Artigo Original EN

Eliana B. Serra, Isaura L. P. T. Rolim, Maria A. B. Loureiro, Nirla G. Guedes
Clinical and sociodemographic characteristics of diabetic patients treated at a referral center in Northeastern

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Características clínicas e sociodemográficas de pacientes diabéticos atendidos em centro de referência no Nordeste
Características clínicas y sociodemográficas de pacientes diabéticos tratados en un centro de referencia en el Noreste

RESUMO

Objetivo: Identificar perfil sociodemográfico e clínico de pacientes com diabetes mellitus tipo 2 atendidos em centro de referência no estado do Maranhão. Método: Estudo descritivo de abordagem quantitativa realizado com 170 pacientes. A coleta de dados deu-se entre outubro de 2019 e fevereiro de 2020. A análise descritiva dos dados ocorreu pelo cálculo de medidas absolutas e relativas com auxílio do pacote estatístico SPSS versão 24. Resultados: 69,8% eram do sexo feminino, 97,6% com idade acima de 40 anos, 67,1% casados/união estável, 51,3% aposentados/pensionistas, 65,8% com baixa escolaridade e 65,9% com baixa renda. Os dados clínicos, destaca-se participantes com até 10 anos de diagnóstico de diabetes, presença de sobrepeso, obesidade, não seguimento de plano alimentar adequado e como complicação evidenciou-se a retinopatia. Conclusão: A identificação do perfil clínico e sociodemográfico possibilita o reconhecimento das vulnerabilidades sociais regionais, corroborando para o planejamento de cuidados individualizados e políticas públicas que atendam às particularidades desta clientela.
DESCRITORES: Diabetes mellitus tipo 2; Perfil de saúde; Doença crônica; Cuidado de enfermagem.

ABSTRACT

Objective: To identify the sociodemographic and clinical profile of patients with type 2 diabetes mellitus treated at a referral center in the state of Maranhao. Method: This is a descriptive study with a quantitative approach with 170 patients. Data collection occurred from October 2019 to February 2020. The descriptive analysis of the data occurred by calculating absolute and relative measures, with the aid of Statistical Package SPSS version 24. Results: 69.8% were female, 97.6% over 40 years of age, 67.1% married/ stable union, 51.3% retired/pensioners, 65.8% with low schooling and 65.9% with low income. Regarding clinical data, participants with up to 10 years of diagnosis of diabetes, presence of overweight, obesity, non-follow-up of an adequate dietary plan and retinopathy was evidenced as a complication. Conclusion: The identification of the clinical and sociodemographic profile enables the recognition of regional social vulnerabilities, corroborating the planning of individualized care to this population, improving the quality of nursing care.
DESCRIPTORS: Diabetes Mellitus type 2; Health profile; Chronic Disease; Nursing care.

RESUMEN

Objetivo: Identificar el perfil sociodemográfico y clínico de los pacientes con diabetes mellitus tipo 2 tratados en un Centro de Referencia en el estado de Maranhão. Método: Este es un estudio descriptivo con un enfoque cuantitativo con 170 pacientes. La recolección de datos ocurrió de octubre de 2019 a febrero de 2020. El análisis descriptivo de los datos se produjo calculando medidas absolutas y relativas con la ayuda del paquete estadístico SPSS versión 24. Resultados: el 69,8% eran mujeres, el 97,6% mayores de 40 años, el 67,1% casado/unión estable, el 51,3% jubilados/pensionistas, el 65,8% con educación baja y el 65,9% con bajos ingresos. En cuanto a los datos clínicos, se destaca como complicación a los participantes con hasta 10 años de diagnóstico de diabetes, presencia de sobrepeso, obesidad, no seguimiento de un plan dietético adecuado y retinopatía. Conclusión: La identificación del perfil clínico y sociodemográfico permite el reconocimiento de vulnerabilidades social es regionales, corroborando la planificación de la atención individualizada a esta población, mejorando la calidad de la atención de enfermería.
DESCRIPTORES: Diabetes Mellitus tipo 2; Perfil de salud; Enfermedad crónica; Cuidado de enfermería.

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INTRODUCTION

Diabetes Mellitus (DM) is part of the group of Chronic Noncommunicable Diseases (NCDs), considered one of the biggest public health emergencies of the 21st century, due to its high prevalence, high mortality and morbidity rates, with consequent increase in costs for the health system. The causes are complex and involve non-modifiable risk factors such as age and genetic and modifiable factors such as eating habits and physical activity. Among the main known microvascular complications, nephropathy and diabetic retinopathy stand out, as well as macrovascular complications such as peripheral vascular disease and stroke.[1,2]

According to preliminary data from the IDF (2021), DM was responsible for 6.7 million deaths worldwide, causing at least US$966 billion in healthcare costs, representing an increase of 316% in fifteen years. There has been a 16% increase in the number of cases in the last two years. Currently 537 million people aged 20-79 have DM and this number is expected to increase to 643 million in 2030 and 784 million in 2045. More than four in five (81%) adults with DM live in low- and middle-income countries. [3]

As it is considered a chronic disease, DM2 requires more differentiated care with actions aimed at health promotion and prevention, since these actions will result in a reduction in costs and overload of public health services, in addition to reducing the complications of DM2. [4] However, it is still a major challenge that ranges from knowledge about the pathology, the need for lifestyle changes, social vulnerabilities, adequate adherence to treatment and difficulty in achieving health goals. [5]

Therefore, for your actions to be effective, you need to know the health profile of your clientele, identifying their weaknesses so that health strategies are objective and achieve the best health results. Therefore, the objective of the present study was to identify the sociodemographic and clinical profile of adult patients with DM2 treated at a Reference Center for Endocrinology in Maranhão in order to provide information for the implementation of public policies that address this target audience.

METHOD

This is a descriptive, cross-sectional study with a quantitative approach, carried out in an Endocrinology Reference Center in the capital of Maranhão, linked to the University Hospital of the Federal University of Maranhão (HUUFMA).

The study population was made up of patients diagnosed with DM2 treated at the aforementioned health center.

The selected sampling method was non-probabilistic for convenience based on the care provided to patients in the aforementioned outpatient clinic and to estimate the sample, the calculation for a finite sample was used, considering participants over 18 years of age, totaling 170 patients. The significance level of 95% and the sampling error of 5% were considered as parameters.

Collection was carried out between October 2019 and February 2020, using a form developed by the researcher after structural evaluation by three specialists with doctorates in nursing on clinical and sociodemographic variables for DM2.

The instrument filled out at the time of the interview with the patient included open and closed questions, according to sociodemographic variables, such as: age, gender, race, religion, living area, type of residence, family arrangement, occupation, income, education, marital status and origin. The clinical variables used were: anthropometric data, time of diagnosis, symptoms, capillary blood glucose, DM complications and type of treatment, difficulties in following a dietary plan. And finally, the risk factors for diabetes, specifically: family history of DM, physical activity, high blood pres-

sure, hypercholesterolemia, obesity, smoking and alcoholism.

As inclusion criteria, patients with a confirmed diagnosis of DM2, age ≥ 18 years and clinical stability at the time of data collection were selected. Patients with difficulty in verbal communication or cognitive deficit were not included, with previous assessment of their mental and cognitive state using the Mini Mental State Examination (MMSE) instrument and those who presented a score ≥ 27 were considered eligible to participate. [9]

The information collected was tabulated in a specific database, created in the Microsoft Excel version 2019 program. After checking for errors and inconsistencies, a descriptive analysis was carried out using absolute and relative frequencies for all sociodemographic, clinical variables and risk factors for diabetes mellitus, using the Statistical Package for the Social Sciences (SPSS) version 24. The present study was approved by the Research Ethics Committee of the Federal University of Maranhão with opinion number 3,402,540.

RESULTS

Of the 170 participants, the majority were female (69.8%), aged between 60 and 79 years old (57.6%), from the State capital (58.2%), with their own home (89.4%) and self-identified race/color as mixed race (41.2%).

Regarding marital status, 67.1% said they had a partner, 42.9% lived with their spouse and children, 57.1% with 3 to 5 people and 76.3% with 3 or more children. Regarding occupation, just over half were retired/pensioners or received some social benefit (51.3%), with a family income of 1 to 2 salaries (55.3%). Regarding the level of education, 65.8% reported low education as seen in Table 1

Regarding clinical data, there was a predominance of individuals with high Body Mass Index (BMI), with 37.1% classified as overweight and 35.3% as

Table 1 - Sociodemographic profile of diabetic patients treated at an Endocrinology Reference Center in São Luís – MA, 2020.			
Variables		**n**	**%**
Gender	Female	118	69,8
	Male	51	30,2
Age group	18 to 39 years old	4	2,4
	40 to 59 years old	66	38,8
	60 to 79 years old	98	57,6
	≥80	2	1,2
Race/color	Brown	70	41,2
	White	66	38,8
	Black	30	17,6
	Indigenous	4	2,4
Provenance	São Luís - MA	99	58,2
	Other municipalities in the State	48	28,2
	Metropolitan region	21	12,4
	Other state	2	1,2
Area of origin	Urban	130	76,5
	Rural	40	23,5
Type of housing	Própria	152	89,4
	Alugada	12	7,1
	Cedida	6	3,5
Family arrangement	With spouse and child(ren)	73	42,9
	With spouse	35	20,6
	With child(ren)	29	17,1
	Others	23	13,5
	Alone	8	4,7
	Parents	2	1,2
Categorized family arrangement	Até 2 pessoas	58	34,1
	3 a 5 pessoas	97	57,1
	≥ 6 pessoas	15	8,8
Marital status	Married or stable union	114	67,1
	Widowed or divorced	33	19,4
	Single	23	13,5
Education	Illiterate	17	10,0
	Incomplete elementary education	67	39,4
	Complete primary education	17	10,0
	Incomplete High School	9	5,3
	Complete High School	47	27,6
	Incomplete higher education	3	1,8
	Complete higher education	8	4,7
	Post-graduation	2	1,2

obese and 72.4% of the sample as being overweight, in addition to 40.0% with glycemic indexes above 200 mg/dL.

Regarding time, 56.2% had been diagnosed at least 10 years ago and, of these, 61.8% had difficulty following a dietary plan. 47.1% of participants reported discovering the diagnosis through routine exams and 51.2% had no symptoms at the time of data collection. Regarding complications, 32.36% had some of them, with retinopathy being the most common (60%) as shown in Table 2.

DISCUSSION

The sociodemographic characterization evidenced in this study is corroborated with recent national and international research that indicated a greater number of cases among women, aged 60 to 79 years [7-10], although the percentage among men is gradually increasing, as seen in a study in England. [18] In Brazil, between 2006 and 2017, there was a 54% increase in the percentage of men who were diagnosed with diabetes, increasing this percentage from 4.6% to 7.1%. [9]

The greater number of women with DM can be justified due to the early search for health services to track diseases and, consequently, faster diagnosis. [7,11] Furthermore, the literature points to gestational diabetes and hormonal changes during menopause as factors that can trigger the accumulation of adipose tissue, being one of the consequences of a higher percentage of DM among women. [12] On the other hand, men seek health services less frequently and, generally, only when they are in the illness stage. This issue can and should support health campaigns and strategies that emphasize men's health. [13]

The higher frequency of DM in people over 60 years of age suggests that the prevalence of the disease may increase with age. With the increase in the population's survival rate, a significant

Years of study	<8 years	102	65,8
	>8 years	53	34,2
Religion	Catholic	104	61,2
	Protestant/evangelical	56	32,9
	Doesn't have one	6	3,5
	Others	3	1,8
	Spiritism	1	0,6
Occupation	Retired/pensioner/benefit recipient	77	51,3
	Autonomous	25	16,7
	Home worker	24	16,0
	Salaried employee	17	11,3
	Unemployed	7	4,7
Reasons for Retirement	Age/ Age/time of work	59	76,6
	Inability	18	23,4
Family income	< 1 minimum wage*	18	10,6
	1 to 2 minimum wages	94	55,3
	3 a 4 minimum wages	52	30,6
	≥ 5 minimum wages	6	3,5
Number of people contributing income	1 person	78	45,9
	2 people	76	44,7
	≥ 3 people	16	9,4
Number of living children	1 a 2 children	19	23,8
	≥ 3 children	61	76,3

* Minimum base reference salary (2019): R$ 998.00 - Source: Own authorship, 2020.

Table 2 – Clinical profile of diabetic patients treated at an Endocrinology Reference Center in São Luís – MA, 2020.		
Variables	**n**	**%**
BMI ≤18.5 – below normal weight	1	0,6
18.5 to 24.9 – normal weight	46	27,1
25 to 29.5 – overweight	63	37,1
30 to 34.9 – grade I obesity	42	24,7
35 to 40 – grade II obesity	17	10,0
≥ 40 – grade III obesity	1	0,6
Capillary blood glucose ≤ 70 mg/dL	2	1,2
70 a 99 mg/dL	21	12,4
100 a 126 mg/dL	24	14,1
127 a 199 mg/dL	55	32,4
≥ 200 mg/dL	68	40,0

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relationship has been observed between age and the development of chronic diseases. Therefore, health services must develop strategies for early tracking of these diseases, including better quality records for the most exposed age groups and immediate screening of the public considered at risk for developing the disease. [14]

Poor knowledge about the disease may be related to low levels of education, which directly impacts the effective self-management of these patients' health and, consequently, an unfavorable prognosis when compared to those with a higher level of education. [15] In this way, nurses must understand their clientele, using accessible language to convey information and clarify doubts, as well as strengthening the bonding relationships between these individuals and the professionals in the units. [16]

Regarding the marital situation, the presence of a partner can serve as an incentive and reinforce the need for healthy habits and effective adherence to treatment. A study carried out with elderly people in São Paulo showed that the companions of individuals with DM2 contributed to better management of the disease in relation to adequate eating habits and emotional support for their companions. [17] However, another study showed that the absence of a partner can lead to greater chances of social isolation and the development of emotional disorders, impacting treatment adherence and quality of life. [18]

The majority of participants came from urban areas of the state capital, demonstrating the importance of access to health services in monitoring these people. Strategies that can guarantee quality access are still a challenge to be overcome and are extremely important for guaranteeing the population's right to health. [19]

A study showed that, in men, in relation to color/race, the frequency of diabetes did not vary according to this variable, while in women, the rates were

DM diagnosis time	≤ 1 year	17	10,8
	2 a 5 years	45	28,7
	6 a 10 years	42	26,8
	11 a 15 years	18	11,5
	16 a 20 years	19	12,1
	≥ 20 years	16	10,2
How were you diagnosed with DM?	Routine tests	80	47,1
	Disease symptoms	59	34,7
	Monitoring of another pathology	19	11,2
	Others	12	7,1
First symptoms of DM	Others	66	69,5
	Weight loss	8	8,4
	Weakness/fatigue	5	5,3
	Urinate a lot	5	5,3
	Constant thirst	5	5,3
	Frequent hunger	3	3,2
	Mood change	2	2,1
	Nausea/vomiting	1	1,1
Current symptoms of DM	No symptoms	41	51,2
	Blurred vision	11	13,8
	Others	10	12,5
	Insomnia	5	6,3
	Weakness	5	6,3
	Dizziness	3	3,8
	General malaise	2	2,5
	Headache	2	2,5
	Irritability	1	1,3
Routine measurement of glycemic levels	Yes	89	52,4
	No	81	47,6
Medications in use	Oral hypoglycemic agents	103	60,9
	Mixed (oral and insulin)	46	27,2
	Insulin (regular or NPH)	21	11,8
Free receipt of medications	Yes	93	54,7
	No	45	26,5

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higher among black and brown women when compared to white women. [18] Genetic, cultural factors, socioeconomic level, dietary patterns, climate, geographic characteristics, lifestyle and dietary patterns among certain ethnic groups can influence the development of DM. In this way, public policies aimed at reducing these social inequalities can have a positive impact on reducing the burden of diabetes in the most vulnerable individuals. [21,22]

As support to deal with stress and negative feelings, many individuals turn to religiosity, attributing meaning to the experience of illness. This variable can generate positive aspects in the physical and mental health of its practitioners. [22,23]

Regarding clinical variables, the data regarding the time since DM diagnosis differ from other studies where a diagnosis time of more than 10 years was found, which can be justified by the characteristics of the treatment site. [24,12, 25, 26] A study carried out in the Northeast indicated a direct association between the time of diagnosis and the presence of complications. [27] Furthermore, as it is a chronic disease, it is already considered a factor that can interfere with self-care. [28]

Regarding self-monitoring of capillary blood glucose (SMCBG), a randomized study showed that patients who routinely performed SMCBG obtained more favorable results in the values of glycated hemoglobin, body mass index and total cholesterol than in the control group. [29] Therefore, behaviors that reinforce adequate management of the disease must be strengthened, promoting empowerment, autonomy and self-care. [30]

CONCLUSÃO

As características sociodemográficas e clínicas da população em estudo, identificou baixa escolaridade, baixa renda, presença de sobrepeso/obesidade, dificuldades relacionadas ao uso de medi-

Difficulty using medications	Partially	32	18,8
	Yes	45	26,5
	No	125	73,5
Reasons for difficulties	Acquisition/supply	23	50,0
	Forgetfulness	19	41,3
	Side effects	3	6,5
	Others	1	2,2
Insulin application rotation	Yes	48	71,7
	No	19	28,3
Presence of complications	Yes	55	32,36
	No	115	67,64
DM complications	Retinopathy	33	60,0
	Cardiopathy	8	14,5
	Difficulty with healing	7	12,7
	Others	5	9,1
	Renal insufficiency	2	3,6
Following a meal plan	Yes	65	38,2
	No	105	61,8

Source: Own authorship, 2020

cações e seguimento de plano alimentar adequado. É fundamental considerar o contexto social e clínico de pacientes com DM2 a fim de desenvolver estratégias que garantam fácil acesso aos serviços de saúde além do incentivo a mudança de estilo de vida. Desta maneira, o enfermeiro como protagonista de intervenções relacionadas a educação em saúde poderá subsidiar o planejamento de seu cuidado, além de fomentar a implementação de políticas públicas de

acordo com cada público e demanda.

Como limitação deste estudo, menciona-se o local de realização da coleta de dados ter sido feita em apenas um serviço de saúde referência no tratamento de DM2, o que não possibilita a generalização dos resultados para um público superior e, também, da maior vulnerabilidade deste público quando comparado a pacientes atendidos em serviços privados e com recursos financeiros favoráveis.

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