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Original Article

Investigating the relationship between quality of life with adherence and history of treatment (drug therapy) without psychotherapy and demographic characteristics in patients with type 2 diabetes

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Abstract

Introduction: Type 2 diabetes is one of the most common psychosomatic disorders and the third most common cause of death in the world. Psychological factors play an important role in causing and exacerbating its symptoms. The purpose of this study was to determine the relationship between quality of life and the therapeutic adherence and history of psychotherapy in patients with type 2 diabetes in Kashan city health centers.

Materials and Methods: The study population consisted of all patients with type 2 diabetes in Kashan and the sample size of this study was 165 patients in this city who were selected by convenient sampling. Research instruments were demographic form, adherence scale and short form of quality of life questionnaire (SF-36). Data analyzed through SPSS software version 20.

Results: The results indicate that there is no relationship between quality of life variable and demographic characteristics of type 2 diabetic patients but the history of drug therapy without psychotherapy has a significant and inverse relationship with quality of life. Also, the results of data analysis showed a direct and significant relationship between therapeutic adherence and quality of life.

Conclusion: The results showed the direct relationship between therapeutic adherence and quality of life and an inverse relationship between the history of non-psychotherapy and quality of life and a significant part of the success of treatment in the longtime depends on the adherence and the psychological aspects of the patient.

Keywords: Adherence, Psychotherapy, Quality of life, Type 2 diabetes

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Introduction

One of the most challenging scientific developments currently in the world is the integration of the effects of mind and body on each other in a wide range. Type 2 diabetes is considered one of the most common psychosomatic disorders and one of the disasters of the last century at the international level, and

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one of the significant causes of morbidity and mortality in the world (1,2). Psychological factors can play an essential role in the adaptation of diabetic patients to lifestyle changes for the proper control of diabetes (3). Type 2 diabetes is characterized by insulin resistance and its relative absence and includes 90-95% of diabetes cases. Currently, more than 3 million people in Iran have diabetes. According to the World Health Organization, if effective actions are not taken, these people will increase to 7 million by 2030 (4). The nature of psychosomatic diseases and disorders, especially type 2 diabetes and its treatment, requires that a significant part of the treatment of the disease be the responsibility of the patient and the family (5). The chronic nature of diabetes affects all areas of life. It is not far from expected that there are psychological issues and problems in these patients, the most common mental disorders are type 2 diabetes, widespread anxiety, and major depression (6,7). The approach to this chronic disease based on the biological-psychological-social model requires the integration of its social and psychological dimensions. In addition to medical care, social and psychological support will significantly impact its acute and long-term consequences. Quality of life is a feeling of well-being that comes from satisfaction or dissatisfaction with aspects of life that are important to a person (8). Satisfaction or non-satisfaction with the essential aspects of life resulting from a person's assessment of his performance and health level compared to what he thinks is ideal, the quality of life index has three dimensions: social, psychological, and physical (9). Due to the wide range of psychosomatic diseases and the role of psychosocial aspects on the incidence of physical diseases, attention has been paid to the fields of health psychology, among which diabetes is not excluded from this category of diseases (10). The most significant factor in the treatment and care of the patient is compliance with the treatment method and recommendations provided by the treatment group, which is called therapeutic cooperation. A significant part of long-term treatment success depends on the patient's therapeutic cooperation (11,12).

The quality of life of a society is the mental reflection of the society's people in terms of life satisfaction. This definition of quality of life shows that this concept has a subjective aspect and finds meaning in people's cultural, social, and psychological contexts. Therefore, the importance of the role of psychologists in psychotherapy can be considered (13,14). Furthermore, the need to pay attention to social and psychological aspects and the use of mental health specialists in this field are mentioned (15).

People who are diagnosed with this chronic disease have experienced various emotions, including defense mechanisms such as denial, feelings of anger, guilt, and depression, and these mechanisms will be effective in the process of their therapeutic cooperation. In addition, most of them provide some psychological support (16,17).

The family is the center of the care philosophy and the main focus point in all health-therapeutic care, especially patients' level of therapeutic cooperation (18,19). Some studies showed that with the increase in personality and emotional stability, the amount of therapeutic cooperation in type 2 diabetes patients increases (20).

Also, some research results showed (21,22) that perceived social support from friends and family, and knowledge of factors affecting the disease and its complications are the best predictors of quality of life in type 2 diabetes patients, which indicates the impact of psychological dimensions. Social in the quality of life of type 2 diabetes patients. Therefore, the role of psychological factors in the etiology of diabetes can be predicted with significant probability. Since the self-management ability of people in treatment and the level of quality of life, and the level of therapeutic cooperation of people depends on the psychosocial factors of a person's life, the importance of these dimensions and the effects they have on the quality of life of people can be considered and studied (23)). Many studies have been conducted on the effects of psychological factors on the occurrence or exacerbation of symptoms and the level of quality of life of type 2 diabetes, but a study that only examines this disease from a psychoanalytical point of view is sporadic. Therefore, this research aims to investigate the relationship between the quality of life, the level of therapeutic cooperation, and the history of psychotherapy in psychosomatic disorders, especially among type 2 diabetes patients.

Materials and Methods

The current study is a descriptive-analytical correlational method, which was conducted cross-sectionally to investigate the relationship between quality of life and therapeutic cooperation, history of treatment (pharmacotherapy) without psychotherapy, and demographic characteristics in patients with type 2 diabetes in health centers of Kashan city. Is. From the statistical population of the current study, which includes all type 2 diabetes patients in Kashan city (2200 patients in the villages of the city and 1400 patients in Kashan city), 165 patients were referred to Golabchi Hospital (Kashan Diabetes Unit) and Shahid Beheshti Hospital- Kashan, Iran (the largest medical center in the city) with a simple random sampling method based on the available sample according to the entry criteria (patient's consent to participate in the research and complete the questionnaire, diagnosis of type 2 diabetes by a specialist in endocrine and metabolic diseases, absence of Simultaneously with other acute diseases, having minimum literacy to read and answer the questions of the questionnaires or having the minimum understanding necessary to understand the questions) and exclusion criteria (presence of acute physical diseases, presence of major psychiatric disorders diagnosed by a clinical psychologist, dependence on substances and alcohol, old age and not understanding the questions) were selected and the research was done in entirely natural conditions and without any field or laboratory manipulations. The researcher only examined the relationship between the variables without interfering with or changing any of the variables. All the people participating in the research were assured that their answers were confidential and only to conduct the research.

Research instruments

A) Questionnaire of demographic characteristics made by the researcher: according to the objectives of the research, by designing several questions, information on the demographic characteristics of age, sex, marital status, employment status, level of education, age at the onset of the disease, duration of suffering from the sample of people It shows the disease, birth order, socioeconomic status, history of suffering from psychological problems and chronic disease, and especially the history of drug therapy without psychotherapy of each subject.

B) Therapeutic Cooperation Scale (Adherence): this scale with 15 questions; 10 initial questions have a three-level scale of low, medium, and high, and five final questions have a 4-level scale, valid and reliable. In this questionnaire, patients' level of therapeutic cooperation and adherence to healthy behaviors in the field of avoiding smoking and pleasurable behaviors of patients are measured. In order to measure the validity of the questionnaire in the present study, Cronbach's alpha for therapeutic cooperation was reported to be 0.79 (24).

C) Quality of Life Scale (SF-36): It is the most famous and widely used tool for measuring the quality of life, which examines the health status of people in the form of 36 questions. Its original translation was done under the supervision of the International Institute for Quality of Life Assessment and using the methods of the International Center for Quality of Life Assessment. The questions of this questionnaire measure eight primary constructs related to individual health, which measure four constructs of physical health and four constructs of mental health. Physical function (PF), role disturbance due to physical health (RP), role disturbance due to emotional health (RE), energy/fatigue (EF), emotional well-being (EW), social functioning (SF), pain (P), general health (GH) are the subscales of this questionnaire. Also, from their integration, two general subscales, the physical and mental health scales, are obtained. In the Iranian sample, Cronbach's alpha analysis for the subscales was obtained as follows: physical function 0.90, role disruption due to physical health 0.85, role disruption due to emotional health 0.77, energy/fatigue 0.84, emotional well-being 0.65, social function 0.77, pain 0.83, general health 0.71 (25). In order to measure the validity of this questionnaire in the present study, Cronbach's alpha was reported as 0.83 for quality of life and 0.69 and 0.75 for each of the two general subscales of physical health and mental health, respectively.

Data were collected from questionnaires in 2 parts, descriptive statistics (mean, standard deviation, frequency, and percentage, tables) and inferential statistics (t-test, Pearson correlation

coefficient) to investigate the relationship between research variables using SPSS software. (version 20) were analyzed.

Results

The average age of the selected sample is 52.53 years, the age of onset of the disease is 43.30 years, and the duration of diabetes is 9.42 years. Also, 43% of the selected sample are men and 57% are women, 95.20% are married, 4.80% are single, 33.3% are employed, 66.1% are unemployed, 92.1% live in Kashan, and 6.70% live in the suburbs, 48.5% have a diploma and 3% have a higher education. Bachelor's degree and above, 73.9% have an average economic status, and 0.6% have a very high economic status. Also, 21.2% of the selected sample had a history of mental illness, and 33.9% had a history of chronic illness. In addition, 29.1% had a history of drug treatment without psychotherapy.

Table 1. Mean and standard deviation of quality of life variable scores and their scales

Scale	Mean	Standard deviation
Quality of life	398.62	114.46
Physical health (general scale)	187.91	64.44
Mental health (general scale)	210.71	68.63
Physical functioning	49.69	30.47
Role limitation due to physical health	41.21	40.64
Role limitation due to emotional health	45.93	42.45
Energy/fatigue	55.93	20.35
Emotional well-being	59.78	19.30
Social functioning	49.01	18.97
Pain	46.23	15.34
General health	51.38	17.57

In Table 1, the descriptive report of the quality of life shows that the average score of people is 398.62. Also, the descriptive report of the therapeutic cooperation variable shows that the average score of people is 39.04, the lowest score is 20, and the highest score is 57.

Table 2. The correlation coefficient of quality of life with demographic components

	Age		Age of onset		Duration of disease	
Quality of life	Correlation value	P	Correlation value	P	Correlation value	P
	-0.09	0.21	0.00	0.91	-0.12	0.10

Table 3. Comparison of the quality of life according to the number of children

		Sum of squares	Freedom degree	Mean of squares	F	P
Quality of life	Intergroup	187739.78	9	20859.97	1.61	0.11
	Intragroup	182947	142	12883.63		

Table 4. Relationship between quality of life and demographic characteristics

Variable		Mean	SD	Mean deviation error	Group	t	P
Sex	Male	421.58	115.40	13.79	70	2.27	0.44
	Female	380.57	111.06	11.77	89		
Marital status	Single	368.31	114.79	40.58	8	-0.76	0.920
	Married	400.23	114.60	9.32	151		
Occupational status	Employed	408.64	116.72	15.73	55	0.87	0.51
	Unemployed	392.35	109.62	10.49	109		
Residence	Kashan	399.19	115.72	9.57	146	0.20	0.07
	Suburb	358.38	37.38	21.58	3		
Use of psychoactive drugs	Yes	337.16	98.54	17.41	32	-3.50	0.10
	No	414.11	113.31	10.05	127		
History of chronic disease	Yes	371.80	116.75	15.88	54	-2.13	0.67
	No	412.38	111.34	10.86	105		
History of medical therapy without psychotherapy	Yes	341.99	95.46	14.23	45	-4.11	0.05
	No	420.98	113.97	10.67	114		

According to the report of the results obtained from the correlation of tables to investigate the difference between the groups of gender, marriage, residence status, etc., the independent t-test was used. As shown, there is no significant difference between the groups in the quality of life variable. Among the demographic characteristics and their relationship with the quality of life, only the history of drug therapy without psychotherapy with a significance level of 0.05 and 95% confidence level has a significant and inverse relationship with the quality of life in type 2 diabetes patients.The correlation between the quality of life and therapeutic cooperation in patients with type 2 diabetes indicated a significant correlation (Correlation value: 0.35, *P*= 0.000).

The result of data analysis shows a direct and significant relationship with therapeutic cooperation at the 0.01 level and with 99% confidence.

Discussion

The data analysis results show no relationship between the quality of life variable and the demographic characteristics of type 2 diabetes patients. However, the history of drug therapy without psychotherapy has a significant and inverse relationship with quality of life. The findings of other researchers, such as Rustoen's research (26), also deny the relationship between demographic variables such as age, gender, duration of illness, social status, marital status, employment status, and quality of life. At the same time, some researchers (3,27) have reported inconsistent results with the present findings. In explaining this result, according to the mentioned materials, it can be said that an excellent quality of life can keep a person immune from diseases and drug treatments, etc. It is therapeutic. It has even been observed that patients who have improved their mental health and, consequently, their quality of life have progressed faster towards general health and have abandoned their drug treatment or did not do it at all. This means that, to the extent that people enjoy better mental health, they will go through the recovery process better and faster, and as a result, the quality of life of these people will increase. Based on the results of the studies, perceived support is the best predictor of quality of life in type 2 diabetes patients, and this indicates the impact of psychological dimensions on the quality of life of type 2 diabetes patients. Therefore, it is possible to consider the role of psychological factors in the pathology of diabetes. In research (6) titled prevalence of psychiatric disorders in type 2 diabetes patients, it was shown that 67.5% of the patients needed a clinical interview and 43.75% had some kind of psychiatric disorder, and the most common of them were adjustment disorders 15% and significant depression 13.75%. In another study (28), the results showed that the mental indicators, vitality and vitality, and mental functioning of diabetes patients are low, and 77% of patients have a low and average quality of life, which indicates the impact of diabetes on the

mental dimensions and quality of life of people. Based on this, it can be said that the level of mental health should be increased, the quality of life of people will also increase, and the need for psychotherapy in people will decrease by the same amount. Also, in research in Gaza (29), data analysis showed that the quality of life and mental health of diabetic people is significantly lower than that of healthy people.Based on the results of this research, there is a direct and significant relationship between quality of life and therapeutic cooperation, which means that with the increase in the quality of life of people, the amount of therapeutic cooperation of patients also increases. The obtained results are consistent with the results of previous studies (11,27). In this way, the follow-up and therapeutic cooperation of patients have significant effects on the recovery process, and this level of therapeutic cooperation determines a significant part of patients' treatment and training programs. Therefore, the quality of people's lives will also increase by accelerating recovery. Because a significant part of long-term treatment success depends on following the treatment orders and the patient's cooperation, this is a necessary and significant thing to prevent recurrence and increase the quality of life (12). In the research of Asghari Bayat et al. (20), the results of data analysis showed that with the increase in personality stability, the amount of therapeutic cooperation in type 2 diabetes patients increases. Therefore, the increase in therapeutic cooperation increases the recovery of the disease and increases the level of quality of life. Asghari Bayat (21), in research titled " examining the relationship between coping styles and treatment adherence of type 2 diabetes patients showed a significant relationship between problem-oriented and emotion-oriented coping styles and patient adherence to treatment.

From this point of view, it can be considered that increasing the knowledge of patients about the effective factors in the disease and its complications, as well as its treatment and control, can be considered an essential factor in increasing the cooperation of patients, thus, by increasing the cooperation, the process of treatment and recovery of patients It has taken an upward course and the quality of life of patients will increase. There is a relationship between the components of quality of life and patients' therapeutic cooperation level. It seems that the patient's quality of life will change as much as the cooperation of the patient changes.

Conclusion

According to the research findings, psychological factors are considered in the possibility of contracting many diseases and as an aggravating factor in suffering from psychosomatic disorders such as type 2 diabetes, as well as the severity of its progress, and they disrupt all the daily functions of the patient. Therefore, in the current research, therapeutic cooperation and psychotherapy were investigated as psychological and social factors in the etiology of the disease on the quality of life of these patients, and the results of data analysis showed a direct and meaningful relationship between therapeutic cooperation and quality of life and an inverse and significant relationship. Furthermore, it showed a history of drug therapy without psychotherapy with quality of life.

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