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SELF-CARE OF YOUNG ADULTS WITH TYPE 2 DIABETES MELLITUS

AUTOCUIDADO DOS ADULTOS JOVENS COM DIABETES MELLITUS TIPO 2

AUTOCUIDADO DE LOS ADULTOS JÓVENES CON DIABETES MELLITUS TIPO 2

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ABSTRACT

Objective: to evaluate the self-care of young adults with type 2 diabetes mellitus **Method:** this is a descriptive, cross-sectional study with a quantitative approach, carried out in two Basic Health Units of Ipiranga of Piauí (PI), Brazil with 60 individuals between 20 to 59 years old. Data collection was conducted through a questionnaire containing demographic and clinical data and a questionnaire to assess the activities of self-care. **Results:** it was observed that (61.5%) women followed healthy diet (57.1%), men do not follow it. On the “evaluation of blood sugar,” the majority of women (71.7%) and men (85.7%) did not evaluate it; the age group that followed less dietary guidance given by a professional is between 46-54 (75.0%). **Conclusion:** young adults with type 2 diabetes have low self-care ability, requiring greater attention of professional nurses with this population. **Descriptors:** Type 2 Diabetes Mellitus; Self-care; Nursing.

RESUMO

Objetivo: avaliar o autocuidado dos adultos jovens com diabetes mellitus tipo 2. **Método:** estudo descritivo, transversal, de abordagem quantitativa, realizado em duas Unidades Básicas de Saúde de Ipiranga do Piauí (PI), Brasil com 60 indivíduos, entre 20 e 59 anos. A coleta de dados foi realizada através de um formulário contendo dados sociodemográficos e clínicos, e um questionário para avaliar as atividades de autocuidado. **Resultados:** observou-se que (61,5%) mulheres seguiam dieta saudável e (57,1%) dos homens não seguem; sobre “avaliar o açúcar no sangue”, a maioria das mulheres (71,7%) e dos homens (85,7%) falaram não avaliar; e a faixa etária que menos seguiu orientação alimentar dada por um profissional está entre 46-54 (75,0%). **Conclusão:** os adultos jovens com DM2 possuem baixa capacidade de autocuidado, sendo necessária maior atenção dos profissionais enfermeiros com essa população. **Descritores:** Diabetes Mellitus Tipo 2; Autocuidado; Enfermagem.

RESUMEN

Objetivo: evaluar el autocuidado de los adultos jóvenes con diabetes mellitus tipo 2. **Método:** estudio descriptivo, transversal, de enfoque cuantitativo, realizado en dos Unidades Básicas de Salud de Ipiranga de Piauí (PI), Brasil con 60 individuos, entre los 20 a los 59 años. La recolección de datos fue realizado a través de un formulario conteniendo datos sociodemográficos y clínicos y un cuestionario para evaluar las actividades de autocuidado. **Resultados:** se observó que (61,5%) mujeres seguía dieta sana, (57,1%) de los hombres no seguían, sobre “evaluar el azúcar en la sangre”, la mayoría de las mujeres (71,7%) y de los hombres (85,7%) dijeron que la evaluaban; la edad que menos siguió orientación alimentaria dada por un profesional está entre 46-54 (75,0%). **Conclusión:** los adultos jóvenes con DM2 poseen baja capacidad de autocuidado, siendo necesaria mayor atención de los profesionales enfermeros con esa población. **Descriptores:** Diabetes Mellitus Tipo 2; Autocuidado; Enfermería.

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INTRODUCTION

Chronic non-communicable diseases (NCDs) are a public health problem of global importance, while their incidence and prevalence call more and more the attention in contemporary societies and consequently of health professionals, especially nurses. In this context, the World Health Organization (WHO) has suggested education for self-care to prevent and treat chronic diseases, since it promotes the involvement of the individual with his treatment, and encourage greater adherence to the plan therapeutic, reducing complications and disability associated with chronic problems.¹

Among the NCDs, the Type 2 diabetes mellitus (DM2) can be highlighted as the most affecting the population by this ever-increasing rates. People living with DM2 are mostly overweight or obese and are usually diagnosed after 40 years old, exposing themselves to a longer period of possible hypoglycemia and higher risk of chronic complications.² The authors report that the main goals are to join a good treatment to treat people with diabetes based on the control of blood glucose levels and prevent potential acute and chronic complications.³

Global estimates indicate that in 2014, the number of people with diabetes was approximately 382 million, a figure that could increase to 592 million by 2035, which is equivalent to 55%, if not controlled. In the Brazilian scenario, the number of people with diabetes in the age group of 20 to 79 years old reached 11.6 million and the forecast is that this number will only increase by 2030.⁴

Faced with this worrying situation, it is necessary to adopt measures aimed at promoting health, to plan prevention and control strategies of these health disorders with a view especially to self-care, seeking to reduce the number of people with DM2.

Guidance on health is of great and decisive importance in self-care process services. Through them, a link exchange of experiences can start between patients and the multidisciplinary team, in addition to providing information on frequently asked questions, difficulties encountered, as well as a better insight into self-care strategies that best apply to this society.⁵

On the other hand, education and guidance for self-care in DM is a progressive process and facilitator of knowledge about the disease and necessary skills. Also, educational activities developed by health professionals are essential to controlling this disease.⁶⁻⁷

Nursing plays a fundamental role, so people

deal with these diseases, and through health education of that those professionals, there is a greater adherence of the subjects. Recognizing the importance of self-care, as well as the significance of the nurse in this scenario, this study aims to:

Evaluate self-care of young adults with type 2 diabetes mellitus and the impact that they have on the quality of life. The theme is highly relevant because it relates to the needs of people with DM2, especially young adults, to acquire knowledge and skills that give them the necessary support for the development of health practices to improve their general quality.

METHOD

Descriptive, cross-sectional study with a quantitative approach, carried out in the municipality of Ipiranga of Piauí/PI. The research was conducted in two Basic Health Units (BHU) located in the urban area, with this choice directly linked to facilitating access for researchers.

The sample of this research consisted of 60 subjects, after the estimate by surveying the records of the BHU, which contained a total of 149 people registered with DM2. The inclusion criteria were defined as age between 20 and 59 years old; drug therapy; absence of chronic complications in an advanced stage, justifying the mentioned number of participants.

Data collection was conducted from August to October 2015 at the BHU, from s form and s questionnaire applied individually. The form contains sociodemographic and clinical variables, which were developed based on the literature. Then, the Self-Care Activities Questionnaire with Diabetes (QAD) was applied, translated and adapted version to the Brazilian⁸ culture of the instrument Summary of Diabetes Self-Care Activities (SDSCA)⁹ and the data tabulation was performed.

The data were processed using the statistical program Statistical Package for Social Sciences (SPSS) version 20.0. Then, the crossing of variables was performed using statistical test Chi-square test (X^2) and the Likelihood Ratio test. The data analysis considered the statistical analytical results and arranged in tables.

The research project was approved by the Research Ethics Committee (CEP) of the Federal University of Piauí (UFPI), Presentation of Certificate number for Ethics Assessment (CAAE): 47991215.6.0000.5214. The completion of the study followed all ethical principles that send the Resolution 466/2012 of the National Health Council.¹⁰

RESULTS

The participants were 60 young adults,

aged 20 to 59 years old. Table 1 shows the results for the variable BMI of the participants.

Table 1. Sample characterization according to the clinical variables. Ipiranga do Piauí (PI), Brazil, 2016. (n=60).

Variables	n	%
BMI		26.7 [†] ± 5.2
Low	8.0	13.3
Euthrophic	17.0	28.3
Overweight	18.0	30.0
Obesity	17.0	28.3

[†] Average.

It is observed that the value of BMI presents mostly overweight people (30.0%), followed by eutrophic and obese who have obtained the same values (28.3%).

Table 2 shows the relationship between the self-care activity to diabetes and the gender of young adults.

Table 2. The relationship between the activities of self-care with diabetes and the gender of participants. Ipiranga do Piauí (PI), Brazil, 2016. (n=60).

	Gender				p-value
	Female		Male		
	n	%	n	%	
1. Follow a healthy diet					0.165 [†]
Yes	24.0	61.5	9.0	42.9	
No	15.0	38.5	12.0	57.1	
2. Followed food guidance is given by a professional.					0.557 [†]
Yes	16.0	41.0	7.0	33.3	
No	23.0	59.0	14.0	66.7	
3. Practice physical activity for at least 30 minutes.					0.693 [†]
Yes	15.0	38.5	7.0	33.3	
No	24.0	61.5	14.0	66.7	
4. Tested blood sugar.					0.211 [†]
Yes	11.0	28.2	3.0	14.3	
No	28.0	71.8	18.0	85.7	
5. Evaluated the blood sugar the number of times recommended.					0.099 [†]
Yes	13.0	33.3	3.0	14.3	
No	26.0	66.7	18.0	85.7	
6. Examined the feet.					0.547 [†]
Yes	18.0	46.2	8.0	38.1	
No	21.0	53.8	13.0	61.9	
7. Examined the shoes before putting them.					0.664 [†]
Yes	19.0	48.7	9.0	42.9	
No	20.0	51.3	12.0	57.1	
8. Dried up the spaces between the toes, after washing them.					1.000 [†]
Yes	26.0	66.7	14.0	66.7	
No	13.0	33.3	7.0	33.3	
9. Took diabetes medications as recommended.					0.234 [†]
Yes	37.0	94.9	18.0	85.7	
No	2.0	5.1	3.0	14.3	
10. Smoked.					0.280 [†]
Yes	8.0	20.5	7.0	33.3	
No	31.0	79.5	14.0	66.7	

[†] - Likelihood Ratio.

Regarding the crossing made between the activities of self-care with DM2 and gender of the participants, it was observed that (61.5%) females followed a healthy diet while (57.1%) males did not. Considering the participants of both genders, most of (59.0%) females and males (66.7%) reported not following food guidance given by any professional. As for physical activity for at least 30 minutes,

most women (61.5%) and men (66.7%) did not practice. Moreover, when they referred to evaluate the blood sugar the number of times recommended, a significant proportion of women (66.7%) and men (85.7%) reported not evaluated it. When asked about “examining their feet” and “examined their shoes before putting them”, the majority of women (53.8% and 51.3%) and men (61.9% and 57.1%) answered no to both items, but when asked about

“dry up the spaces between the toes after bathing”, most participants of both genders reported to dry them and achieved the same result of participants ranging from 29-45, 46-54 and 55-59. (66.7%) (Table 2).

Table 3. Relationship between the activities of self-care with diabetes and the age of the participants. Ipiranga do Piauí (PI), Brazil, 2016. (n=60).

	Age group						p value
	29 - 45		46 - 54		55 - 59		
	n	%	n	%	n	%	
1. Follow a healthy diet							0.398 [†]
Yes	7.0	46.7	12.0	50.0	14.0	66.7	
No	8.0	53.3	12.0	50.0	7.0	33.3	
2. Followed food guidance is given by a professional.							0.213 [†]
Yes	7.0	46.7	6.0	25.0	10.0	47.6	
No	8.0	53.3	18.0	75.0	11.0	52.4	
3. Practice physical activity for at least 30 minutes.							0.768 [†]
Yes	5.0	33.3	8.0	33.3	9.0	42.9	
No	10.0	66.7	16.0	66.7	12.0	57.1	
4. Tested blood sugar.							0.492 [†]
Yes	5.0	33.3	4.0	16.7	5.0	23.8	
No	10.0	66.7	20.0	83.3	16.0	76.2	
5. Evaluated the blood sugar the number of times recommended.							0.266 [†]
Yes	6.0	40.0	4.0	16.7	6.0	28.6	
No	9.0	60.0	20.0	83.3	15.0	71.4	
6. Examined the feet.							0.281 [†]
Yes	4.0	26.7	11.0	45.8	11.0	52.4	
No	11.0	73.3	13.0	54.2	10.0	47.6	
7. Examined the shoes before putting them.							0.282 [†]
Yes	5.0	33.3	14.0	58.3	9.0	42.9	
No	10.0	66.7	10.0	41.7	12.0	57.1	
8. Dried up the spaces between the toes, after washing them.							0.204 [†]
Yes	8.0	53.3	19.0	79.2	13.0	61.9	
No	7.0	46.7	5.0	20.8	8.0	38.1	
9. Took diabetes medications as recommended.							0.066 [†]
Yes	14.0	93.3	20.0	83.3	21.0	100.0	
No	1.0	6.7	4.0	16.7	-	-	
10. Smoked.							0.130 [†]
Yes	4.0	26.7	3.0	12.5	8.0	38.1	
No	11.0	73.3	21.0	87.5	13.0	61.9	

‡ - Chi Square Pearson; † - Likelihood Ratio

Regarding the data presented in Table 3, the most prevalent age of the study participants who reported following a healthy diet ranged from 55 to 59 years old (66.7%), while the least following the diet was between 29-45 (53.3%).

In “physical activity at least 30 minutes”, the young adults in this study obtained favorable results. The young adults who just evaluated the blood sugar the number of times recommended in the last seven days of the week were 46-54 years old (83.3%). About “examining their feet” and “examining the shoes before putting them”, the majority of

young adults in the age groups between 29-45 years old (73.3% and 66.7%) reported not examining them. In “dry the spaces between the toes after washing them” the majority of participants in the age groups listed in Table 3 mentioned to dry them.

About the item “take diabetes medication as recommended” there were excellent results especially for young adults aged 55 to 59 (100%), followed by 29-45 (93.3%) and 46-54 (83.3%).

Table 4 shows the relationship between the activities of self-care with diabetes and the level of education of the study participants.

Table 4. Relationship between the activities of self-care with diabetes and the education level of the participants. Ipiranga do Piauí (PI), Brazil, 2016. (n=60).

	Education level						p-value
	Illiterate		Elementary		High school/Higher Education		
	n	%	n	%	n	%	
1. Follow a healthy diet							0,202 [†]
Yes	4,0	50,0	16,0	47,1	13,0	72,2	
No	4,0	50,0	18,0	52,9	5,0	27,8	
2. Followed food guidance is given by a professional.							0,632 [†]
Yes	2,0	25,0	13	38,2	8,0	44,4	
No	6,0	75,0	21	61,8	10,0	55,6	
3. Practice physical activity for at least 30 minutes.							0,239 [†]
Yes	1,0	12,5	13,0	38,2	8,0	44,4	
No	7,0	87,5	21,0	61,8	10,0	55,6	
4. Tested blood sugar.							0,433 [†]
Yes	1,0	12,5	7	20,6	6	33,3	
No	7,0	87,5	27	79,4	12	66,7	
5. Evaluated the blood sugar the number of times recommended.							0,119 [†]
Yes	1,0	12,5	7	20,6	8,0	44,4	
No	7,0	87,5	27	79,4	10,0	55,6	
6. Examined the feet.							0,660 [†]
Yes	4,0	50,0	13,0	38,2	9,0	50,0	
No	4,0	50,0	21,0	61,8	9,0	50,0	
7. Examined the shoes before putting them.							0,307 [†]
Yes	5,0	62,5	13,0	38,2	10,0	55,6	
No	3,0	37,5	21,0	61,8	8,0	44,4	
8. Dried up the spaces between the toes, after washing them.							0,474 [†]
Yes	5,0	62,5	21,0	61,8	14,0	77,8	
No	3,0	37,5	13,0	38,2	4,0	22,2	
9. Took diabetes medications as recommended.							0,829 [†]
Yes	7,0	87,5	31,0	91,2	17,0	94,4	
No	1,0	12,5	3,0	8,8	1,0	5,6	
10. Smoked.							0,024 [‡]
Yes	1,0	12,5	13,0	38,2	1,0	5,6	
No	7,0	87,5	21,0	61,8	17,0	94,4	

‡ - Chi Square Pearson; † - Likelihood Ratio

The participants mentioning to follow healthy diet have an average level of education/higher (72.2%), while those who have elementary school were only 47.1%. However, when asked about following food guidance the number of times recommended, the level of education that stood out was the illiterate (75.0%), followed by those with elementary education (61.8%) who reported not following the guidelines obtained (Table 4).

Regarding the practice of physical activity equivalent to at least 30 minutes, most (87.5%) of illiterates participants reported not practicing. In “Assessing the blood sugar the recommended number of times,” most of the sample reporting not evaluating it were illiterate(87.5%) (Table 4).

As for the items “examined their feet” and “examined the shoes before putting them”, it

was noted that most of them have not examined and has the education to elementary school getting the same results for the two items (61.8%). When asked if they “dried toes after washing them,” subjects with high school/higher level of education (77.8%) reported to dry them. Moreover, when they referred to item “took diabetes medicines as recommended”, the education that stood out was the high school/higher (94.4%) the majority answered yes to this item (Table 4).

On the last item of the tables “smoked”, all results obtained satisfactory and positive responses.

DISCUSSION

The study showed that young adults of this research have high BMI, whose values are considered overweight (30.0%) and obesity

(28.3%). This result is similar to the study carried out in Mexico on self-care behaviors and health indicators in adults with type 2 diabetes, which also found high levels of BMI (36.7% and 56.1%).¹¹

Thus, it is clear that people who are overweight and obese need the care of Basic Health teams so they can arrange care plans that help patients return to a normal BMI range. This action should preferably be done in groups to optimize this care, considering the evidence supporting the best results of this type of action.¹²

By analyzing the self-care of young adults with diabetes mellitus type 2, it was obtained a higher score for activities related to drug therapy and a lower score for activities related physical activities. These results are similar to the two studies that used the same instrument.¹⁻¹³ The first cross-sectional descriptive study aimed to evaluate the activities of self-care with diabetes, in people who have complications of the lower limbs and found higher scores for the use of therapeutic drug than for physical activities.¹ Similar results to the study in Florianópolis-SC, whose objective was to evaluate the activities of self-care and check its relationship with sociodemographic characteristics, metabolic control and clinical data of people with DM2, with ambulatory monitoring.¹³

In gender, it was observed that (61.5%) of women followed a healthy diet, while (57.1%) men did not follow it. It is noteworthy also that both genders did not follow any food advice given by health professionals.

However, it is known that nutritional education is one of the key points in the treatment of T2DM. Without adequate food, it is unlikely to be able to do a good metabolic control; yet people with diabetes and healthcare professionals report that modifying eating habits are one of the most challenging aspects of self-care.¹⁴ However, the food is directly related to psychosocial and cultural issues, therefore necessary that the approach to the issues food are inserted in the educational process.¹⁵

On self-care activity related to “evaluating the blood sugar the number of times recommended” got low scores in both genders. This finding is different to what was found in the study that aimed to evaluate the self-care of people with diabetes and complications of the lower limbs in which obtained better results for this item.¹ However, it is expected that capillary self-monitoring is carried out by all people with DM to obtain a better metabolic control.

The dimension “foot care” stood out the daily examination, the inspection of footwear and drying of the interdigital spaces after washing them. The sample is below the recommended for the examination activities of legs and inspection of shoes before reuse them. This result converges to the findings of the study that aimed to analyze self-care of patients with DM2 in the Family Health Strategy in Teresina-PI, where there was a small number of people examining the feet and inspects inside the shoes before reuse them.¹⁶ This suggests that the subjects in this study do not usually have this habit. Thus, it is necessary to take preventive measures to inspect their feet daily so they can early detect some trauma or signs that may signal indicative of injury.

This study statistically significant relationship between age and “physical activity” and “foot care”, implying that the younger the age of the adults in this study, the lower the adherence of physical activity and foot care, this result may reflect the routine daily of each.

In association analysis between age and the activities of self-care, there was a low frequency in this study item related to “evaluate the blood sugar the number of times recommended.” This result is similar to a study in Florianópolis-SC, which aimed to evaluate the activities of self-care and check its relationship with sociodemographic characteristics, metabolic control and clinical data of people with DM2, outpatients and it was found a lower average for this item.¹⁷ Blood glucose monitoring should be performed for all patients with DM2 to keep their blood sugar levels within the normal range.

In this research, there was a statistically significant relationship between “foot care” and education. One result similar to other literature. One study conducted in the emergency department of the Mérida Regional Hospital in Mexico shows that people with high education had better capacity for self-care.¹⁸

Another study in Florianópolis-SC also showed a direct relationship between the “foot care” and education. The results were satisfactory showing also a good ability to self-care, corroborating the data of this research. Thus, it is observed that the more education, the greater the self-care.¹⁷

By analyzing the self-care of the sample under study, it was found the low frequency of people who use tobacco in the relationship between sociodemographic variables and the item “smoked.” This result was positive because there is already evidence to suggest

that tobacco use is associated with the occurrence of some complications of diabetes. This finding supports the study aimed to evaluate the activities of self-care with diabetes in people who have complications in the lower limbs, which was noticeable even lower frequency of people who smoke.¹

To reflect on self-care nurses and staff, along with diabetic users care plans should be built from certain and priorities chosen to understand the different vulnerabilities of these people, so as to provide better clarification of the problems faced and establish a conduit that is effective in caring for all patients.

CONCLUSION

At the end of this study, a significant level of deficit in self-care practices can be identified as to analyze the behavior of the people interviewed noted the need of these individuals learn to live better with diabetes to have higher chances of survival and to improve their health. Thus, diabetes mellitus and chronic disease require continuous and stable clinical follow-up of the person affected, as well as changes in the habits and customs to have a good quality of life.

Health professionals and particularly nurses should act as facilitators to motivate these people to adhere to behavior change so that they can keep the disease under control with the necessary guidance, acquiring skills for self-care according to the needs of each.

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