



Scholars Research Library

Der Pharmacia Lettre, 2015, 7 (11):324-328
(<http://scholarsresearchlibrary.com/archive.html>)



Quality of Life in Patients with Type II Diabetes

Soleyman Saravani¹, Azizollah Arbabisarjou², Mohammad Sarani¹, Mahdi Afshar¹,
Aziz Shahraki Vahed^{3*}

¹School of Medicine, Zabol University of Medical Sciences, Zabol, Iran

²Promotion Health Research Center, Zahedan University of Medical Sciences, Zahedan, Iran

³Faculty of Nursing and Midwifery, Zabol University of Medical Sciences, Zabol, Iran

ABSTRACT

Quality of (QOL) reflects the scale of social physical activities as well as mental health and is considered as an important health indicators and factors. QOL can be used as an indicator of the quality of health care and is part of the patient's treatment plan. The determination of this indicator in patients with type II diabetes which is a chronic and common disease provides health care providers with useful information. In this descriptive analytical study, fifty patients with type II diabetes who referred to the Clinic of Jale'i Health Center, Zabol, Iran were selected. The required data were collected using a check-list of demographic data and Diabetes-specific Quality of Life Brief Clinical Inventory (DQOL-BCI) which had acceptable reliability and validity. Software SPSS-18 and descriptive statistics were run to analyze the data. In this study, fifty patients with type II diabetes living in four villages covered by Jale'i Health Center were examined. 36 individuals (72%) were female and 14 (28%) were male. The mean age of the patients was 52.16 ± 7.3 years old and the mean duration of diabetes was 5.26 ± 3.7 years. With regard to occupation, 60% were household, 22% were farmers, 10% worked in greenhouse, and the rest was self-employed. 54% used tablet to control their diabetes, while 46% used combined treatments (tablet, insulin, diet, and exercise). With regard to the level of education, 74% were illiterate, and 26% had high school diploma. In terms of marital status, 76% were married and 24% single (including the lack of marriage or death of the spouse). With respect to their health, in total, 62% suffered from overweight, obesity, and dangerous obesity, whereas 24% of them had diabetes complications (eye, kidney, cardiovascular, and diabetic foot ulcers). QOL in the majority of cases (74%) was fairly favorable and quality of life in 16% of them was at an optimum level. Given the high prevalence of diabetes in the villages covered by the health center (2.4%), it is suggested that further studies be conducted on the causes of diabetes including the role of diet, genetic factors, cultural and social beliefs, and lifestyle of people in the region.

Keywords: Type II diabetes, quality of life questionnaire

INTRODUCTION

Industrialization, globalization, increased longevity, and changes in lifestyle of people around the world is quite tangible in the twenty-first century. The recent definition by Serey (2006) on quality of work life (QWL) is quite conclusive and best meet contemporary work environment. The definition is related to meaningful and satisfying work. Some definitions indicate that QWL is a multi-dimensional construct, made up a number of interrelated factors that need careful consideration to conceptualize and measure. It is associated with job satisfaction, job involvement, motivation, productivity, health, safety and well-being, job security, competence development and balance work and non-work life as is conceptualized by European Foundation for the Improvement of Living conditions(2002) [1, 2]. One result of such changes is changes in disease patterns and prevalence of chronic diseases such as diabetes. The

prevalence of these diseases is associated with the risk factors related to lifestyle such as poor diet, obesity, smoking, and lack of physical activity [3]. Diabetes is called "silent epidemic" and is considered as a major public health problem in the United States and other parts of the world and even in our country, Iran since as the most common metabolic disease, diabetes is increasing with an prevalence which reduces life expectancy to one-third [4]. Diabetes mellitus is a chronic disease and a major cause of death and disability around the world. According to the latest available statistics, about 171 million people worldwide suffer from this disease and it is estimated that in 2025, this figure will be amounted to 300 million ones [5]. Diabetes happens due to a lack of insulin production or reduction of its effects, which result in an increase in blood glucose levels and impaired metabolism of carbohydrates, proteins, and fats. The two major types of diabetes include insulin-dependent diabetes, as diabetes type I and insulin-independent diabetes as type II diabetes. Type II diabetes is more common and about 90-95% of all people with diabetes worldwide is of this type and that it is more common in adults [6]. Diabetes costs affect all people at any places. These costs are not only financial costs, but also the intangible costs such as pain, anxiety, discomfort, headache, weakness, stress, depression, infection, and limb amputations, blindness, kidney failure, cardiovascular disease, and nutritional problems as well [7]. All diseases affect social relationships, marriage, family, and career and that although medical treatment decreases the symptoms, the disease and its side effects impairs life style and mainly reduces the various aspects of QOL in patients with diabetes and their families [8]. For example, severe restrictions of food and anti-diabetic oral medication or injections have adverse effects on the QOL of diabetic patients. In addition, long-term micro-vascular complications and macro-vascular complications of diabetes, such as neuropathy, cardiovascular disease and stroke have a negative impact on the QOL diabetic patients [9].

To define the quality of life is difficult because it is a broad and complex concept that is identified through having the feeling of happiness and satisfaction and is related to each individual's perception of his own life. The World Health Organization (WHO) defines quality of life in terms of culture and understanding of the situation prevailing community values and goals, expectations, standards, and one's own interests. Accordingly, QOL is so closely related to the status of physical, psychological and personal beliefs, self-reliance, mass communication, and community [5]. Today, in health care, management of chronic diseases is highly important; complete healing of chronic diseases is impossible, but death is not imminent, so in these kinds of diseases, one of the main objectives in health care is to make patients' quality of life better. If modifying the QOL is an important goal of therapy, it should be considered as a result of medical research. Today, patients expect more participation in treatment decisions; therefore, knowledge of the QOL is fundamental and important in joint decision-making and health care [10]. This study aimed to evaluate the QOL in patients with type II diabetes under the guise of Jale'i Health Centers.

MATERIALS AND METHODS

This study was a descriptive-analytical study aimed to evaluate the quality of life of patients with diabetes type II covered by Jale'i Health Center. The center offers services to four villages with a total population of 5230 people and cares and follows-up 127 patients with diabetes type 1 and 2. The study population included fiity patients with type II diabetes who referred to be visited by general practitioner in the health center or covered health homes. Inclusion criteria were: 1- at least one year from the time of diagnosis of type II diabetes so that their quality of life has been affected by diabetes. 2- The sample's age was 30 years old and above. Because according to studies, the most common age of the onset of diabetes is from 30 years of age onward, and is especially in the age range of 35-40 (9). 3- In the last 5 years, their residence has been in the villages under the guise of Jale'i Health Center. Exclusion criteria were: having a known mental disorder, being admitted to hospital because of diabetes or any other disease during the two weeks prior to the questionnaire and chronic diseases such as cancer, and asthma. The data collection instrument was a questionnaire consisted of two parts: the first section was made up of demographic information, and the second was Diabetes-specific Quality of Life Brief Clinical Inventory (DQOL-BCI), respectively (see Appendix 1). DQOL questionnaire contains of 60 items whose validity and reliability was calculated for that first time in 2004 by Thomas E. Burroughs and his colleagues and declined to 15 items. The questionnaire included questions on two aspects of patient's caring behaviors and satisfaction with disease control. The results of the study by Burroughs revealed that the short form questionnaire of DQOL is more effective in screening programs for patients, faster than the full 60-item questionnaire (12). After explaining the purpose of the study, and informed consent from patients, at baseline, demographic data from health records and health records of diabetes patients in Jale'i Health Center were collected and DQOL-BCI was filled out using interview technique. The data were interred into software SPSS for Windows (version 18.0 SPSS Inc., Evenston, Illinois) for data analysis, and were adjusted using descriptive statistical methods in the form of frequency tables and were analyzed by statistical tests to determine the relationship between the variables. Means and standard deviations of the scores were calculated.

Findings

In this study, fifty patients with type II diabetes living in four villages covered by Jale'i Health Center were examined. 36 individuals (72%) were female and 14 ones (28%) were male. The minimum and maximum ages for the patients were 31 and 79, respectively. The mean age of the patients was 52.16 years old with the standard deviation of 7.3 and the mean duration of diabetes was 5.26 ± 3.7 years. With regard to occupation, 60% were Household, 22% were farmers, 10% worked in greenhouse, and the rest was self-employed. 54% used tablet to control their diabetes, while 46% used combined treatments (tablet, insulin, diet, and exercise). With regard to the level of education, 74% were illiterate, and 26% had high school diploma. In terms of marital status, 76% were married and 24% single (including the lack of marriage or death of the spouse). With respect to their health, in total, 62% suffered from overweight, obesity, and dangerous obesity, whereas 24% of them had diabetes complications (eye, kidney, cardiovascular, and diabetic foot ulcers). QOL in the majority of cases (74%) was fairly favorable and QOL in 16% of them was at an optimum level.

With regard to the quality of life, the results showed that quality of life (total dimensions of caring behaviors and patient satisfaction with disease control) of the majority of the surveyed centers (74%) had fairly favorable, whereas 16% had desirable quality of life (Table 1).

Table 1: Frequency distribution of the quality of life of patients with diabetes in the villages covered by Jale'i Health Center

Quality of life	Number	Frequency percentage
Desirable	8	16
Fairly favorable	37	74
Undesirable	5	10
Total	50	100

Given the results of this study, compared to males, females had significantly higher quality of life scores ($p < 0.0001$). Compared with people with 50 years and older group, those in 30-50 years of age group, had higher mean score of the QOL ($p < 0.028$). The results also indicated that there is a significant relationship between BMI and QOL ($p < 0.024$). Education and marital status were not statistically and significantly associated with the overall QOL ($p > 0.05$).

DISCUSSION

Type II Diabetes is one of the most common metabolic disease which affects the dimensions of patients' life. It has no certain treatment. Diabetic patients suffer from numerous physical, mental, and social problems. These problems can lead to decreased quality of life of them. The complications of diabetes can also reduce the QOL of patients [13], even the treatment of diabetes, such as insulin injections and dietary restrictions is problematic in patients' daily life and reduces their QOL [14]. QOL is the most important indicator for the assessment of health care in chronic diseases. To achieve a good QOL in diabetic patients, we must pay attention to the assessment of quality of life. In this study, demographic and personal factors, BMI, measuring the QOL in terms of caring behaviors and patient satisfaction with disease control were evaluated. Given that most analyses in different studies within the country and abroad were of descriptive or uni-variate analysis and report only the score in any area or overall QOL, and that mainly public questionnaire of quality of life, such as SF-36, WHOQOL-BREF ADOQOL, SF-20, SF-26, and researcher-made questionnaires have been used, it is not possible to compare the results of this study with other studies due to the use of different instruments.

The mean overall QOL in this study was determined as 47.5. The cutoff points for determining good quality of life, fairly favorable and unfavorable responses were based on the rating of the responses. The rating of each item was based on one to five to answer each question in sequence (very dissatisfied, dissatisfied, middle, satisfied and very satisfied) and (always, often, sometimes, rarely or never). Each study subject could obtain a score ranging from 15 to 75. 16% had good quality of life (points 55-75), 74% fairly good QOL (points 35-55) and 10% had optimal QOL score (15-35), respectively. This finding is consistent with results reported by Marchasson in France in which 8.5% of patients had undesirable quality of life and is consistent with the present study [15]. However, it is inconsistent with the findings of the study by Monjamed *et al.* who reported that 13.5% of patients had desirable QOL, 71% fairly-desirable and 15.5 had poor QOL. Our study reports almost a higher quality of life in the studied population [16]. The justification is that, first, the questionnaire applied was different and, second, in that study, patients with chronic complications of diabetes were evaluated. The average overall score for QOL in our study is higher than a similar study in Yazd.

SF-20 questionnaire was used in the study in Yazd in which the mean score of 625.65 was obtained out of 60 points. 33.6% of Yazdi patients had poor QOL that this figure is also higher than our study. The most important explanation for this finding is that the prevalence of micro-vascular complications in Yazd is high and consequently the QOL is far lower in diabetic patients [17]. This study reported that marital status is not a determinant of the overall QOL. This result is consistent with the results obtained by Papado et al. [19,18, 8]. The results of this study are consistent with the findings of other studies that predict factors associated with QPL in patients with type II diabetes and suggest that the duration of the disease has the greatest impact on QOL [24-20, 18, 15, 10]. The explanation for the findings is that the more the time of diabetes diagnosis, the more the QOL is affected. In this study, those with the disease control pills had a higher quality of life than those of a combined therapy (pills, insulin, exercise and nutrition). This result is consistent with the result of the study obtained in Saudi Arabia in which patients who control their disease with diet have a higher QOL [25].

The results of the present study showed that the highest percentage of patients is female. In the study by Bagust et al. [23] and Ragonesi et al. ([26], the highest percentage of subjects was female. The researchers suggest that perhaps because of busy work and lack of time, men are less likely to refer for visit; however, women who are mostly housewives have more regular visits. Also, in this study, the mean QOL score was higher in females than in males. The study by Schultz and Winstead-Fry [27] and Mansourian et al. [28] showed that the mean score of the quality of life of women had a statistically significant difference with that of men, but in the study by Rasouli et al. the women's QOL score was lower than men. This is inconsistent with the results of this study [29]. The reason for this may be the side effects on men's performance and their jobs. In this study, the mean score of the QOL in diabetic patients of 30-50 years was significantly higher than that in 50 years and older diabetic patients. In their study, Sadeghi et al. concluded that the QOL is inversely proportional to the age of diabetic patients. The result is consistent with that of the present study [5]. Senez et al. also found that with age, quality of life of diabetic patients' decreases [23], such reduced QOL may relate to an increase in physical, and emotional limitations and self-care or cardiovascular complications, neurovascular and neuropathy and other complications of diabetes with an increase in age. According to Bagheri et al., diabetic patients with vascular complications are of lower QOL (28)

The results showed that the highest percentage of patients was within the overweight BMI (25-30 kg per square meter) (40%) and a total of 22% of body mass index in obese and dangerous overweight (greater than 30 kilograms per meter square), respectively. On the BMI, Veves believes that about 90% of patients with diabetes are overweight [31], also Timby asserted that weight loss even less than ten percent of body weight can significantly improve blood sugar levels (30). In the study by Hanninen et al., the mean BMI was obtained as 30.4 [18]] while in this study, it was obtained as 4.27. Then quality is a component of care and the component of services. The patients demand beyond the services that they receive specially where they are and the place that they receive these services [33]. Lifestyle is routine and usual activities' that persons have accepted them. While these activities have effects on people's healthy live on consuming suitable food, sleeping and exercising, controlling weight, not smoking and alcoholic beverages and become immune against illnesses that all these make lifestyle [34].

CONCLUSION

Given the high prevalence of diabetes in the villages covered by the health center (2.4%), it is suggested that further studies be conducted on the causes of diabetes including the role of diet, genetic factors, cultural and social beliefs, and lifestyle of people in the region. According to the findings of this study, based on a significant impact on the QOL of patients with diabetes on the reduction of the QOL of these people, taking into account the improvement of the quality of life using better methods of training and follow-up and control of disease is an important issue which must be considered in these patients and be seriously emphasized.

REFERENCES

- [1] Serey, T.T. *Business Forum*, **2006**, 22(2), PP.7- 10.
- [2] Arbabisarjou A., Allame S M., Farhang A. *Life Science Journal*, **2012**;9(4). <http://www.lifesciencesite.com>
- [3] Azizi, F., Tehran Lipid and Glucose Study (TLGS): rationale and design, Shahid Beheshti University of Medical Sciences, Iranian Journal of Endocrinology and Metabolism, **2001**.
- [4] Azizi, F., Hatami, H. and Jon Ghorbani, M., Epidemiology and control of common diseases in Iran, Tehran: Ashtiagh Publication, **2007**, 32-55
- [5] Sadeghi, S., Arshi, S., Iranparvar, M., Amani F. and Siyaposh H., *Journal of Ardabil University of Medical Sciences*, **2009**, 8(4): 394-402
- [6] WHO. WHO and the International Diabetes federation: regional Partners. *Bulletin of the world Health organization* **1999**; 77(12): 42-3.

- [7] Ghavami, H., Ahmadi, F., Antezami, H., and Memarian, R., *Journal of Semnan University of Medical Sciences*, **2004**, 6(3): 86-179
- [8] Papado Poulos A, Kontodimopoulos N. *BMC Public Health* **2007**; 7(147): 186-91.
- [9] Harris M. *Curr Diab Rep* **2003**; 3(1): 49-55.
- [10] Deyo RA. *Ann Intern Med* **1991**; 114(8): 695-7.
- [11] Ghanbari, A. and Parsa. E., *Journal of Public Health Nursing*, **2005**, 22(4): 22-311
- [12] Burroughs TE, Radhika D, Waterman BM, Gilin D, McGill J. *Diabetes Spectrum* **2004**; 17(1): 91-7.
- [13] Ellis DA, Frey MA, Naar-King S, Templin T, Cunningham P, Cakan N. *Diabetes Care* **2005**; 28(7): 1604-10.
- [14] Vares, Z., Zandi, M., Baghaii, P., Masoudi, N. and Mirzabegher N., *IJNR*, **2010**; 5 (17) :14-22
- [15] Marchasson B, Dubroca B, Manciet G. *J A M Geriatr Sos* **1997**; 45(3): 295-301.
- [16] Monjamed B., Ali Asgharpour, M., Mehran A., and Peimani T., *Journal of Nursing And Midwifery Faculty*, **2006**, 1(12): 55-66
- [17] Baghiani Moghadam, M., Afkhami, M., Ardekani, S., Mazlomi, M. and Saeedzade, M., *Sadoughi University of Medical Sciences*, **2006**, 4(14):49-54
- [18] Hanninen J, Tkala J. *Diabetes Res Clin Pract* **1998**; 42(1):17-27.
- [19] Eljedi A, Rafael T. *BMC Public Health* **2006**; 6(268) : 1-9.
- [20] Pouwer F, Snoek FJ. *Qual Saf Health Care* **2002**; 11(2): 131-6.
- [21] Glasziou P, Alexander J, Beller E, Clarke P. *Health & Quality Of Life Outcomes* **2007**; 21(5): 1-11.
- [22] Brown M, Brown G, Sharma S, Busbee B. *Ophthalmology* **2003**; 110(6): 1076 -81.
- [23] Senez B, Felicioli P, Moreau A, Legoaziou MF. *Presse Med* **2004**; 33(3): 161-6. [French]
- [24] Ensaf S, Gawad A. *Saudi J Disab & Rehab* **2002**; 8(3): 163-168.
- [25] Bagust A, Wilson E, Perry SA, et al. *Diabetes Care* **2001**; 50(1): 1096.
- [26] Ragonesi L, Taddei MT. *Diabetes Care* **1998**; 11(3): 417-22.
- [27] Schultz AA, Winstead-Fry P. *Cancer Nurs* **2001**; 24(1): 12-19.
- [28] Mansourian M., Behnampour N., Kargar M., Rahimzadeh H. *Journal of Gorgan Bouyeh Faculty of Nursing & Midwifery* **2006**; (10): 16-20 (persian)
- [29] Rasouli D, Nasiriziba F, Nabiamjad R, Haghani H. *JJUMS*. **2011**; 9 (1) :38-45
- [30] Bagheri, H., Ibrahimi H., Taghavi, N., and Hassani, M., (2005), *Journal of Shahrekord University of Medical Sciences*, 7(2): 6-50
- [31] Veves A, Giurini M, Logerfo W. The diabetic foot, medical and surgical management. Newjersey: Human apress Inc **2002**; Pp: 386.
- [32] Timby K, Scherer C, Smith E. Introductory medical-surgical nursing. 7th ed. Philadelphia: W.B. Lippincott **1999**; Pp 290.
- [33] Arbabisarjou, Azizollah. Practical Leadership and Management in Nursing. Tehran: Nashre Jameaanegar, **2012**.
- [34] Arbabisarjou A., Ajdari Z, Omeidi Kh. Relationship between health promotion life style and life quality among nursing students, *World of Sciences Journal*; **2013** ,02.