, but also a state of whole social, mental and spiritual. In order to strengthen the physical and mental health of individuals with diabetes, their spiritual health should also be supported. Spiritual well-being is examined in two dimensions as religious and existential. While the religious dimension is defined as believing in a god or a higher power, the existential dimension

can be defined as seeking to figure out the meaning and purpose of life (Allahbakhshian et al., 2011). Jafari et al., and Javanmardifard et al. stated that the diabetic individuals' spiritual well-being level is mild (Jafari et al., 2014; Javanmardifard et al., 2020). Chronic illnesses such as diabetes raise many questions about the meaning and purpose of life. At this point, spiritual goodness can provide an important support in finding answers to these questions.

The concept of spiritual care plays an important role in holistic care in modern nursing. Nurses, who are primarily responsible for the care of individuals, have important responsibilities in this regard. It is necessary for nurses to determine the spiritual care needs of individuals with diabetes, to plan interventions to accept the illness and to provide care accordingly.

The aim of current study was to evaluate the effect of spiritual well-being on acceptance of the illness in individuals with TIIDM. The study sought answers to the questions:

- What are the spiritual well-being levels of individuals with TIIDM?
- What are the acceptance of the illness levels of individuals with TIIDM?
- Is there a correlation between the spiritual well-being and acceptance of the illness levels of individuals with TIIDM?

Methods

Study design and setting

This cross-sectional study was conducted with individuals with TIIDM at the "Diabetes Training Center, the Endocrinology and Metabolism Clinic", and the outpatient clinic of a university hospital between September and December 2021.

Sampling procedure

G*power analysis was performed, and a sample size of 110 individuals with TIIDM was calculated in a confidence interval of 95%, for an effect size of 0.03, and a power of 0.95 to represent the population. Individuals' file registration numbers were listed. Then, sample were selected according to a simple random sample method.

Inclusion criteria

- Being 18 years old or older
- Being diagnosed with TIIDM
- Being open to communication

Exclusion criteria

- Having dementia or any other organic mental disorder
- Having neurological illness and intellectual disabilities that affected individuals' cognitive functions
- Having any psychiatric diagnosis.

Measures

Individual information form (IIF): The form contained thirteen questions, which asked individuals about the following descriptive characteristic; age, gender, marital status, employment status, educational status, the duration of illness, use of drugs related to diabetes, their perception of their health, A1c level, status of diabetes complication, the presence of a chronic illness other than diabetes, adherence with the diet recommended by a dietitian or physician, and self monitoring of blood glucose at the frequency recommended by a nurse or physician (Can et al., 2020; İlaslan et al., 2021; Üşenmez et al., 2021).

Table 1. Distribution of the individuals' information (n=110)

Individual Information	N/Mean±SD	%
Age groups (years)		
18-28	6	5.5
29-39	11	10.0
40-50	31	28.2
51-61	39	35.5
62 and older	23	20.9
Gender		
Male	47	42.7
Female	63	57.3
Educational status		
Literate	47	42.7
Primary school	13	11.8
Secondary school	22	20.0
High school	14	12.7
University graduate	14	12.7
Marital status		
Married	90	81.8
Single	20	18.2
Employment status		
Yes	21	19.1
No	89	80.9
Status of perceiving own health		
Good	14	12.7
Mild	55	50.0
Poor	41	37.3
Diabetes treatment type		
Diet+physical activity	6	5.5
Oral anti diabetic (OAD)	31	28.2
İnsülin	55	50.0
OAD ve insülin	18	16.4
Status of diabetes complication		
Yes	43	39.1
No	67	60.9
Any other chronic illness		
Yes	53	48.2
No	57	51.8
Diet adherence		
Yes	27	24.5
Partly	56	50.9
No	27	24.5
Blood glucose monitoring		
Yes	67	60.9
No	43	39.1
Duration of illness (years)		
0-1	18	16.4
2-5	25	22.7
6-10	25	22.7
11-15	20	18.2
16-20	9	8.2
21 and over	13	11.8
A1c Level	10.28±3.22	<6.5 or <7*
TOTAL	110	100.0

*It expresses the reference value of the A1c value.

Acceptance of Illness Scale (AIS): Felton and Revenson (1984) developed the scale. It was adapted to diabetic patients in Turkish society by Büyükkaya Besen and Esen (2011). The Cronbach's α coefficient was found to be 0.79. The AIS consists of eight items and each item consists of five points. The sixth item of the scale is scored inversely. The lowest 8 points from the scale are the highest 40 points (Büyükkaya Besen & Esen, 2011). The scale's Cronbach's α coefficient was 0.92 for current study.

Spiritual Well-Being Scale (FACIT-Sp): The scale was developed by Ellison and Paloutzian (1982). Turkish validity and reliability of scale carried out by Aktürk et al. (2017). The Cronbach's α coefficient of the scale varies between 0.81 and 0.89". The 5-point Likert-type scale has 3 subscales consisting of meaning subscale, peace subscale, and belief subscale. Each item in the scale is scored between 0-4. The fourth and eighth items of the scale are scored reversely and the other items are scored straight. The lowest 0 points from the scale are the highest 48 points. The higher the score shows that higher level of spiritual well-being (Aktürk et al., 2017). The scale's Cronbach's α coefficient was 0.92 for current study.

Data collection procedure

Data were collected by interviewing individuals with TIIDM. IIF, AIS, and FACIT-Sp questionnaires were marked according to the answers received by the first researcher by reading them to the individuals. It took approximately 10-15 minutes to filled out each questionnaire.

Data analysis

IBM SPSS 25.0 was utilized for data analysis. $p < 0.05$ was took account of significant for the study. Cronbach's α reliability analysis was utilized to calculate the reliability coefficients of the scales, percentage distribution was utilized to calculate the descriptive characteristics, arithmetic mean was utilized to calculate the total score mean of the scales, and Pearson Correlation and Linear Regression analysis were utilized to compare the both scales.

Ethical statement

Before starting the current study, approval (Approval No: 2021/2372, Date: 10.08.2021) from the Health Sciences Ethics Committee of a University and legal permission from the University hospital were acquired. Before starting the study, it was explained to the individuals "about the aim of the study, that the information they provided would be kept confidential and that they could withdraw from the study at any time". The current study was conducted in accordance with the Principles of the Declaration of Helsinki. In addition, written consent was acquired from the individuals using the 'Informed Voluntary Consent Form'.

Results

Table 1 shows that 31.5% of the individuals were in the age group of 51-61 years, %57.3 of them were female, 81.8% were married, 42.7% were literate, 80.9% were unemployed, 50.0% perceived their health status to be "mild" 45.4% had been ill for 2-10 years, and 51.8% did not suffer from any chronic illness. Considering the diabetes-related characteristics of the individuals, 50.0% only treated by insulin, 60.9% have not any diabetes chronic complications, 50.9% partly adhered to diets, 60.9% monitored regularly blood glucose by self. The mean A1c of the individuals was 10.28 (± 3.22).

Table 2 shows that the total mean score of the individuals was 25.68 \pm 7.71 in FACIT-Sp and 21.85 \pm 3.93 in the AIS.

Table 3 shows a statistically positive weak correlation was determined between the individuals' total mean scores of FACIT-Sp and AIS ($p < 0.05$). As the spiritual well-being levels of the individuals increased, their acceptance of illness also increased. As a results of the regression analysis, the spiritual well-being levels predicted the acceptance of illness by 18%.

Discussion

The results of the current study which was conducted for the aim of evaluating the the effect of spiritual well-being levels on acceptance of illness in individuals with TIIDM were discussed in line with the literature.

According to the scale total score mean; it can be said that "the acceptance of illness of the individuals is mild levels". In former studies, it has been reported that individuals with TIIDM have low or mild acceptance of their illnesses (Bak et al., 2017; Besen & Esen, 2012; Can et al., 2020; Krzemińska & Kostka, 2021; Olszak et al., 2016; Rogon et al., 2017; Starczewska et al., 2018; Şahin & Cingil, 2020; Şireci & Karabulutlu, 2017; Yılmaz et al., 2019). Individuals with TIIDM emphasized that living with diabetes is a difficult process. Considering this process, accepting the illness is a considerable step in the individuals' relationship with the illness and can facilitate the individual to take an active role in the treatment (Bien et al., 2016). Considering that diabetes requires some necessities such as diet, regular exercise, continuous drug use and blood sugar measurement, and changes in daily life activities, it can be thought that diabetes is considered a illness that causes limitations by individuals.

According to the scale score mean; it can be said that the spiritual well-being of the individuals is mild levels. In former studies, it was stated that the spiritual well-being of individuals with TIIDM was mild or high (Ardiansyah et al., 2020; Chopoglou et al., 2019; Heidari et al., 2013; Newlin et al., 2010; Sitepu & Pohan, 2018; Ulfa Suryani, 2020; Urooj-un-nisa & Shafi, 2014). Watkins et al. (2013) emphasized that spiritual and religious beliefs and practices have an essential place in diabetes self-care behaviors. Zareipour et al. (2016) reported that the spiritual health of diabetic individuals is mild. In Turkey, belief, praying and believing in the existence of a holy person have an important place in coping with the illness, so it can be said that spiritual well-being is at a mild level in the current study. The positive effects of spiritual well-being affect not only the physical consequences of the illness, but also the ability to overcome the psychological difficulties caused by the illness. It can be said that individuals with TIIDM use spiritual well-being as a coping method to deal with the negative conditions brought by the illness.

Table 2. Subscales and total mean scores of the FACIT-Sp and total mean scores of the AIS

Scale	Min-Max Score	Mean \pm SD
Meaning Subscale	4-12	8.37 \pm 2.76
Peace Subscale	4-12	8.34 \pm 2.79
Faith Subscale	4-14	8.96 \pm 2.47
FACIT-Sp Total	12-37	25.68 \pm 7.71
AIS Total	12-29	21.85 \pm 3.93

A statistically positive weak correlation was determined between the individuals' total mean scores of FACIT-Sp and AIS ($p < 0.05$). In addition, as a result of the regression analysis, the spiritual well-being predicted acceptance of the illness by 18%. Çelik et al. found that there was no correlation between acceptance of the illness and religious coping in individuals with TIIDM (Çelik et al., 2021). In the other study, a positive correlation was found between

Table 3. The correlation and regression of FACIT-Sp subscales and total mean score with AIS total mean score

AIS Total Score	Correlation**		Regression***					
	r	*p	R ²	β	t	*p	df1,df2	F
Meaning	0.475	0.000	0.22	0.475	5.604	0.000	1.108	31.400
Peace	0.461	0.000	0.21	0.461	5.400	0.000	1.108	29.159
Faith	0.302	0.000	0.09	0.302	3.291	0.001	1.108	10.831
FACIT-Sp Total Score	0.434	0.000	0.18	0.434	5.002	0.000	1.108	25.020

*p<0.05 **Pearson Correlation Analyses ***Linear Regression Analyses

accepting the illness and the level of religious coping (Lager, 2006). It was determined that as the spiritual well-being of the individuals increased, their level of acceptance of the illness also increased. Spiritual goodness consists of the religious dimension, which includes belief in a divine power, and the existential dimension, which includes the meaning and purpose of life.

It can often be difficult for individuals to accept that they have a chronic illness and that they need to change their lifestyle. Believing in a divine power in the face of the difficulties individuals experience can make them stronger. For this reason, spiritual well-being has an important role in dealing with and accepting the illness, and this may contribute to their acceptance of the illness.

Limitation of study

The fact that the current study was conducted in a hospital and therefore it was carried out with individuals with "similar social and cultural aspects". The reason is that the causality has not been adequately examined due to the current study was cross-sectional, and conducted in a small sample group due to the covid-19 pandemic.

Conclusion and Recommendations

It was determined that the level of acceptance of the illness and spiritual well-being of the individuals with TIIDM were mild a statistically positive weak correlation was determined between the individuals' total mean scores of FACIT-Sp and AIS. Nurses have an important role in care. Nursing care in modern nursing is not only limited to medical care, but also tends towards holistic care that includes social, psychological and spiritual aspects. The concept of spiritual care is also a component of holistic care.

Nurses should determine the level of acceptance of the illness in individuals with TIIDM and should consider the spiritual needs of the individuals. In this context, it can be ensured that the importance of spiritual care is emphasized when planning the care of their individuals and that related trainings are provided, that nurses add spiritual care to the treatment plans of individuals and that their level of spiritual well-being can be increased. At the same time, it may be recommended to get counseling from consultation-liaison psychiatric nursing while creating the content of the education to be given to individuals with diabetes. It can be ensured that diabetes nurses participate in diabetes education, which can contribute positively to individuals' acceptance of their disease. In addition, it may be recommended to conduct randomized controlled studies in which psychoeducational interventions are applied to increase the acceptance level of individuals with diabetes. It can be thought that the interventions to be applied to increase the acceptance of the

disease of individuals with TIIDM will contribute to the increase in the quality of nursing care.

Conflict of Interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Ethics Committee Approval

This study was approved by İnönü University Health Sciences Scientific Research and Publication Ethics Committee (Date: 10.08.2021 No: 2021/2372) and legal permission from the Dicle University Hospital.

Informed Consent

The patients were informed of the purpose of the study and assured that their information would be kept confidential, and they could withdraw from the study at any time.

Peer-review

Externally peer-reviewed.

Author Contributions

T.Y.U.: Concept, Data Collection and/or Processing, Literature Search, Design, Writing Manuscript.

F.K.B.: Materials, Analysis and/or Interpretation, Design, Supervision, Critical Review.

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