Examination of Well-being in Patients with Type II Diabetes

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Abstract

This research is intended to examine the mental well-being of patients with type 2 diabetes mellitus and to examine whether mental well-being differs according to the socio-demographic, health and disease characteristics of patients hospitalized in the state hospital.

The study group of the study group consisted of individuals who were diagnosed with Type 2 diabetes mellitus (DM) at Çumra State Hospital in Çumra, Konya province, between February 2018 and April 2018. Random sampling method is used in sample selection. In the calculation of the sample, the number of samples was calculated as 123 individuals. In the collection of research data; a questionnaire form prepared by their searcher and the Warwick - Edinburgh Mental well - Being Scale (WEMIO) were used. The data were collected by their searcher using the hospitalized questionnaire in the internal medicine service, based on self-report by the participants, and in a portion of the questionnaires, interviewed face-to-face with patients with difficulties in reading. Data were summarized as number, percentage, and mean ± Standard deviation. In the analyzes, student t test and one way analysis of variance were used in independent groups of parametric tests. In all statistical analyzes, $p < 0.05$ was considered significant.

It was found that 58.5% of the participants had female gender, 69.1% were 65 years and below, 61.0% had education at primary and lower education, 90.2%-49.6% of the respondents considered the economic situation as moderate, 81.3% were married, 94.3% were health insurance, 88.6% were living in the core family, 52.0% were interested in home care 92.2% of these caregivers are first degree relative. The mean score of the individuals who participated in the study was 45, 98 ± 10,52 points on the Mental Well-Being Scale.

Patients with low educational level, unemployed and poor economic status, single, needing caregivers and seeking psychiatric support should be evaluated form mental well-being and should be considered as a risk group. It may be advisable for researchers to conduct studies on the causes affecting mental well-being and to contribute to the development of the literature on this subject, to work with illustrates with different socio economic characteristics and with larger samples.

Keywords: Suicide; Lethality; Depression; Signs and symptoms

1. Introduction

The World Health Organization (WHO), chronic diseases "The long and the disease slowly progressive" and the chronic situation "for several years or health problems that require continuous maintenance for ten years" as definitions [1]. Today, chronic diseases constitute an important part of the causes of death between the ages of 20-64 and they are increasing day by day. 8 to 14 million people die every year due to chronic diseases and diabetes complicated ranks 8th among the causes of death in the world [2,3]. Diabetes shortens the life span between five and ten years [2]. The prevalence of type 2 diabetes in all of the developed and developing societies change with each passing day living conditions is increasing rapidly [2,3]. In our country, Turkey conducted in 1997-1998 Diabetes Epidemiology (TURDEP-I) in type 2 diabetes prevalence according to the study results was found to be 7.2%, recently published TURDEP-II and in the study of type 2 diabetes, the frequency of which increased significantly with each passing year, and 13% 7 were found to have [2,3]. According to TURDEP data, the World Health Organization and International Diabetes Federation have already reached its estimated prevalence in the 2030s [5].

Psychology has dealt with the concept of ark well-being gel with two main approaches, ın hedonic ası based on the balance of positive and negative emotions, and lulu eudaimonic u based on the understanding of how well the individual will be [6]. The World Health Organization [7] defined mental well-being as ult an individual being aware of his / her abilities, overcoming the stress of his life, being productive and beneficial in his work life and contributing to his / her society in accordance with his / her abilities Dünya. Mental well-being includes whether the individual is aware of life goals, potential, and the quality of the relationship with other people.

In another definition, the individual should perceive himself / herself in a positive way, to be self-satisfied even when he / she is aware of its limitations, to develop safe and warm relations with other individuals, to shape the environment so as to meet his own needs and demands, to act autonomously and independently, to have life purpose and meaning, to be aware of his capacity and this reflects the effort to improve its capacity [8]. Individuals with a high level of mental well-being have wondered what is happening in and around themselves, they tend to learn, their psychological and physical health is better and their quality of life is higher [6,9].

The aim of this study was to determine the mental well-being levels of patients with type 2 diabetes who were hospitalized in a state hospital, and to investigate whether mental well-being differed according to socio-demographic, health and disease characteristics of patients.

2. Research Questions

1. What is the level of mental well-being of patients with type 2 diabetes?
2. Do the mental well-being levels of individuals with Type 2 diabetes differ according to their socio-demographic characteristics?
3. Do the mental well-being levels of individuals with Type 2 diabetes differ according to their health characteristics?
4. Do the mental well-being levels of individuals with Type 2 diabetes differ according to their disease characteristics?

3. Materials and Methods

This research is descriptive. The research was carried out at Çumra State Hospital in Çumra, Konya. The population of the study consisted of individuals diagnosed with Type 2 Diabetes Mellitus (DM) who were admitted to the internal medicine service of Çumra State Hospital aged 18 years and older.

3.1 Sample size

The sample of the study was calculated by taking into account the number of patients with type 2 diabetes diagnosed last year. In the calculation of the sample, n = (Nt2pq) / d2 (N-1) + (t2pq) formula was used and the number of samples were calculated as 123 individuals (Confidence level was 95%, t = 1.96, d = 0.05). The incidence of (p kabul was accepted as p = 0.5 (q = 0.5) because it was not found despite all the researches [10]. Random sampling method was used in the sample selection.

3.2 Inclusion criteria

- 18 years of age and over,
- Having at least 24 hours in the internal service.

3.3 Exclusion criteria

- Being diagnosed with any psychiatric disorder prior to the diagnosis of DM.

3.4 Data collection tools and techniques

In the collection of research data; the sociodemographic characteristics of the patients, the presence of a previous psychiatric diagnosis, the questionnaire prepared to determine the patient's compliance with the disease and treatment, and the Warwick - Edinburgh Mental Well-being Scale (WEMİOÖ) were used to determine the mental well-being.

3.5 Information form

The questionnaire formed by the researcher in accordance with the literature information [11] consists of 20 questions in total.

3.6 Warwick-Edinburgh mental well-being scale (WEMİOÖ)

The Warwick-Edinburgh Mental Well-being Scale was created in 2007, with joint work by the Universities of Warwick and Edinburgh. WEMİOÖ consists of a total of 14 psychological status sentences and examines the positive mental health of individuals involved in psychological well-being and subjective well-being. Scale is 5-Likert type. The scoring of the scale is 1 (I disagree), 2 (I disagree), 3 (I disagree), 4 (Agree) and 5 (Agree completely). All items of the scale were positive. This scale was translated into Turkish in 2015 by Keldal and translated into Turkish psychology literature. At least 14 and maximum 70 points are taken from the scale. High scores from the scale indicate high mental (psychological) well-being [9].

3.7 Data collection

The data were collected by the researcher based on self-report between February 2018 and April 2018 by the researcher. In some of the questionnaires, data were collected by face-to-face interviews with patients who had difficulty in reading.

3.8 Data analysis

The statistical analysis of the research data was made by SPSS 20 program. Data are summarized as number, percentage and mean ± standard deviation. In order to test the normality of the distribution of data, Skewness and Kurtosis coefficients were not significantly deviated from the normal distribution and fell between -1 and +1. After seeing that the data was normally distributed, student t test and one-way analysis of variance were used in groups independent of parametric tests. P <0.05 was considered significant in all statistical analyzes.

4. Ethical Aspects of Research

Written permission from Çumra State Hospital for the purpose of conducting the research before the research in the relevant institutions. Written permission from Gökay KELDAL was obtained from the ethics committee of Selcuk University Faculty of Health Sciences, Non-Interventional Clinical Researches Ethics Committee as of 28.02.2018 and numbered 2018/93. In addition, the purpose of the study and the benefits expected from the research were explained to the individuals who participated in the research, and their verbal approvals were obtained and their participation was voluntary.

5. Results

When the distribution of the socio-demographic characteristics of the individuals with diabetes was examined, it was found that 58.5% of the women were females, 69.1% of them were 65 years of age, 61.0% of them received education under primary and of the study, 49,6% of them evaluated their economic status as moderate, 81,3% were married, and 94,3% were health insurance. 88.6% of the individuals lived in the nuclear family; It was found that 52.0% of them were home care and 92.2% of these caregivers were related to first degree.

When the distribution of the health characteristics of the individuals participating in the study is examined, 82.9% have a chronic disease other than diabetes; of these diseases, 13.0% had chronic kidney disease, 74.0% had cardiovascular disease, and 30.9% had any lung disease. It was found that 46.3% of the patients evaluated their health status as moderate, and 42.3% of them performed health checks every 3 months. 72.4% of the individuals stated that they did not go to a psychiatrist before and 48.8% did not want to receive psychiatric support.

When the distribution of the disease characteristics of the individuals is examined, it is seen that 63.4% of the patients have 10 years or less of diabetes, 52.0% of them do not use insulin, and 79.7% of the individuals who use insulin are 10 years of insulin use, 33.9% of them used insulin twice a day and 94.9% of them do insulin injections by themselves. 60.2% of individuals go to health check for diabetes every 2-3 months and 75.6% of them make blood sugar control irregular. The mean values of the Warwick Edinburgh Mental Well-being Scale total score were compared according to some socio-

demographic characteristics of the participants. The mean total score of the male subjects (48,98 ± 9,380) was significantly higher than the female (43,85 ± 10,829) (p<0,05).

According to the Tukey HSD test results, the total scale score (58,67 ± 7,02) of the individuals with higher education level was significantly higher than the other education levels and the level of education was uneducated (41,96 ± 9,80). , 04 ± 9,86) and secondary education (49,21 ± 12,27) individuals have similar averages (p<0,05). When the study status of the individuals who participated in the study is examined, the mean total score of the working individuals (52,50 ± 13,16) is significantly higher than the non-working individuals (45,27 ± 10,01) (p<0,05). According to the Dunnet T3 test results, the mean total score (56,33 ± 8,38) of the individuals with high income levels, low income (42,93 ± 11,03) and moderate (48,41 ± 9,20) (p<0,05). The mean scores of the marital status, married (47,33 ± 10,35) individuals were significantly higher than those of single (40,09 ± 9,34) (p<,05). When questioning whether or not caregivers are involved, the mean total score of caregiver absenteeism (48,19 ± 10,35) is significantly higher than the mean of caregiver presence (43,58 ± 10,26) (p<0,05). When the comparison of the mean scores of the scale according to the other socio-demographic characteristics of the participants, age, health insurance, family type, the total score of Mental Well-being Scale is similar compared to who is the caregiver (p> 0.05) (TABLE 1).

TABLE 1. **Comparison of scale scores according to socio-demographic characteristics of patients (n = 123).**

Specifications	Mental Well-Being Scale Total Score x±Sd	Test and p Value
Gender		
Female	43,85 ± 10,82	t = -2,735
Male	48,98 ± 9,38	p = 0,007
Age		
65 Years and Under 65 Years Over	46,88 ± 11,24 43,95 ± 8,47	t = 1,435 p = 0,154
Education Status		
uneducated Literate / Primary School Secondary High education	41,96 ± 9,80 46,04 ± 9,86 49,21 ± 12,27 58,67 ± 7,02	F = 3,520 p =0,017
Working Status		
Working Inoperative	52,50 ± 13,16 45,27 ± 10,01	t = 2,300 p = 0,023
Income status		
Low Medium High	42,93 ± 11,03 48,41 ± 9,20 56,33 ± 8,38	F = 6,008 p = 0,003
Marital status		

Single	40,09 ± 9,34	t = -3,078
Married	47,33 ± 10,35	p = 0,003
Health Assurance		
Yes	46,26 ± 10,57	t = 1,217
None	41,29 ± 9,01	p = 0,226
Family Type		
Simple family	45,63 ± 10,60	t = 0,390
Extended family	48,64 ± 9,77	p = 0,316
Caregivers Is There?		
Yes	43,58 ± 10,26	t = -2,478
No	48,19 ± 10,35	p = 0,015
Caregivers Who?		
1st degree relative	47,63 ± 10,31	t = -1,502
2nd degree relative	54,80 ± 9,25	p = 0,138

In TABLE 2, Mental Well-being Scale total scale scores were compared according to the health characteristics of the patients. When the other chronic disease was examined, the mean total score (50,14 ± 11,30) of the patients without any other chronic disease was found to be significantly higher than the average (45,12 ± 10,20) individuals with other chronic diseases (p<0,05). When these chronic diseases were questioned, the mean of patients without any lung disease (47.53 ± 9.96) was significantly higher than the mean of patients with any lung disease (42.50 ± 11.03) (p<0.05). Chronic kidney disease and cardiovascular disease were found to be similar averages (p>0.05).

TABLE 2. **Comparison of scale scores of patients according to their health characteristics (n = 123).**

Specifications	**Mental Well-Being Scale Total Score x±Sd**	**Test and p Value**
Other Chronic Disease Presence		
Yes	45,12 ± 10,20	t = -2,018
No	50,14 ± 11,30	p = 0,046
Other Chronic Disease Groups		
Chronic Kidney Disease		
Yes	44,19 ± 8,25	t = -0,727
No	46,24 ± 10,82	p = 0,468
Cardiovascular Disease		
Yes	45,13 ± 9,74	t = -1,507
No	48,38 ± 12,34	p = 0,134
Any Lung Disease		

Yes No	42,50 ± 11,03 47,53 ± 9,96	t = -2,501 p = 0,014
Health Perception		
Bad	38,29 ± 9,98	F = 20,420
Medium	48,39 ± 8,89	p < 0,001
Good	51,50 ± 8,51	
Health Control Frequency		
Once in 3 months	45,35 ± 10,82	F = 0,388
6 months / one year	47,63 ± 10,52	p = 0,679
When physicians Suggestions or Complaints	45,83 ± 10,32	

CHART 3.5. (Continuation). **Comparison of scale scores of patients according to their health characteristics (n = 123).**

Specifications	Mental Well-Being Scale Total Score x±Sd	Test and p Value
Did you go to the psychiatrist?		
Yes	43,94 ± 11,65	t = -1,329
No	46,75 ± 10,01	p = 0,186
Do You Want to Get Psychiatric Support?		
Yes Undecided No	41,58 ± 10,98 43,17 ± 11,48 49,98 ± 8,22	F = 9,932 p <0,001

When the health perception of the patients was examined, the mean total score of the patients (38.29 ± 9.98) who evaluated their health status as poor as Tukey HSD test was moderate (48.39 ± 8.89) and good (51.50 ± 8,51), the mean of the total scale score was significantly lower (p<0.05).

When the patients' request to receive psychiatric support was examined, the mean total score (49.98 ± 8.22) of those who did not want to receive support, the ones who wanted to get support (41.58 ± 10.98) and the unstable (43.17 ± 11.48) Scale scores were significantly higher than the mean scores (palar0.05). When we look at the situation of going to the psychiatrist and going to the health check, it was found that the average of total scale scores were similar (p<0.05).

The scale scores of the patients were compared according to their disease characteristics. The mean age of the patients with diabetes (10,15 years) and those with diabetes over 10 years and above (42,24 ± 10,16) were significantly higher than those with diabetes. degree is high (p<0.05).

In insulin use cases, the mean score of the patients who did not use insulin (50,14 ± 9,515) was significantly higher than the mean score of the patients using insulin (41,46 ± 9,73) (p<0,05).

The other disease characteristics seen in Table 3.5 were found to be similar in terms of insulin use year, insulin use frequency, insulin injection by whom, and by the frequency of diabetes and blood glucose control, mean scores of Mental Well-being Scale were similar (p<0.05).

The distribution of total scores of Mental Well-being Scale of diabetes patients is given. The mean total score of Mental Well-being Scale was found as 45.98 ± 10.52. The person with the lowest value of the scale is 17 and the person with the highest value is 68. The mean total score was found to be higher than half of the 70 points (35 points).

6. Discussion

In our study, the mental well-being of the male individuals was higher than the mental well-being of women. As a result, we may think that women are more emotional than men and are more affected by diabetes. The level of mental well-being of individuals with tertiary education; the level of education is higher than the level of mental well-being of uneducated, illiterate, primary and secondary education individuals. As the level of education increases, we can think that individuals are more psychologically stronger and more resistant to negative effects and that mental well-being will be increased as the level of education increases. The level of mental well-being of the working individuals in our study was found to be higher than the mental well-being of non-working individuals. We can say that working individuals have different environment and communication with different people, having a sense of self-confidence, having financial income and having a positive effect on mental well-being. Then the income level of the individuals is examined, it is seen that the individuals with high income level have high mental well-being level compared to the individuals with low and low income level. The reason for this is that, as stated in the working state, the financial income is a support / support and it can be seen as the spiritual power outside the material meaning of the individuals.

In our study, mental well-being levels of the married individuals were found to be higher than those of single individuals. It can be thought that individuals have different responsibilities in marriage; especially those who have children have more resilience against difficulties and a co-existence which will support them when dealing with difficulties positively affects mental well-being. Questioning the existence of someone who supports people who care for them; the level of mental well-being of the caregivers was higher than the caregivers. The reason for this is that the majority of the individuals who participated in the study were 65 years of age (69.1%) and they did not need a care requirement by others and they provided their own care. In our study, age, health insurance, family type, mental well-being levels do not change according to who the caregiver is. The reason of this; the content of the events experienced rather than the smallness of the age, the meanings of the life events experienced for the person are more important, even if there is no health insurance, the individuals can benefit from the health services; We can think that it doesn't matter who the giver is.

When other chronic illnesses were examined, the level of mental well-being of those without any other chronic disease was found to be significantly higher than the mental well-being of individuals with other chronic diseases. Psychological adjustment to the disease is a difficult process because of the physical and psychological problems experienced by the individual with chronic disease and the problems that are experienced in the life process [12]. We can say that as the number of carotid diseases increases, individuals are at risk for decreasing their mental well-being.

When the patients' willingness to receive psychiatric support is examined, the level of mental well-being of those who do not want to receive support is significantly higher than those who want to receive support and who are unstable. We can say that patients who feel well mentally are effective in not wanting psychiatric support. They are similar in terms of their mental well-being when looking at the psychiatrist and going to health control. We may think that the condition of going to the psychiatrist does not affect the individuals because they are not diagnosed with psychiatry. Going to or without a health check does not affect mental well-being. When the year of diabetes is considered, the mental well-being of individuals with diabetes for 10 years or less is higher than the mental well-being of individuals with diabetes over 10 years. As the number of years in diabetes increases, the effects of the disease increase and various complications occur. Increasing times of sadness, anger, helplessness, hopelessness, fear of future, lack of role in family and work life, loss of self-confidence, fear of death, self-sufficiency and fear of being dependent on others, increasing psychosocial problems such as depressive image and social isolation. we can say it can be effective.

The average score of the Mental Well-being Scale total score of diabetes patients is higher than half of the highest score (70) that can be taken from this scale. In our study, we can say that mental well-being levels of type 2 diabetes patients are higher than the average.

7. Conclusion

Patients who have low levels of education, which do not work and are in the middle / poor status, who are single, who need care giving presence and who want to get psychiatric support should be evaluated for mental well-being and should be considered as a risk group. Patients who need psychiatric support but who do not want to receive counselling should be advised and the importance of psychiatric support should be explained.

8. Limitations of the Research

The findings of this study are limited only to the type 2 diabetic patients in the internal service at the dates specified in the hospital where the study was conducted, and cannot be generalized to all type 2 diabetes patients. In addition, the existence of the Mental Well-being Scale with other chronic diseases has not been achieved in this process. For this reason, there are no examples in the introduction and discussion section for comparisons between mental well-being and independent variables. These conditions are limited for research.

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