Evaluation of Quality of Life in Type 2 Diabetic Patients

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ABSTRACT

Introduction: Diabetes is considered as a chronic disease, and one of the most important actions for taking care of chronic patients is investigating about their quality of life. **Methodology:** We performed a quasi – experimental study. 30 patients were determined as the volume of sample based on the pilot study performed on 10 patients using comparison of means test with the safety factor of 95% while the power of the test was equal to 80. Random sampling method was used for sampling. Demographical information questionnaire and the quality of life questionnaires for diabetic patients (DQOL) from Thomas et al study were considered. After confirmation of data integrity, the SPSS software v. 21 was used for analyzing the data. The confidence coefficient more than 95% was considered for statistical tests (P<0.5). **Results:** the quality of life average for diabetic patients was about 19.23, in which the lowest level of life quality (3.87) was related to the feeling of pain during treatment and the highest (8.60) was related to the satisfaction level of knowledge and information. In conclusion and according to the total result of this questionnaire (19.23), the quality of life of the diabetic patients was very low. **Conclusion:** In fact, any changes in any aspect of life quality are due to the personal, social or economic factors. So, the evaluation of life quality with the social – personal information can provide a complete database, which is useful for enhancement of their quality of life.

Key Words: *Type 2 diabetic patients, quality of life.*

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INTRODUCTION

In the past, infectious disease and malnutrition were the basics of all health care policies. However, these days the improvement of medical and health care enables us to largely confront with the pathogens. On the other hand, people are most suffering from non-communicable diseases such as diabetes, osteoporosis, cardiovascular, obesity and others because of the changes in the lifestyle and lack of physical activities. [1]

Among all of them, diabetes is the most wide-spread chronic diseases in the world which is introduced as a latent epidemic by the International Health Agency. [2]

According to the statistics reported by the international diabetes federation in 2011, more than 366 million people equal to 8.3% of adults all over the world are suffering from diabetes.

It is predicted that the wide spread level of diabetes increases up to 50.7% at the end of 2030. In Iran, as International Health Agency reported, the wide spread of type 2 diabetes was reported about 7.7%, which will be probably increased up to 8.6% till 2025. [2]

The main diagnosis of diabetes disease is impaired glucose tolerance or high blood sugar level which makes patients face with the risk of short or long term side-effects of diabetes while most of them can be avoided by appropriate care and control. [3] However, inappropriate

control of this disease causes the increase of blood sugar level which is the reason of cardiovascular, neuropathy, retinopathy and nephropathy diseases. Also, diabetic foot and depression are some other side effects of it. [4]

These side-effects can cause feeling dissatisfaction in the life and also decreasing the quality of life. Quality of life is an important factor in feeling good about all aspects of life including physical, social and emotional aspects. They are even more important for chronic diseases. International Health Agency describes the quality of life as the perceived quality of individual's life situation with regard to his/her culture, value system and priorities. [5]

In the recent years, quality of life is known as the most important reason of health in the medical treatment and health care of diabetic patients. Diabetes can produce a negative effect on physical performance, emotional situation and social or personal relationship and decrease all aspects of life quality for these patients. [6]

International health agency explains that the aspects including physical health, emotional situation, social relationship and environmental conditions. In fact, quality of life is considered as the perception of the patients from their condition/situation instead of the perception of the expert.

Duval reported in his study that nobody, even the description of a person is not able to determine the life quality of the patients, and contrary to popular belief, even critically ill patients are able to specify the important factors influenced upon their quality of life. In fact, those patients are able to report their perception from quality of life, perfectly. However, the symptom of the disease and also the personal, social and economic specifications are the most important variations of the life quality.

Duval also considered the location and life condition as other variables influencing the perception that the patients have about their quality of life. [7]

Over the last two decades, the interest in evaluating the improvement of life quality among the patients suffering from chronic diseases has been increased dramatically and daily performance enhancement is considered as a target. The evaluation of life quality can help us to consider the problem of patients, basically. Aiming the target of health care at making a comfortable, effective and satisfactory life for those patients, increases the importance of life quality studies among chronic diseases. The evaluation of life quality helps nurses to supervise properly the patients who their lives are affected seriously and irremeably by integrity performance disorder. [8]

ANALYSES METHOD

We performed a quasi – experimental study in which the statistical population included all type 2 diabetic patients admitted to Imam Khomeini Hospital. 30 patients were determined as the volume of sample based on the pilot study performed on 10 patients using comparison of means test with the safety factor of 95% while the power of the test was equal to 80.

Random sampling method was used for sampling. Demographical information questionnaire included the personal information of the patients, and the quality of life questionnaires for diabetic patients (DQOL) from Thomas et al study were used. These questionnaires consisted of 15 questions with the purpose of evaluating the quality of life of types 1 & 2 diabetic patients. In the study of Nasihatkon et al. (2012), the content validity and the internal stability validation of this questionnaire were measured and approved. It consisted of 15 questions including two dimensions of health care behavior of the patients and satisfaction with the disease control.

In order to investigate the internal stability validation of the questionnaire, Spearman correlation coefficients between each question and total score was measured. Also, Alpha Cronbach coefficient was calculated to confirm the reliability of the questionnaire. The calculated alpha Cronbach (0.77) indicated that there was an acceptable reliability. There is an approved rank category for alpha Cronbach coefficient based on that the value more than 0.9, between 0.7-0.9, between 0.5-0.7, and lower than 0.5 indicates an excellent reliability, an acceptable reliability, medium reliability and unacceptable reliability, respectively.

When the data gathering was completed, all of the questionnaires were encoded and transferred to the database of a computer. After confirmation of data integrity, the SPSS software v. 21 was used for analyzing the data. A descriptive research method was conducted for the evaluation of results which included the average, standard deviation, absolute and relative frequency distribution. The confidence coefficient more than 95% was considered for statistical tests ($P < 0.5$).

RESULTS

According to the results mentioned in the table 1, the quality of life average for diabetic patients was measured about 19.23 in which the lowest level of life quality (3.87) was related to the feeling of pain during treatment and the highest (8.60) was related to the satisfaction level of knowledge and information.

Table 1: The average and standard deviation of life quality of diabetic patients

Variable	Standard deviation	Average
The level of knowledge and information satisfaction	8.60	3.76
Sleep satisfaction	4.50	1.93

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The level of sugar blood measurement satisfaction	4.20	1.38
The level of self-care satisfaction	5.10	1.75
The level of medical care time satisfaction	4.11	1.54
The level of current medical care for diabetes satisfaction	5.22	1.64
Diabetes causes the restriction at work activities	4.22	1.68
Medical care of diabetes makes pain	3.87	1.42
Are you physically ill?	6.22	15.2
Are you worried about being unconscious?	4.22	1.62
The level of satisfaction in spending time for diabetes evaluation	6.82	11.2
The satisfaction level of what your situation imposed on your family	4.20	1.38
The prefer level to say somebody I have diabetes and I cannot eat this kind of food	4.52	1.42
Quality of life	19.23	4.05

DISCUSSION AND CONCLUSION

The results of this study revealed that the highest and lowest scores were related to the level of knowledge and information satisfaction and the medical care of diabetes makes pain, respectively.

In the study performed byThommasen et al. on the patients from Malaysia, China and India, physical performance got the highest score in Malaysia and China, while in India, the highest average score was obtained for physical pain of the patients. These results were in contrast to our findings which probably are due to the obesity or not adherence to the nutrition. [9]

Samira Daneshvar et al. (2017) performed a study with the title of "The investigation about quality of life of diabetic patients" This sectional study was done on two groups include a test group (122 diabetic patients) and a comparison group (122 equivalent non-patients) from Ilam state [10]. The result suggested that the life quality of diabetic patients was lower than the non-patients studied in this investigation. These results were in compliance with our findings.

FaroughVafaeiBaneh et al. (2012) performed another study about "The effect of cognitive behavioral therapy (CBT) on the patients suffering from type 2 diabetes". The results revealed that CBT can improve their quality of life, general health dimensions, vitality and happiness, social performance, restricted role due to emotional problems and mental health. However, no meaningful effect was observed on restricted role due to physical problems, physical performance and physical pain. [11]

MajidEidiBaigi et al. (2014) reported an investigation with the title "Comparison between type 2 diabetic

patients and non-patients in Ahwaz". The results suggested that there was a meaningful difference between their quality of life (P<0.0001). According to the current study, patients suffering from type 2 diabetes had more undesirable quality of life as to non-patients. This result was in compliance with our finding.

To improve mental health level and quality of life of diabetic patients, we suggested providing comprehensive and preventive educations at medical-health care centers and also transmitting more information via broadcast media.

This issue is taken from the research plan with the code of ethics: IR.ZBMU.REC.1397.134.

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