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Original Article

Factors related to the quality of life of diabetic patients

Fatores relacionados à qualidade de vida de pacientes diabéticos

Factores relacionados con la calidad de vida de pacientes diabéticos

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Objective: to analyze the association among the variables of socio-demographic, clinical and lifestyle of diabetics, correlating them to the domains of Diabetes Quality of Live-Brazil scale. **Methods**: a cross-sectional analytical study of 60 diabetic patients enrolled in a primary care unit. The scale has 44 items divided into four domains: Satisfaction, Impact, Social/Vocational and General concerns related to diabetes. **Results**: it was found that patients who do not adopt healthy lifestyle habits have improved levels of quality of life, since being "sick" usually occurs with complications. The most prevalent needs changes were: dietary change, physical activities and monitoring of foot care. **Conclusion**: the use of instruments validated as DQOL-Brazil provides a better view of the patient´s health status, being important to the effective intervention of the nurse on the negative aspects found.
Descriptors: Quality of Life; Diabetes Mellitus; Nursing.

Objetivo: analisar a associação entre variáveis sociodemográficas, clínicas e estilo de vida de diabéticos, correlacionando-os aos domínios da escala Diabetes Quality of Live-Brazil. **Métodos**: estudo transversal, analítico com 60 diabéticos cadastradas em uma unidade de atenção primaria. A escala possui 44 itens divididos em quatro domínios: Satisfação, Impacto, Preocupações sociais/vocacionais e Preocupações gerais relacionadas ao diabetes. **Resultados**: encontrou-se que pacientes que não adotam hábitos de vida saudáveis possuem melhores níveis de qualidade de vida, pois o "estar doente" ocorre, geralmente, quando instaladas as complicações. As necessidades mais prevalentes de modificação foram: mudança alimentar, realização de atividade física e seguimento dos cuidados com os pés. **Conclusão**: a utilização de instrumentos validados como DQOL-Brasil possibilita uma melhor visualização da situação de saúde do paciente, sendo importante a intervenção efetiva do enfermeiro nos aspectos negativos encontrados.
Descritores: Qualidade de Vida; Diabetes Mellitus; Enfermagem.

Objetivo: analizar la asociación entre variables sociodemográficas, clínicas y estilo de vida de diabéticos, correlacionándolas a los dominios de la escala *Diabetes Quality of Live* -Brasil. **Métodos**: estudio transversal, analítico, con 60 pacientes diabéticos inscritos en una unidad de atención primaria. La escala tiene 44 artículos divididos en cuatro dominios: Satisfacción, Impacto, Preocupaciones sociales/vocacionales y Preocupaciones generales relacionadas con la diabetes. **Resultados**: se encontró que pacientes que no adopten hábitos de vida saludables han mejorado los niveles de calidad de vida, como el "quedarse enfermo", por lo general, ocurre cuando se instalan complicaciones. Las necesidades más prevalentes de cambios fueron: cambio alimentario, realización de actividad física y seguimiento de atención a los pies. **Conclusión**: el uso de instrumentos validados como DQOL-Brasil ofrece mejor visión del estado de salud del paciente, es importante la intervención efectiva del enfermero en los aspectos negativos encontrados.
Descriptores: Calidad de Vida; Diabetes Mellitus; Enfermería.

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Introduction

Diabetes Mellitus is a chronic disease characterized as an important public health problem. Although it is possible to control, the accumulation of events and the limitations imposed by the treatment can lead to series of changes in the patients´ lifestyle.

There are 346 million people with diabetes worldwide. Over 80% of the disease occurs in countries of low and middle income and, according to projections, the number of deaths of people with diabetes will double between 2005 and 2030[1].

Certain lifestyle habits are responsible for increasing the rates. Among them, there are increasing rates of obesity, sedentary lifestyle, high calorie diet and rich in sugars, which greatly increases the chances of manifestation of this disease.

Prevention should be focused through the evaluation of risk factors for early detection and monitoring of diabetic complications, always emphasizing the importance of change in lifestyle[2].

One of the important characteristics of the chronic conditions in general is the space that the disease now occupies in people´s lives. There is often an emotional shock by not being prepared to live with the limitations resulting from the chronic condition[3]. Thus, changes in diabetic life can interfere with quality of life, thus, living well often is related to live without diseases.

In general, it can be seen that the meaning of quality of life includes a wide variety of internal and external conditions chosen by each of us. Then, it is important a research to define what the main difficulties of diabetic patients are that will influence their quality of life. Once these data is developed, it will be useful to assist in the improvement of health services.

Therefore, it becomes important to know the factors that affect the quality of life of patients with diabetes mellitus, since the knowledge will facilitate in developing the treatment plan of those people. This will assist in reducing the complications and improving the quality of life.

Therefore, this study aimed to analyze the association of sociodemographic, clinical and lifestyle characteristics of diabetics, correlating them to the fields of Diabetes Quality of Live-Brazil scale.

Method

Cross-sectional, analytical study with a quantitative approach carried out from January to April 2012, in a Primary Health Care Unit belonging to the Regional IV in Fortaleza-CE.

There were 427 diabetic patients in the research. The sample initially calculated was 75 patients, determined by the formula given for finite populations. The level of significance was 5% and the sampling error was 8%. It was estimated at 20% p proportion of patients with reasonable quality of life and q=80% complementary percentage (100-p). By applying these values in the formula, there is that n=75 patients. However, only 60 patients were collected due to the accessibility in the days they attend the nursing consultation, have diagnosis of diabetes mellitus signed by a doctor, age over 20 years old, able to participate in data collection, explaining their needs and residing in Fortaleza.

For data collection, sociodemographic data, clinical data (body mass index, time of diagnosis and treatment, associated diseases and number of medications taken) and lifestyle data were collected. To evaluate the quality of life, the specific instrument for diabetes was used, entitled: Diabetes Quality of Live-Brazil[4]. It has 44 questions, organized into four domains: 1. Diabetic Life satisfaction, even with chronic illness, 2. Diabetes impact on their lives, 3. Social/vocational concerns for this disease and 4. General concerns general related to diabetes. For each question, there is a possibility of a response with values from 1 to 5, where 1 corresponds to a better quality of life and 5 the worst quality of life. The maximum value obtained in the total scale and each domain is the best levels for defining the quality of life.

There was a statistical analysis using the Statistical Package for Social Sciences, version 17.0. To analyze the normality of the variables, the Kolmogorov-Smirnov test was applied. For those with normal distribution, the F Snedecor test or the Student t test were applied to compare the averages. The average of independent variables associated with the average standard error are compared (physical activity, diet therapy, foot care, smoking and alcoholism) with the average of the dependent variables (domains related to quality of life scale). Inferential analyzes were accepted as statistically significant if values were $p < 0.05$.

The project was approved by the Ethics Committee in Research of the State University of Ceará in Opinion Number 10244361.

Results

Out of the 60 diabetics, 75% are female, age varying from 30 to 86 years old (average=66.9 years old). From those patients studied, 80% had less than six years of education level and 53.4% were unmarried. Among those surveyed, 91.6% of the patients had recent diagnosis, 1 to 6 years and 50% of them did not perform the treatment prescribed by the professionals, such as following the diet and performing physical activity.

Tables 1 and 2 show the average and mean standard error scores, in the total scale and in the domains with each socio-demographic variable.

Table 1 - Comparison of average of the scale and its domains, with socio-demographic variables: age, gender and marital status

Variables	n	Satisfaction	Impact	Social/vocational concern	Diabetes concern	Total scale
Age		Average±MSE p>0.05	Average±MSE p>0.05	Average±MSE p>0.05	Average±MSE p>0.05	Average±MSE p>0.05
30 - 49	10	54.0 ± 5.3	58.4 ± 3.2	92.1 ± 3.6	57.5 ± 7.5	62.2 ± 2.4
50 - 59	11	67.5 ± 5.7	68.8 ± 3.7	92.8 ± 5.7	67.6 ± 7.8	72.1 ± 4.1
60 - 69	21	56.0 ± 3.8	64.3 ± 2.8	92.6 ± 1.8	58.0 ± 5.6	65.4 ± 2.7
70 - 86	18	58.1 ± 4.9	66.5 ± 3.5	98.0 ± 1.1	59.7 ± 5.6	68.0 ± 3.2
Gender		Average±MSE p= 0.028	Average±MSE p> 0.05	Average±MSE p> 0.05	Average±MSE p> 0.05	Average±MSE p= 0.034
Male	15	67.6 ± 4.9	69.0 ± 3.1	95.2 ± 2.3	70.0 ± 5.9	72.8 ± 2.8
Female	45	55.3 ± 2.6	63.4 ± 2.0	93.8 ± 1.7	56.9 ± 3.6	64.9 ± 1.8
Marital status		Average±MSE p>0.05	Average±MSE p>0.05	Average±MSE p>0.05	Average±MSE p>0.05	Average±MSE p>0.05
Married	28	57.2 ± 3.3	63.7 ± 2.2	90.4 ± 2.7	61.6 ± 4.0	65.5 ± 2.1
Single	12	58.8 ± 6.2	64.5 ± 3.2	98.2 ± 1.2	59.3 ± 8.0	67.5 ± 3.6
Widow	15	59.5 ± 5.9	65.5 ± 4.6	98.0 ± 1.0	60.8 ± 7.7	68.2 ± 3.9
Separated	5	61.0 ± 9.2	69.4 ± 4.6	94.2± 2.6	52.5 ± 8.7	68.9 ± 5.4

*MSE: Mean standard error

Table 2 - Comparison of average of the scale and its domains, with socio-demographic variables: income, education and occupation

Variables	n	Satisfaction	Impact	Social/vocacional concern	Diabetes concern	Total scale
Family income (wage*)		Average±MSE p>0.05	Average±MSE p>0.05	Average±MSE p>0.05	Average±MSE p>0.05	Average±MSE p>0.05
0	13	55.1 ± 4.4	62.9 ± 3.5	92.8 ± 2.5	53.3 ± 6.5	64.1 ± 3.1
1	35	59.7 ± 3.2	65.4 ± 2.4	96.8 ± 1.0	60.3 ± 4.0	68.0 ± 2.1
2 to 5	12	58.1 ± 6.3	65.1 ± 3.3	880 ± 5.5	67.1 ± 7.7	66.6 ± 3.9
Education		Average±MSE p>0.05	Average±MSE p>0.05	Average±MSE p>0.05	Average±MSE p>0.05	Average±MSE p>0.05
Illiterate	8	67.9 ± 4.5	69.7 ± 2.4	93.7 ± 2.8	64.8 ± 8.4	72.5± 2.7
Elementary	40	57.1 ± 2.8	63.9 ± 2.3	95.6 ± 1.2	58.9 ± 3.9	66.2 ± 2.0
High school/University	12	56.0 ± 6.8	64.3 ± 2.6	89.8 ± 5.5	61.4 ± 7.0	65.4 ± 4.2
Occupation		Average±MSE p>0.05	Average±MSE p>0.05	Average±MSE p>0.05	Average±MSE p>0.05	Average±MSE p>0.05
Working	28	57.8 ± 3.8	66.9 ± 2.7	95.5 ± 1.3	64.0 ± 4.5	68.1 ± 2.5
Not working	32	58.9 ± 3.1	62.9 ± 2.0	93.0 ± 2.3	56.8 ± 4.3	65.8 ± 2.0

*The value of the minimum wage in the research period was R$ 622,0, equal to U$$ 1256,44

In the total scale in Table 1, it is clear that in the variable age, people from 50 to 59 years old have a better quality of life (72.0±4.1) compared to participants from other ages. They are also more satisfied with life (67.5±5.7) and are fewer concern about their health (67.6±7.8).

Men have better quality of life (72.8±2.8) than women (64.9±1.8) because there are significant difference in the total scale score and satisfaction.

With regard to the marital status, the data shows, separated patients with better quality of life when compared to the other status (68.9±5.4).

As for income in minimum wages, the data show that people who get only 1 minimum wage have better quality of life (68.0±2.1) when compared to those with between 2-5 wages. The data show that there was a significant social concern in this domain, p = 0.048.

Regarding education, the evidences show that illiterates have better quality of life (72.5±2.7).

With regard to occupation, the results show that the active workers have better levels of quality of life (68.1±2.5) compared to retirees, but in the satisfactions in general, these subjects showed less satisfaction with the way of living. In this study, clinical data were associated with quality of life evaluation, as seen in Table 3.

When assessing the body mass index, the data show that obese people with better quality of life, represented by (69.5±2.8) in the total scale.

Correlating the data on the quality of life to time of diagnosis, it was observed that people with better quality of life are those which have 11 to 35 years of diagnosis (72.1±2.7), by analyzing the value of p at the total scale and satisfaction with p = 0.002 and p = 0.003, respectively. This value is repeated when evaluated quality of life to the time of treatment.

When evaluating the data in clinical variables about the number of medication, it was noted that people who take 4-9 medications are those with lower levels of quality of life.

As seen in Table 4, data show that the quality of life of participants who have other diseases and diabetes is worse (66.7±1.7).

The research correlated and evaluated the quality of life with the way of living, in Table 5, and it was noticed that people with better quality of life are those who do not follow the proper treatment of diabetes.

Table 3 - Comparison of the average scale and its domains, with clinical patient data

Variables	n	Satisfaction	Impact	Social/vocational concern	Diabetes concern	Total scale
Body Mass Index		Average±MSE p>0.05	Average±MSE p>0.05	Average±MSE p>0.05	Average±MSE p>0.05	Average±MSE p>0.05
Eutrophic	22	58.7 ± 4.5	65.0 ± 3.5	94.9 ± 1.6	69.2 ± 5.1	67.2 ± 3.2
Overweight	23	56.0 ± 3.7	62.5 ± 2.5	93.7 ± 1.8	57.8 ± 5.2	64.8 ± 2.3
Obesity	15	61.6 ± 4.5	68.0 ± 2.0	93.8 ± 4.4	63.7 ± 6.6	69.5 ± 2.8
Time of diagnosis		Average±MSE p= 0.003	Average±MSE p> 0.05	Average±MSE p> 0.05	Average±MSE p> 0.05	Average±MSE p= 0.002
1 to 3	20	67.6 ± 4.9	69.0 ± 3.1	95.2 ± 2.3	70.0 ± 5.9	72.8 ± 2.8
4 to 6	13	55.3 ± 2.6	63.4 ± 2.0	93.8 ± 1.7	56.9 ± 3.6	64.9 ± 1.8
7 to 10	9	58.4 ± 2.4	64.8 ± 1.7	94.2 ± 1.4	60.2 ± 3.1	66.9 ± 1.6
11 to 35	18	66.6 ± 4.1	69.4 ± 2.9	98.8 ± 0.8	58.3 ± 5.9	72.1 ± 2.7
Time of treatment		Average±MSE p=0.002	Average±MSE p> 0.05	Average±MSE p> 0.05	Average±MSE p> 0.05	Average±MSE p=0.008
1 to 3	21	45.0 ± 3.6	60.7 ± 2.6	90.9 ± 3.3	54.7 ± 4.8	59.6 ± 2.5
4 to 6	12	70.5 ± 4.0	64.3 ± 5.1	95.2 ± 2.5	60.9 ± 8.1	70.5 ± 4.0
7 to 10	9	68.5 ± 2.3	65.7 ± 2.5	91.2 ± 2.8	75.6 ± 6.5	68.5 ± 2.3
11 to 35	18	72.1 ± 2.7	69.4 ± 2.9	98.8 ± 0.8	58.3 ± 5.9	72.1 ± 2.7

*MSE: Mean standard error

Table 4 - Comparison of the average scale and its domains, with clinical patient data

Variables	n	Satisfaction	Impact	Social/vocational concern	Diabetes concern	Total scale
Number of medication		Average±MSE p> 0.05	Average±MSE p> 0.05	Average±MSE p>0.05	Average±MSE p>0.05	Average±MSE p>0.05
1	8	57.0 ± 6.4	68.5 ± 4.8	93.7 ± 3.4	57.8 ± 8.8	67.6 ± 4.3
2	7	54.0 ± 7.5	69.8 ± 3.7	97.9 ± 2.0	63.3 ± 9.9	68.3 ± 4.4
3	10	65.1 ± 6.9	61.3 ± 6.1	92.1 ± 3.2	69.3 ± 7.6	68.2 ± 4.9
4	14	57.2 ± 3.7	61.5 ± 2.6	96.9 ± 1.7	52.2 ± 5.5	64.8 ± 2.5
5	14	58. 0 ± 5.0	66.8 ± 2.9	92.3 ± 4.5	66.9 ± 7.2	64.6 ± 6.6
6 to 9	7	57.8 ± 9.9	63.0 ± 5.9	92.3 ± 3.8	49.1 ± 8.5	64.6 ± 6.6
Other diseases		Average±MSE p>0.05	Average±MSE P> 0.05	Average±MSE p>0.05	Average±MSE p>0. 05	Average±MSE p>0.05
Yes	52	58.8 ± 2.6	64.5 ± 1.8	93.7 ± 1.5	58.7 ± 3.3	66.7 ± 1.7
No	8	56.0 ± 6.3	66.4 ± 5.4	97.3 ± 2.6	69.5 ± 9.9	68.1 ± 4.2

*MSE: Mean standard error

Table 5 - Comparison of the average scale and its domains, with data on patients´ lifestyle

Variables	n	Satisfacion	Impact	Social/vocational concern	Diabetes concern	Total scale
Activity		Average±MSE p> 0.05	Average±MSE p>0.05	Average±MSE p> 0.05	Average±MSE p> 0.05	Average±MSE p> 0.05
Yes	19	53.7 ± 4.5	63.3 ± 2.9	92.2 ± 2.2	62.8 ± 5.5	64.6 ± 2.7
No	41	60.6 ± 2.8	65.5 ± 2.1	95.1 ± 1.7	58.9 ± 3.8	67.9 ± 1.9
Following the diet		Average±MSE p>0.05	Average±MSE p> 0.05	Average±MSE p>0.05	Average±MSE p>0. 05	Average±MSE p>0.05
Yes	18	53.0 ± 4.9	61.3 ± 3.2	92.6 ± 2.0	59.0 ± 6.4	63.2 ± 3.1
No	42	60.7 ± 2.7	66.3 ± 1.9	94.2 ± 1.8	60.7 ± 3,6	68,4 ± 1,8
Foot care		Average±MSE p> 0.05	Average±MSE p>0,05	Average±MSE p>0.05	Average±MSE p> 0.05	Average±MSE p>0.05
Yes	23	52.3 ± 3.6	63.9 ± 2.6	94.7 ± 1.5	60.0 ± 4.8	64.0 ± 2.3
No	37	62.2 ± 3.1	65.3 ± 2.2	93.9 ± 2.0	60.3 ± 4.1	68.3 ± 2.1
Smoking		Average±MSE p> 0.05	Average±MSE p>0.05	Average±MSE p>0.05	Average±MSE p>0.05	Average±MSE p>0.05
Yes	8	55,6 ± 6.9	57.4± 6.3	93.7± 3.4	57.0 ± 8.3	57.0 ± 8.3
No	52	58.8 ± 2.6	65.9 ± 1.6	94.2 ± 1.5	60.6 ± 3.4	60.6 ± 3.4
Use of alcohol drinks		Average±MSE p= 0.02	Average±MSE p>0.05	Average±MSE p>0.05	Average±MSE p= 0.022	Average±MSE p=0.046
Yes	10	71.0 ± 5.6	69.8 ± 3.5	90.7 ± 3.8	76.5 ± 5.3	74.1 ± 3.6
No	50	55.9 ± 2.5	63.8 ± 1.9	94.9 ± 1.5	57.0 ± 3.4	65.4 ± 1.7

*MSE: Mean standard error

The information is relevant because it shows that people who do not practice physical activity (67.9±1.99), do not follow the diet recommended by the nutritionist (68.4±1.8) and do not carry out feet care (68.3±2.1) have the highest values in the total scale, with higher levels of quality of life.

Discussion

Diabetes mellitus is considered one of the main public health problems today, and the type 2 is prevalent among individuals with more advanced age. Most of the participants (21) in this study were 60-69 years old. The type 2 diabetes can occur at any age, but it is usually diagnosed after 40 years old[5]. Another important fact in the study was the predominance of female participants, showing that women have higher attendance in health services.

It was identified low education in this research because patients had at most complete elementaryy education. It is believed that this situation affects the health of people and may hinder the understanding of information and consequently hinder the adherence to treatment, increasing exposure to risk factors.

With respect to clinical investigations, it was found that most of them, 38 (63.3%) presented above normal weight. Despite being a disease, obesity is a risk factor for the onset of hypertension and

diabetes[6]. This finding justifies the need to control weight by changing eating habits and physical activity of the patients.

With regard to time of diagnosis, it was found that 70.0% of patients had been diagnosed with diabetes mellitus 10 years old. The time of diagnosis may influence the onset of complications, because the longer with the disease, the greater the chances of developing lesions in target organs. The diabetes duration and glycemic control are, respectively, the two most important factors for the development and severity of diabetic retinopathy[5].

In the clinical research, it can be seen that most of the participants, 52 (86.6%) have other diseases besides diabetes mellitus, highlighting the Hypertension. It is believed that this is due to more than half of the patients were elderly, because if they live longer, they have higher chronic conditions.

The literature points out that the increase in the number of diseases is directly related to functional disability[7] and adverse situations when not properly addressed may lead to anxiety and depression, in most cases, acting as a "trampoline" for triggering other diseases[8].

Regarding the number of medication use in these patients, it is emphasized that most of them, 28 (46.6%) take 4-5 tablets a day. This data is important, since the literature states that increased use of medication is a barrier for treatments adherence, making complex therapeutic schemes, and enabling the occurrence of drug interactions and adverse reactions[7].

Considering that most patients are elderly, the difficulty of adherence to treatment at this stage is also due to other different factors, such as cognitive impairment, low understanding of the instructions, lack of communication and increasing physical limitations in the complexity of the regimen. Nursing care must be developed in appropriate health actions compatible with and for the patient as a whole.

When considering the health behaviors, it is clear that most of the patients do not follow the recommended diet and physical exercise, thus having poor adherence among study participants. As for foot care, 37 (61.6%) patients reported not doing any particular care. Thus, the need for educational activities that encourage such practices is emphasized.

These data demonstrate that, despite the recommendations, there is resistance to the change in lifestyle. Having to change lifestyle habits that are consolidated and assume a new routine that involves discipline is a great challenge for these patients.

Some authors point out the importance of acquiring and maintaining healthy habits to improve quality of life and health. A good quality of life is possible to provide a minimum of conditions to develop a full potential, living, working, or simply existing. However, it is difficult to conceptualize this term, especially because it can suffer influence of cultural, ethical and religious[9-10].

Despite the difficulties for treatment adherence, nursing plays a crucial role in treating this disease, given the need for behavioral research to identify inefficient responses that require support from professional and family[11]. Family support can direct appropriate actions to health, influencing the adaptation necessary to ensure the patient´s support[12].

Also in the lifestyle, consumption of alcohol and smoking were less observed among patients in the study. The deleterious effects by smoking and alcohol use in the population are widely reported. However, it seems that this fact did not prevent these patients the consumption of tobacco or alcohol.

Regarding the second part of the instrument applied about the population's quality of life studied in gender, the data show that men have a better quality of life (72.8±2.8). They attend less healthcare, they take longer to figure out the diagnosis of the disease, delaying the impact and negative feelings that will be awakened from the diagnosis of diabetes mellitus. Therefore, health professionals should be alert to the male population that they are responsible, since they must reach them out, even if the measures taken to

such an act require more dedication.

With regard to education, the data show that illiterate people have higher levels of quality of life, having the highest levels of satisfaction. This is justified because the lack of knowledge hinders the understanding of the disease, giving a false sense of well-being when in fact, the lack of knowledge will result in further complications[6].

Regarding marital status, people who were separated were highlighted. A study conducted in São Paulo found social representations and showed that some people identify negative aspects for the zeal that family members take regarding the treatment, because it can promote psychological distress and restriction of personal freedom and autonomy, so the separation would benefit this case[13].

Regarding the occupation, the data show that workers have better levels of quality of life (68.1±2.5) compared with retirees, but in the satisfactions in general, these subjects showed less satisfaction with the way of living.

It is believed that a better satisfaction with life is due to the fact that in this period, the family and friends show their importance, and retirees return to their personal life left aside, with good relationships among couples, children and friends outside the work environment. On the other hand, when they retire, many people lose their point of reference, the recognition of society, the reference in the profession, appointments, schedules, being "useful", and consequently having lower quality of life contradictorily with most people working.

In this study, it was noted the quality of life in terms of clinical data and it was noticed that obese patients have better levels of quality of life. The authors stress being similar to observed in the study. They state that when patients perform the recommended diet, there are several meanings, such as loss of enjoyment of food and drink, the restriction of autonomy and the restriction of freedom for food, as and when desired [14]. The limitations and prohibitions imposed by the disease and its treatment take the freedom to do what they want, which causes a sad living directly affecting the quality of life of these people.

Regarding the time of diagnosis, people who have higher levels of quality of life are those who have discovered the illness longest. The understanding of the benefits of treatment and the consequent adherence to the proposed changes, vary to live with the problem. Living healthy, better understanding the disease, obtaining stability of symptoms and improving quality of life are goals by those who live with these disorders for long time[14]. It is believed that this reason is the fact that these subjects are adapted positively, that is, they are coping better with this chronic disease responsible for clinical complications that damage the health of the individual.

Acredita-se que a presença de outras comorbidades, conforme identificado neste estudo, faz com que os entrevistados sofram mais devido as consequências de cada doença, aumentando a tomada do número de medicamentos, de procedimentos como exames laboratoriais e consultas.

It is believed that the presence of other comorbidities as identified in this study causes the respondents suffering more due to the effects of each disease, increasing the number of taking drugs, and procedures such as laboratory tests and appointments.

Regarding the increasing number of drugs, poly-pharmacy is defined as the use of five or more drugs, and it is a fact that has increased substantially in recent years. The use of multiple medications is associated with increasing risk and severity of the adverse reactions, drug interactions, and generating a difficulty in treatment adherence, reducing the quality of their lives[15].

The research correlated and evaluated the quality of life as a way of life and it is noticed in this study that people with better quality of life are those who did not follow the proper treatment of diabetes.

According to the literature, the quality of life related to health is a subjective assessment of

the patient and it can be built and consolidated in a process that includes reflection on what is definitive for their lives, inspiring the desire to be happy[16].

Therefore, to adapt to a non-communicable chronic disease involves several changes in habits that affect the everyday lives of individuals, which seems to be extremely painful and difficult. By observing the data on lifestyle, it is noticed that not following these healthier habits reflects in higher levels of quality of life.

Still investigating the lifestyle of these patients, there was an important finding in the feet care by patients, but less than half of them, 23 perform the necessary care.

Ulcers of the lower limbs result from inadequate habits like walking barefoot, use of tight shoes, inadequate nail cutting and small mycoses, cracks, calluses and foot deformities. Such situations can cause significant damage in diabetics, demonstrating the importance of health education as a preventive measure[17].

Conclusion

In the study, it was found that patients who do not adopt healthy lifestyle habits are believed to possess the best quality of living standards. Thus, the most prevalent needs intervention were: change in dietary pattern, physical activities and monitoring foot care. These changes while provide high levels of quality of life for these patients, however the failure of therapy may result later in complications, affecting considerably the quality of life of these people.

Therefore, the use of instruments validated as DQOL-Brazil enables to see better the health situation and it is believed that despite lifestyle changes are difficult, it is important that these patients eliminate these improper practices regarding the treatment and adapt their new health condition to prevent possible complications that affect their quality of life.

Collaborations

Frota SS and Guedes MVC contributed to the elaboration, field data collection, analysis, interpretation and aticle editing. Lopes L contributed for data analysis and interpretation of the article. Frota SS, Guedes MVC and Lopes LV contributed for elaboration and final approval of the version to be published.

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