Emotional Intelligence and Quality of Life in Elderly Diabetic Patients

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Abstract

Background: Coordination of various physical and mental aspects of individuals, including the ability to control difficult conditions and situations has an effect in the prevention and development of various diseases, such as diabetes, and the improvement of the quality of life. Therefore, the purpose of this study was is to determine the effect of emotional intelligence on the quality of life of elderly diabetic patients.

Methods: This study was conducted in 2018. The statistical population in this cross-sectional study consisted of elderly people referred to the health centers of Kermanshah province in western Iran, who were divided via available sampling into two groups with diabetes and without diabetes. Data gathering tools were a couple of LIPAD Quality of Life and Shrink Emotional Intelligence standard questionnaires. The Data was analysed using software SPSS, 23 th version. Tests were used (T-test, Chi-square, Anova and regression).

Results: Most of them were male (52.72%) and the mean age of the patients was 65.01(±6.08) years old and married. The quality of life score in diabetics and non-diabetics was respectively 51.9 and 50.37 with a standard deviation of 17.73 and 20.54. The mean total score of emotional intelligence in the elderly with diabetes was 99.42 with a standard deviation of 10.37 and non-diabetic subjects were 97.18 with a standard deviation of 18.4.

Conclusion: There was no significant difference between the mean scores of quality of life (0.652) and emotional intelligence (0.421) in diabetic and non-diabetic individuals. But, the emotional intelligence has an effect on the quality of life of the elderly people.

Keywords

quality of life, elders, diabetes, emotional intelligence

Introduction

Reduced fertility and improved life expectancy caused to increase the elderly population much faster than the general population and it's a global phenomenon.[1] In 2006, the United Nations announced that the total number of elderly people in the world was 687 million and 923 thousand, which will reach 1 billion, 968 million and 153 thousand by 2050. In fact, old people are facing many challenges. Most elderly people are subjected to diseases that endanger their independence and quality of lives.[2]

Diabetes as one of these diseases is a serious public health problem that threatens the quality of life of patients and can lead to acute and chronic complications. This disease is a leading cause of disability and death in many countries.[3,4] The prevalence of diabetes among adults worldwide is around 2–21%, which varies according to socio-economic conditions. Studies show that in the next 20 years in the world, between 50% and 100% of people will have diabetes. It will increase as the world's population grows olde. As the studies show, the incidence rate of diabetes in elderly people is ascending which was 6 per 1,000 people in 1990, 11.6 in

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2000 and 12.4 in 2010.[5] Elderly people with chronic diseases, such as diabetes, have a lower quality of life than their peers. WHO defines Quality of Life as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns.[6,7] It is a broad-ranging concept affected in a complex way by the person's physical health, psychological state, personal beliefs, social relationships and their relationship to salient features of their environment. Quality of life is a multidimensional and relative concept influenced by time, place and individual values. Many social and cultural factors such as religious beliefs, social networks, and relations between them and the physiological, behavioural, and emotional factors are involved in quality of life of chronic patients in critical condition.[8–10] One of the emotional factors is emotional intelligence that it can an important role to manage and treat diabetic people.

Emotional intelligence is the kind of intelligence that involves the ability to recognize their own and others' feelings and emotions and use of them to make the right decisions in life.[11]

Based on Goleman, emotional intelligence includes four skills of self-awareness, self-management, social awareness, and relationship management. Shortcomings and weaknesses in the field of emotional intelligence are the cause of many emotional, social, and health problems in today's world. High emotional intelligence is correlated with extraversion, flexibility, identifying different emotions and feelings and coordinating feelings and providing desired life.[12]

There are some studies that they investigated quality of life in elderly diabetic patients[13–15] and another's studied the effect of emotional intelligence in diabetic patients, not old diabetic ones[16,17] and there is only one research that it determined the relationship between emotional intelligence and quality of life in old diabetic patients.[1,18] On the other hand, quality of life is one of the main concerns of policy-makers and public health planners in the community and promoting a healthy life in old diabetic patients. So, the aim of this study is to determine the relationship quality of life and emotional intelligence in elderly diabetic patients referred to the Diabetes Centre of Kermanshah University of Medical Sciences.

Methods

Study Design

This study is descriptive – correlational research that was done as a cross-sectional one. The subjects of the study were elderly people that referred to selected health centers of Kermanshah, in the west of Iran, in 2018. Inclusion criteria for this study were: full consent to cooperate, older than 60 years, having at least the ability of reading and writing, lack of confusion and use of drugs leading to consciousness disorder, and being diabetics at least one year. The research proposal of this study was approved by the Ethics Committee affiliated with Kermanshah University of Medical Sciences, that corroborated its ethical considerations (decree number:?), and the allowance by health centers authorities and obtaining the written consent of patients, and ensuring them on protecting the information. Then, patients completed the questionnaires of demographic information, quality of life, and emotional intelligence. Due to the small size of the study population, sampling was performed through census and available samples the samples then were divided into two groups of elderly people with diabetes and non-diabetic patients. Finally, 129 persons were included in the study. The sample size was calculated based on study of Oken et al.[1] Considering the 99% confidence level, the 95% power, mean and standard deviation, quality of life in the diabetic and non-diabetic group were respectively 73.91 ± 14.85 and 83.84 ± 11.86 and the required minimum sample sizes in each group was 65 people. The sample size formula was as follows:

$$n = \frac{(z_{1-\frac{\alpha}{2}} + z_{1-\beta})^2(\sigma_1^2 + \sigma_2^2)}{(\mu_2 - \mu_1)^2} = \frac{(2.57 + 1.64)^2(14.85^2 + 11.86^2)}{(83.84 - 73.91)^2} \simeq 65$$

Data were collected by two questionnaires: **Lipad** Quality of Life and **Shrink** Emotional Intelligence which was handed out to them and then collected. The **Lipad** Quality of Life Questionnaire is particularly for the elderly. This questionnaire consists of 31 questions that examine the quality of life in seven dimensions (physical function, self-care, depression and anxiety, mental performance, social function, sexual function, and life satisfaction). **Lipad** Questionnaire was made by Pordehkordi et al. In order to determine the reliability of the questionnaire, the re-test method was used. Therefore, the reliability of the questionnaire was 0.83.[19]

The **Shrink** emotional intelligence questionnaire consists of five subscales (including 33 questions) of self-motivation, self-awareness, self-management, self-control, coherence (social intelligence), and relationship management (social skills). This questionnaire was adjusted according to the theory of emotional intelligence by Goleman and then translated and standardized in Iran by Abbasabad Arabi et al.[20] Its reliability coefficient was calculated using Cronbach's alpha calculation method for each component and the total test was as follows: Self-motivation = 54%, self-awareness = 69%, Self-management (Self-control) = 64%, Coherence (Social intelligence) = 51%, Relationship management (social skills) = 50% and the total test = 85%. These numbers indicate an acceptable level of reliability. In the separate studies of reliability, Mahanian Khameneh and Salamizadeh,[21] and Delpasand et al.[22] reported this test through the calculation of Cronbach's alpha respectively at 83%, 87%, 84%, and 88%. The validity of the questionnaire

was examined by conditional validity and structural validity, and then convergent and divergent factor analysis were examined. Also, in 1996, the validity and reliability of this questionnaire was examined by Gerabet and introduced as a valid and reliable questionnaire.[23] After completing these questioners by participants, the data was analyzed by SPSS software, version 23. The tests used in this study were T-test, Chi-square, Anova and regression.

Results

129 persons were enrolled in two groups of diabetic with 63 people (8.48%) and non-diabetic with 66 people (2.51%). The number of men was 68(52.72%) and the number of women was 61(47.28%). The mean age of the patients was 65.01(±6.08) years and the average income of patients was 12,572,350 Iranian Rials (under $100). These persons received the necessary information about diabetes and ways to deal with it mostly from the media.

According to Table 1, the majority of subjects' education level was pre-diploma (59.7%) and a minority of them had a postgraduate degree (1.6%), Also the majority of the participants were married (66.7%) and the minority were divorced (7%).

Based on Table 2, the mean quality of life score (SD) and mean of emotional intelligence (SD) in the diabetic group was 519(17.73) and 99.42(10.37) respectively.

Table 1. Demographic Finding About Diabetic and Non-Diabetic Groups.

Demographic variables	Frequency (%)
Gender	
Female	61 (47.3%)
Male	68 (52.7)
Education	
Below diploma	77 (59.7%)
Diploma	34 (26.4%)
Bachelor	7 (5.4%)
Postgraduate	2 (1.6%)
Marital status	
Married	86 (66.7%)
Single	11 (8.5%)
Widowed	23 (17.8%)
Divorced	9 (7%)

Also, there is no significant difference between the mean scores of quality of life (P = 0.652) and emotional intelligence (P = 0.421) in diabetic and non-diabetic individuals (Table 2).

Chi-square test showed no statistically significant difference between the gender of the studied persons (p = 0.94) and marital status (0.213) in diabetic and non-diabetic groups. The level of education in two groups was not relatable (Table 3).

Discussion

The present study was conducted to investigate the relationship and predict the quality of life based on emotional intelligence in elderly diabetic patients referred to the Diabetes Centers of Kermanshah University of Medical Sciences, in the west of Iran. The results of this study showed that there is no significant relationship between the quality of life in diabetic and non-diabetic patients. Since, in Iran, baseline index and normative criterion of quality of life in elderly people have not been determined, by considering the criterion of zero to 90 which is related to the quality of life questionnaire of the present study, the average score of 45 can be determined for the community as an acceptable indicator. Regarding that the mean of the overall quality of life score (51.9) was higher than the average of the questionnaire, the quality of life of the diabetic elderly patients can be evaluated as a desirable one.

The results of some studies indicate a good quality of life in diabetic patients,[24] some studies indicate a moderate quality of life[25–27] and finally some others indicate a poor quality of life in these patients.[28–31]

In general Diabetes can cause a lot of problems in individual, family, social, and high rate of mortality. This disease

Table 3. Chi-Square Test Findings in Two Groups of Studies.

Variable	P-value	Non-diabetic Frequency (%)	Diabetic Frequency (%)
Gender			
Male	0.941	(31.2) 31	(29.8) 30
Female		(43.7) 35	(33.2) 33
Marital status			
Married	0.213	(44) 44	(42) 42
Single		(5.6) 3	(5.4) 8
Widowed		(11.8) 15	(11.2) 8
Divorced		(4.6) 4	(4.4) 5

Table 2. Mean and Standard Deviation of Quality of Life and Emotional Intelligence in Two Groups of Studies.

Variable	P-value	Non-diabetic Mean and standard deviation	Diabetic Mean and standard deviation
Quality of life	0.652	50.37 (±20.54)	51.9 (±17.73)
Emotional intelligence	0.421	97.18 (±18.49)	99.42 (±10.37)

affects the quality of life of the patient due to the involvement of more organs including the heart, kidneys, eyes, etc. In addition, the chronic nature of boring and disabling treatments and threatening complications of diabetes affects the quality of life of the patient.

The results of this study showed that there is a direct and significant relationship between the emotional intelligence and the quality of life of the elderly diabetic patients, which is consistent with the results of Zysberg et al and Abbasabad Arabi et al.[20,32] These studies indicated that with the increase of emotional intelligence, quality of life is also enhanced. The results are in line with the results of research conducted by Downey et al. on the depression of 250 students in Romania,[33] and the study conducted by Anjum and Swathi showed that teachers who have higher emotional intelligence have a higher quality of life.[34] Yalcin study in Turkey on 32 diabetic patients revealed that emotional intelligence reinforcement increases the quality of life of diabetic patients.[16] If the criterion of 33 to 165 which is related to the questionnaire of the present study is considered, the mean score of 99 can be determined as the norm of society and an acceptable indicator for the state of emotional intelligence in the elderly. So, the emotional intelligence score (99.42) of this study was more than the norm index of society.

In this study, there is not a significant difference between the score of emotional intelligence in diabetic and non-diabetic individuals and it is in an acceptable state. Generally, considering the relationship between emotional intelligence and health, many previous studies have shown that people with high emotional intelligence are more likely to have higher physical and mental health than those with lower emotional intelligence and, consequently have a better quality of life.

On the other hand, there was no difference between the studied two groups in terms of quality of life and emotional intelligence based on gender, marital status, and educational levels. While studies have shown the effect of educational level on improving emotional intelligence and subsequently increasing the quality of life. So, people with a high level of education have better socio-economic positions and they can better interact with others and have a healthier life.[20,35–38] About marital status, other studies showed that married people had a better quality of life than singles and divorced people.[39–42] Other studies showed that there was a statistically significant difference between two sexes based on emotional intelligence, so it was different with the present study results.[22,43,44]

Generally, in explaining these results, it can be said that emotional intelligence and the quality of life are two areas are linked with each other very closely that the problems of each of these areas can be passed on to other area that the results of the studies mentioned indicate this fact.

The most important limitation of this study is the use of correlation method and the discovered relationships cannot be regarded as excellent relationships. Another limitation is the use of self-reporting tools. These tools usually collect responses that others think should be correct. Individuals who complete these tools may not have enough self-control and will not respond responsibly.

Conclusion

Diabetes as a chronic disease affects different age groups of people. Various factors affect the incidence of the disease, in addition to hereditary factors, healthy nutrition and mobility of people are effective in preventing disease progression. Meanwhile, elderly people may suffer irreparable complications due to age-related disabilities. Therefore, improving the quality of life of these patients and subsequently improving the emotional intelligence of people during the first years of the disease can prevent irreversible complications. For this reason, the direct relationship between emotional intelligence and its impact on the quality of life in different ages of diabetics, especially the elderly ones, can be effective in improving their health. So, it is recommended that administrators of nursing to consider educational and supportive programs and workshops in the field of emotional intelligence for diabetics, especially elderly diabetic patients. It is also suggested that future studies conduct research on patients with other chronic diseases such as cancer and multiple sclerosis. In addition, it is recommended that the relationship between emotional intelligence and other aspects leaving chronic disease such as depression and anxiety and self-efficacy to be examined. Some limitations of this study include low sample size and the location of its implementation that cannot be generalized its results to other cities of Iran. Therefore, it is recommended that this study will be conducted on a higher number of population and in other Iranian.

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