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Diabetes mellitus-related factors that may influence in the self-care

ABSTRACT | Objectives: To identify the profile of individuals older than 18 years of age, with type 1 and type 2 Diabetes Mellitus (DM), of both sexes followed in the FHS of the rural area of the city of Divinópolis-MG and the types of self-care performed. Method: Descriptive, quantitative study using an adapted instrument and the Diabetes Self-Care Activities Questionnaire. Results: Among the 107 interviewees, 42.1% are over 65 years of age, 62.6% are female, with the same percentage for individuals who have incomplete elementary education and are married, 65.4% have another health problem, being 58.7% Hypertension. In the identification of self-care, responses to "medication" (96.3%) were more prevalent, as opposed to "physical activity" (18.7%), which had a lower prevalence. Conclusion: the research shows that people adhere more to medication treatment than changes in lifestyle.

Keywords: Diabetes Mellitus; Self-care; Quality of life.

RESUMEN | Objetivos: Identificar el perfil de los individuos mayores de 18 años, portadores de Diabetes Mellitus (DM) tipo 1 y 2, de ambos sexos acompañados en las ESF de la zona rural del municipio de Divinópolis-MG y los tipos de autocuidado realizados. Método: Estudio descriptivo, cuantitativo a través de un instrumento adaptado y del Cuestionario de Actividades de Autocuidado con la Diabetes. Resultados: Entre los 107 entrevistados, el 42,1% tiene edad por encima de 65 años, el 62,6% son del sexo femenino con igual porcentaje para los individuos que poseen enseñanza fundamental incompleta y están casados, el 65,4% presenta otro problema de salud siendo 58,7% Hipertensión Arterial. En la identificación del autocuidado, se obtuvo mayor prevalencia las respuestas referentes a la "medicación" (96,3%), al contrario de la "actividad física" (18,7%), que obtuvo menor prevalencia. Conclusión: la investigación evidencia que las personas se adhieren más al tratamiento medicamentoso que a los cambios en el hábito de vida.

Palabras claves: Diabetes Mellitus; Autocuidado; Calidad de vida.

RESUMO | Objetivos: Identificar o perfil dos indivíduos maiores de 18 anos, portadores de Diabetes Mellitus (DM) tipo 1 e 2, de ambos os sexos acompanhados nas ESF da zona rural do município de Divinópolis-MG e os tipos de autocuidado realizados. Método: Estudo descritivo, quantitativo através de um instrumento adaptado e do Questionário de Atividades de Autocuidado com o Diabetes. Resultados: Dentre os 107 entrevistados, 42,1% têm idade acima de 65 anos, 62,6% são do sexo feminino com igual porcentagem para os indivíduos que possuem ensino fundamental incompleto e são casados, 65,4% apresentam outro problema de saúde, sendo 58,7% Hipertensão Arterial. Na identificação do autocuidado, obteve-se maior prevalência as respostas referentes à "medicação" (96,3%), ao contrário da "atividade física" (18,7%), que obteve menor prevalência. Conclusão: a pesquisa evidencia que as pessoas aderem mais ao tratamento medicamentoso do que a mudanças no hábito de vida.

Palavras-chaves: Diabetes Mellitus; Autocuidado; Qualidade de vida.

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INTRODUCTION

Noncommunicable Diseases (NCDs) have been increasing all over the world and have been a priority in public health, severely altering the lives of most people. These diseases are related to environmental and behavioral risks, such as cigarettes, physical inactivity, inadequate diet and obesity, which can cause feelings of despair and distress, which implies the need for comprehensive health care, aiming at quality and autonomy of their lives. ⁽¹⁾ Of these NCDs, Diabetes Mellitus (DM) stands out for having a high prevalence in the entire population. According to the International Diabetes Federation (IDF), in 2017, it was estimated that the world population with DM reached around 425 million diabetics and that in 2045 it could reach around 629 million people. ⁽²⁾

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According to the Health Ministry, DM is a disease characterized by hyperglycemia and is associated with dysfunctions, complications and insufficiency of various organs, among them: kidneys, eyes, heart, nerves, brain and blood vessels. It may result from a deficiency in insulin secretion or its action, involving specific pathogenic processes, such as destruction of the pancreatic beta cells, insulin producers, secretion disorders and resistance to the action of insulin. ⁽³⁾

With population growth, industrialization, increased life expectancy, increased consumption of high-calorie diets, physical inactivity, obesity and changes in lifestyles, the prevalence of people with diabetes grows more and more, causing greater social and economic impact, both in terms of productivity and costs, in this sense mainly affecting health services. It also directly interferes in the lives of patients and their families, as it has consequences such as pain, anxiety and implications for quality and lifestyle, in addition to reducing life expectancy. ⁽⁴⁾

Taking into account the complications that diabetes can bring to the carrier, we recognize that one of the main components of treatment is self-care, which involves an eating plan, monitoring capillary blood glucose, correct use of medication, physical activity and feet-care, for the benefit of maintaining life, health and well-being. It is noteworthy that these practices are directly linked to values, skills and limitations. ⁽⁵⁾

The adoption of daily self-care measures in patients with diabetes is essential to control the disease, since interventions in lifestyle can influence quality of life, in addition to preventing comorbidities. It is necessary that factors such as age, family support, education, access to information, sociocultural orientation, health status, available resources, skills or deficits in self-care, in addition to personal characteristics,



The adoption of daily self-care measures in patients with diabetes is essential to control the disease, since interventions in lifestyle can influence quality of life, in addition to preventing comorbidities.

be identified for the implementation of more effective interventions, in addition to expand adherence to therapy. ⁽⁶⁾

Factors associated with the increase in diabetes mellitus can be classified into: hereditary, socioeconomic and behavioral. Scientific evidence ⁽⁷⁾ highlight behavioral risk factors both for the increase in new cases of DM and to increase the risk of complications in patients with the disease, such as: smoking; inadequate diet with high intake of foods that are sources of fats, salt and sugar; overweight and obesity; sedentary lifestyle; physical inactivity; and abusive consumption of alcoholic beverages.

According to Oliveira ⁽⁸⁾, the role of nurses is of great importance for the promotion of self-care and DM control, mainly through educational actions aimed at promoting health, well-being and improving quality of life. Health education and the creation of support programs are strategies for the implementation of nursing interventions, and can be used through patient monitoring, with more time and a greater number of meetings than routine care, as complications of DM are directly linked to adequate daily personal care and a healthy lifestyle.

Therefore, it became necessary to develop a study that assesses what are the factors that hinder the self-care of diabetic patients, which can influence their quality of life. To this end, the study discussed here aimed to identify the profile of individuals with Diabetes Mellitus monitored by the Family Health Strategies in the rural area of the municipality of Divinópolis - MG, according to socio-demographic, clinical and lifestyle-related variables, diagnosis and treatment. In addition to identifying which types of self-care are performed by them.

METHOD



This study is characterized by being a descriptive study, with a quantitative

approach, developed in the Family Health Strategies, public institutions integrated to the Unified Health System of primary care, which serve only the rural area of the municipality of Divinópolis – MG. The municipality is located in the central-west region of Minas Gerais and has about 238.230 inhabitants⁽⁹⁾, of which 4.362 of them have registered diabetes.⁽¹⁰⁾

The study was conducted through interviews with the patient and data collected from medical records. The study population consisted of people over 18 years old, assisted in the three ESFs in rural areas - Buritis, Quilombo and D'Jalma Dultra - who had a diagnosis of type 1 and type 2 DM, who were registered in the Health Information System (SIS) of Divinópolis-MG and had a risk classification according to with Hiperdia (National Program for Hypertension and Diabetes mellitus). The total number of people served by the ESFs Buritis, Quilombo and D'Jalma Dultra was 147, according to data from the Municipal Health Secretary of Divinópolis. To determine the sample, the sample calculation was used with the statistical criteria defined by Barbetta (11) with a sampling error of 5%.

The interview sought to identify the profile of type 1 and 2 diabetic patients monitored by ESFs in the rural area of the municipality of Divinópolis to characterize patients with diabetes mellitus according to sociodemographic, clinical variables, related to lifestyle, diagnosis and treatment.

The data were collected by the researchers from September to October

2017. Initially, the data would be collected after a conventional evaluation by the nurse or medical professional, however, since the number of people who would come to the Unit would not be satisfactory to compose sample at the time of collection, since the ESFs in the rural area are each day in a different community, it was decided to visit the residences, accompanied or not by community health agents. The choice of participants was random among those registered in the territory of the FHS and that met the inclusion criteria of the research. Besides, data was collected from the participants' medical records.

For data collection, firstly, an instrument developed by the researchers was used, which was based on studies carried out in the area and also on available literature^(8,12). It was structured with 30 items containing sociodemographic and clinical variables, and also related to lifestyle, treatment and diagnosis. Then, the Diabetes Self-Care Activities Questionnaire (QAD) was used, which was translated and adapted for Brazil, to verify how often the interviewees carry out self-care activities or behaviors in the previous seven days. This has six dimensions and fifteen items for assessing self-care for diabetes, such as general food, specific food, physical activity, blood glucose monitoring, foot care, use of medication and items for the assessment of smoking. Responses range from 0 to 7 with scores indicating self-care.⁽¹³⁾

Data related to the time of diagnosis, drug therapy, weight, height,

value and date of the last capillary blood glucose performed on an empty stomach were collected from medical records, with the exception of those who perform the blood glucose test at home. The other data were collected from the patient. To measure blood pressure, he used the standardized technique, according to recommendations of the European Society of Hypertension⁽¹⁴⁾, the calculation and classification of the Body Mass Index (BMI) was used to standardize the World Health Organization.

The data were categorized, transcribed and organized in the Excel for Windows program, processed and analyzed in the Epi Info 3.5.1 program. Then, the distribution of the variables of interest was analyzed. For their presentation, descriptive statistics, mean, absolute frequency and percentage were used.

The research was carried out after approval by the Human Research Ethics Committee (CEP) of the State University of Minas Gerais (UEMG), under Opinion 2,249,597. This research obeyed the ethical precepts recommended in the regulations described in Resolution No. 466, of December 12th, 2012, of the National Health Council (Conselho Nacional de Saúde - CNS). Written informed consent was obtained from all patients.

RESULTS

In the studied group (107 patients with type 1 and 2 DM), the majority (45) are over 65 years old (42.1%). There was a predominance (67 patients) of females (62.6%), with an equal percentage for married individuals. As for the professional activity performed, 32 patients (29.9%) are home workers, with 66 patients (61.7%) living with 2 to 4 people in the same residence and 76 subjects have a family income of up to 3 minimum wages (71.0%), with an equal percentage for those with incomplete elementary education, as shown in Table 1.

Table 1 - Sociodemographic characteristics of diabetic patients treated by the Family Health Strategies in the rural area. Divinópolis - MG, 2017.

Variáveis	(N)	(%)
Sexo		
Feminino	67	62,6
Masculino	40	37,4
Idade (anos)		
Até 35 anos	8	7,5

De 36-45 anos	6	5,6
De 46-55 anos	15	14,0
De 56 até 65 anos	33	30,8
Acima de 65 anos	45	42,1
Estado civil		
Casado	67	62,6
Solteiro	16	15,0
Divorciado	6	5,6
Viúvo	18	16,8
Escolaridade		
Ens. Fundamental incompleto	76	71,0
Ens. Fundamental completo	17	15,9
Ens. Médio incompleto	9	8,4
Ens. Médio completo	5	4,7
Renda Familiar*		
Entre 0-3 salários mínimos	76	71,0
Entre 3-5 salários mínimos	23	21,5
Acima de 5 salários mínimos	8	7,5
Pessoas residentes na mesma casa		
Mora sozinho (a)	14	13,1
De 2 a 4 pessoas	66	61,7
De 5 a 7 pessoas	25	23,4
Acima de 7 pessoas	2	1,9
Atividade profissional exercida		
Autônomo	24	22,4
Do lar	32	29,9
Trabalhador assalariado	12	11,2
Trabalhador rural	13	12,1
Não exerce atividade profissional	25	23,4
Outras	1	0,9

* Minimum monthly salary corresponding to the year 2017: R\$ 937,00.
Source: Research data.

Table 2 - Clinical data on diabetic patients followed by Family Health Strategies in the rural area. Divinópolis - MG, 2017.

Variáveis	(N)	(%)
Índice de massa corporal (Kg/m²)		
Baixo (<18,5)	2	1,9
Normal (18,5-24,9)	17	15,9
Sobrepeso (25-29,9)	46	43,0
Obesidade 1 (30-34,9)	20	18,7
Obesidade 2 (35-39,9)	18	16,8
Obesidade 3 (acima de 40)	4	3,7

Regarding anthropometric parameters, BMI was used especially 1 The sample had a higher prevalence of people who were overweight (43.0%), and in waist circumference measurements both (43) women (40.2%) and 18 (men) (16.8%) had a much increased risk (> 88 /> 102), which shows Table 2.

In the assessment of blood pressure, 38.3% of diabetics had Systemic Arterial Hypertension (SAH) type 1 (140-159 / 90-99), since it meets the highest prevalence (58.7%) of SAH when asked if had another health problem.

As for life habits, there was a prevalence among those (86) who are not smokers (80.4%), (94) do not use alcoholic beverages (87.9%), as well as those (88) who do not practiced no leisure activity (82.2%). And when asked about treatment, only 25% used insulin, with 20% using human PHN. (Table 3).

In the evaluation of self-care activities, there was a higher prevalence of responses related to "medication" (96.3%), in contrast to "physical activity" (18.7%), which had a lower prevalence. When analyzing the general and specific diet, it is noted that the participants performed desirable self-care behavior on the proposed items, less with regard to the consumption of foods rich in fats. In relation to following a healthy diet, individuals reported following an average of 4,74 ± 2,25 days a week, most followed a diet according to guidelines made by professionals on average 4,33 ± 2,32 days a week and ate 5 or more servings of fruits and / or vegetables on average 4,54 ± 2,03 days a week. As for the restriction of sugars, the participants seem to be aware, because in the item sweets consumption, an average of 1,28 ± 1,94 days was obtained in the week.

As for the prevalence of individuals in the research who are overweight, they follow a healthy diet consuming fruits and / or vegetables, but they consume on average 4,16 ± 2,05 days a week, foods rich in fats, which is not favorable for a adequate food.

Circunferência abdominal (cm)		
Mulher		
Normal (Até 80 cm)	15	14,0
Risco aumentado (80-88 cm)	9	8,4
Risco muito aumentado (>88 cm)	43	40,2
Homem		
Normal (Até 90 cm)	11	10,3
Risco aumentado (90-102 cm)	11	10,3
Risco muito aumentado (>102 cm)	18	16,8
Pressão arterial (mmHg)²		
Normal ($\leq 120/\leq 80$)	35	32,7
Pré-hipertensão (121-139/81-89)	12	11,2
Hipertensão estágio 1 (140-159/90-99)	41	38,3
Hipertensão estágio 2 (160-179/100-109)	12	11,2
Hipertensão estágio 3 ($\geq 180/\geq 110$)	7	6,5
Valor da última glicemia em jejum (mg/dl)		
Normal (< 110)	28	26,2
Alterada (≥ 110)	73	68,2
Sem informações	6	5,6
Data da última glicemia em jejum		
Menos de 1 mês	44	41,1
Entre 1-4 meses	43	40,2
Entre 4-6 meses	7	6,5
Acima de 6 meses	5	4,6
Sem informações	8	7,5

Source: Research data

Table 3 - Characterization of the studied sample, according to data regarding diagnosis and treatment. Divinópolis - MG, 2017.

Variáveis	(N)	(%)
Tempo de diagnóstico		
De 1 a 10 anos	82	76,6
De 11 a 20 anos	22	20,5
Acima de 20 anos	3	2,8
Tratamento⁺		
Dieta	50	46,8
Exercício físico	17	15,8
Uso de antidiabético oral	102	95,3
Uso de insulina	25	23,4
Tipo de insulina		
NPH humana	20	18,8
Regular	3	2,7

With regard to the practice of physical activity, there is the realization of undesirable self-care behavior. Because, regarding the performance of any activity at least 30 minutes a day, the research subjects reported performing only an average of $1,91 \pm 2,41$ days a week, and in the item specific physical exercise, it was reported on average $1,69 \pm 2,44$ days a week, which shows that they do not recognize this therapeutic resource as a self-care practice.

Considering smoking as one of the habits related to complications in the treatment of DM, as well as one of the risk factors for DM ⁽⁷⁾, when asked about their history in relation to cigarette consumption, this study showed that prevalence was of those who never smoked (80.4%), which demonstrates the accomplishment of self-care (Table 6).

DISCUSSION

Observing the data presented above, in relation to the age group, the elderly stand out, who, according to the World Health Organization, are considered to be aged 60 years or over. This corroborates the notion that Brazil is undergoing changes in the demographic profile and in the age structure of its population, since life expectancy has increased, causing a marked aging of the population. This is directly linked to the increase in the prevalence and social impact of chronic diseases, especially in people over 50. ⁽¹⁵⁾

As for sex, the present research obtained results similar to other studies. ^(1,15) A possible explanation would be the fact that women are more concerned with health, perform better self-care and, therefore, constantly seek health services and assistance that are offered to them. ⁽¹⁾ The prevalence of married people can be linked to family support, which is one of the important factors for self-care. Studies show that diabetic people who had adequate support from

Associação (NPH + Regular)	2	1,9
Frequência de aplicações no dia[†]		1,72±0,45
Tipo de antidiabético		
Metformina	84	78,5
Glibencamida	7	6,5
Glicazida	2	1,9
Glimepirida	1	0,9
Associações	8	7,5
Frequência de comprimidos tomados no dia[†]		2,05±0,57

* Possible variables of more than one answer.

[†] Values described on average ± standard deviation.

Source: Research data

Table 4 - Characterization of the studied sample, according to the treatment variables. Divinópolis - MG, 2017.

Variáveis	(N)	(%)
Grupo de orientações de DM		
Participa	0	0
Já participou	13	12,1
Nunca	94	87,9
Problema para realizar o exame de glicemia		
Sim	7	6,5
Não	37	34,6
Não possui aparelho	63	58,9
Alterações nos pés		
Nenhuma	88	82,2
Rachadura	15	13,9
Edema	2	1,8
Descamação	5	3,7
Ressecamento	3	2,8
Amputações		
Nenhuma	105	98,1
Dedo MIE	1	0,9
MID (abaixo joelho)	1	0,9

Source: Research data.

Table 5 - Self-care activities for diabetic patients monitored by the Family Health Strategies (ESF) in the rural area, Divinópolis - MG, 2017.

Itens Avaliados	0-4 dias %	5-7 dias %	Média de dias/semana
Alimentação geral			
Seguir dieta saudável	36,4	63,6	4,74±2,25
Seguir orientação nutricional de profissional	46,7	53,2	4,33±2,32
Alimentação específica			

their family members adhered better to self-care practices and this type of conduct can help in identifying the needs of care. ⁽¹⁶⁾

Regarding incomplete elementary education, according to Cortez ⁽¹⁷⁾, it is worth noting that due to the low level of education, patients may have difficulties in understanding the therapeutic recommendations given by health professionals, which would justify the lower adherence of these patients to treatment.

As for the main activity currently practiced in the home, that is, people who dedicate themselves to the activities of the home, it can be explained by the fact that most of the people surveyed are already elderly and diabetes mellitus is a disease that requires changes in habits and complications, generating disabilities and high therapeutic cost, which can hinder work capacity and life expectancy, due to a series of complications. ⁽¹⁶⁾

The number of people living in the same house plays a decisive role in daily life. Studies⁽¹⁸⁾ they highlight the important role of the family with regard to following the recommendations forwarded and helps to motivate therapeutic adherence, since the support and participation of the family have a positive impact on the improvement of self-care practices. In the same way that the number of inhabitants has a direct implication on the control of the disease with regard to hygiene, food and other care, since the income is lower to meet the family demand. ⁽¹⁶⁾

In view of the results, especially the low income (0 to 3 minimum wages) added to the number of people who live in the house, it appears that these are people who have a low per capita income index. According to the WHO, this situation is closely linked to low levels of education and precariousness of the significant portion of the world population. Individuals with low purchasing power live and work in poor conditions,

5 ou mais porções de frutas e/ou vegetais	45,7	54,2	4,54±2,03
Alimentos ricos em gordura (carne vermelha, leite integral e derivados)	54,2	45,8	4,16±2,05
Doces	90,6	9,4	1,28±1,94
Atividade física			
Pelo menos 30 minutos (total de atividade contínua, inclusive andar)	81,3	18,7	1,91±2,41
Exercício físico específico (caminhar, andar de bicicleta, nadar)	81,3	18,7	1,69±2,44
Monitoramento da glicemia			
Avaliar glicemia	81,3	18,7	1,57±2,43
Avaliar glicemia conforme recomendado	80,5	19,6	1,60±2,50
Cuidado com os pés			
Examinar os pés	40,2	59,9	4,45±3,07
Examinar os sapatos antes de calçar	34,6	65,5	4,89±2,98
Secar espaços entre os dedos dos pés	23,3	76,6	5,76±2,34
Medicação			
Tomou medicamentos/insulina, conforme recomendado	3,7	96,3	6,66±1,25
Tomou suas injeções de insulina, conforme recomendado	1,8	21,6	6,60±1,13
Ingerir quantidade indicada de comprimidos do diabetes	2,8	92,5	6,79±0,70

Source: data research

Table 6 - Self-care activities related to smoking in diabetic patients monitored by the Family Health Strategies (ESF) in the rural area, Divinópolis - MG, 2017.

Itens Avaliados Tabagismo	%
Fumou nos últimos 7 dias?	
Não	92,5
Sim	7,5
Quantidade de cigarros por dia	
1-2 cigarros	2,8
3-4 cigarros	3,7
5-6 cigarros	2,8
Quando fumou o último cigarro	
Nunca	80,4
Há mais de dois anos	7,5
Um a dois anos atrás	2,8
Quatro a doze meses atrás	0,9
No último mês	0,9
Hoje	7,5

Source: data research

in general, do not have access to health services or preventive measures. Furthermore, needy families tend to have a

lower degree of learning and this makes health poor. ⁽¹⁸⁾

In the study, 68.2% of diabetics

had fasting blood glucose values above what is established by the American Diabetes Association (ADA) for adequate control of the pathology. And in relation to the date of the last fasting blood glucose, most (44) reported having assessed blood glucose more than a month ago (41,1%). Thus, when glycemic levels are high, they will favor the onset of chronic complications of DM, which makes it important to control using methods that assess the frequency and magnitude of hyperglycemia, being essential in monitoring and adjusting the treatment of DM. ^(2,19)

In this work, in relation to the overweight found through the evaluation of the BMI, According to Braga ⁽²⁰⁾, WHO shows recent data that overweight and obesity are among the top five risk factors for DM, with an important impact on quality of life. The study by Fontela ⁽²¹⁾ revealed that diabetic people who have an inadequate BMI (overweight / obesity) are twice as likely to develop complications of diabetes than those who have an adequate BMI.

As for waist circumference, in women this can be attributed to the higher concentration of body fat, especially in the abdominal region, due to pregnancies and hormonal differences, as well as the fact that the aging process causes a decline in growth hormone, basal metabolic rate and natural reduction in physical activity levels, in addition to healthy eating habits, so with the progressive redistribution of fat, women start to accumulate more abdominal fats. ⁽²²⁾

In relation to men, it can possibly be explained by the greater consumption of alcohol, fatty foods and physical inactivity. Studies ⁽²³⁾ say it is an expected result, due to epidemiological evidence pointing to an inverse relationship between body fat and non-basal energy expenditure, mainly represented by physical activity, with body fat being more favorably distributed among physically active individuals.

According to the time of diagnosis and treatment, 76,6% had the disease in less than ten years, being in disagreement with the study by Cortez ⁽¹⁷⁾ in which individuals with more than 10 years of diagnosis of the disease prevailed. As treatment, the majority (95.3%) used oral antidiabetics, of these 78.5% used Metformin, which is consistent with the study by Silva ⁽²⁴⁾ in which metformin is presented as the first choice of medication for the treatment of diabetes, as it has characteristics such as mild hyperglycemia, obesity and insulin resistance, in addition to reducing 25% of microvascular complications.

In relation to treatment problems, 63 (58.9%) reported as a problem "not having the device", which can be attributed to the fact of access to supplies provided by public health and also to financial difficulties. ⁽²⁵⁾ Regarding changes in the feet, 88 (82.2%) reported that they did not have and 105 (98.1%) did not have amputations in any of the limbs. This can be considered due to the duration of the disease, as studies show that there is a greater chance of developing lesions in patients with more than 10 years of disease involvement. In addition to the patients exhibiting desirable self-care behavior (see Table 4), as the measures adopted to perform self-care with the feet reduce the triggering rates of amputations. ⁽¹⁶⁾

Regarding blood glucose monitoring, when analyzing the items assessing blood glucose and assessing blood glucose as recommended, a low average number of days per week was observed, which was similar to the study carried out by Gomides ⁽⁵⁾. This fact can be attributed to the majority of the participants having reported not having the device at home, as already discussed and presented in Table 4, as well as difficulties in carrying out the monitoring, with regard to psychological, economic and social factors.

As for foot care, all items evaluated



When considering the self-care activities of medication use, the items evaluated obtained the highest averages, verifying a desirable self-care behavior for drug treatment.



showed an average of days greater than 4, showing the achievement of desirable self-care and agreeing with the low rate of changes in the feet and amputations discussed and reported in Table 4, which allows us to state that participants know the importance of proper foot care to avoid future complications from DM. Prevention being the first line against diabetic ulcers, which can reduce the occurrence of foot injuries by up to 50%. ⁽¹⁶⁾

When considering the self-care activities of medication use, the items evaluated obtained the highest averages, verifying a desirable self-care behavior for drug treatment. Thus, the research shows that people adhere more to drug treatment than to changes in lifestyle (Table 5), as these are often ingrained since childhood, in addition to representing a change in daily routine. ⁽⁴⁾

Finally, during the research, it is possible to verify important considerations about the profile of patients with DM and also about their adherence to self-care for the prevention and treatment of the disease, such data can help in the elaboration of strategies for the reduction of symptoms, as well as for greater and more effective patient compliance, always aiming at the perspective of health education. It should also be noted that, although it was found that many were informed about the need for treatment and prevention of the disease, it is considered that some strategies could be better developed and encouraged by nurses and ESF professionals, such as the guidance group of the DM and also activities to promote reflection on self-care.

CONCLUSION

The results of the study allowed to verify that the majority of patients with DM treated at the ESFs in the rural area of Divinópolis are women, elderly, overweight or obese, who still have SAH

diagnosed with DM less than 5 years ago. Regarding self-care, it was found that patients adhere to the drug strategy, but, although they do not have risky behavior regarding the use of alcoholic beverages and tobacco, they have also not effectively changed life habits that

favor the disease aggravation like a fatty diet and inactivity.

However, it is noted the importance of the professional nurse in the care of the patient with DM, through nursing consultation and / or nursing assistance, which will provide knowledge of

the past and socioeconomic history of individuals to create specific care plans for each patient, encouraging the patient's autonomy and enabling family members to help them, especially with regard to self-care and changes in people's life habits. 🐦

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