FAMILY FUNCTIONALITY OF ELDERLY WITH DIABETES MELLITUS

Funcionalidade familiar de idosos com diabetes mellitus

Funcionalidad familiar de personas mayores con diabetes mellitus

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RESUME

Objective: To assess family functionality from the perspective of elderly people with diabetes mellitus, taking into account their sociodemographic, economic, clinical aspects and family configuration. **Method:** Cross-sectional study, descriptive with quantitative approach, to data collection foi not carried out from June 15 to November 28, 2017 not Ambulatory of Endocrinology of the President Dutra University Hospital, with application of a systematized um roteiro followed by family APGAR, totalizing 186 gone. **Results:** Data revealed functional family index in 92.47% of cases. Moderate familial dysfunction was reported by 4.30% and high familial dysfunction present in 3.23%. **Conclusion:** The elderly presented mostly functional families, and it can be concluded that these families can be a source of psychosocial resources, being able to absorb and deal with crisis situations.
DESCRIPTORS: Family relations; Family characteristics; Diabetes mellitus; Aged; Noncommunicable diseases.

RESUMO

Objetivo: Avaliar a funcionalidade familiar na perspectiva dos idosos com diabetes mellitus levando em consideração suas características sociodemográficas, econômicas, aspectos clínicos e configuração familiar. **Métodos:** Estudo transversal, descritivo com abordagem

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DOI: 10.9789/2175-5361.rpcfo.v13.9346 | Sousa WEA, Sardinha AHL, Verzaro PM et al. | Family functionality of elderly with diabetes mellitus

R. pesq.: cuid. fundam. online 2021 jan/dez 13: 612-618

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quantitativa, a coleta de dados foi realizada no período de 15 de junho a 28 de novembro de 2017 no Ambulatório de Endocrinologia do Hospital Universitário Presidente Dutra, com a aplicação de um roteiro sistematizado seguido do APGAR de família, totalizando 186 idosos. **Resultados:** Os dados revelaram índice de famílias funcionais em 92,47% dos casos. A disfunção familiar moderada foi relatada por 4,30% e elevada disfunção familiar presente em 3,23%. **Conclusão:** Os idosos apresentaram na sua maioria famílias funcionais, podendo-se concluir que essas famílias podem ser fonte recurso psicossocial, sendo capazes de absorver e lidar com situações de crise.

DESCRITORES: Relações familiares; Características da família; Diabetes mellitus; Idoso; Doenças não transmissíveis.

RESUMEN

Objetivo: Evaluar la funcionalidad familiar desde la perspectiva de las personas mayores con diabetes mellitus, teniendo en cuenta sus aspectos sociodemográficos, económicos, clínicos y la configuración familiar. **Método:** Estudio descriptivo transversal con enfoque cuantitativo, la recolección de datos se realizó del 15 de junio al 28 de noviembre de 2017 en la Clínica de Pacientes Externos de Endocrinología del Hospital Universitario Presidente Dutra, con la aplicación de un guión sistematizado seguido por el APGAR familiar, totalizando 186 ancianos. **Resultados:** Los datos revelaron un índice familiar funcional en el 92.47% de los casos. La disfunción familiar moderada se informó en un 4,30% y la disfunción familiar alta se presentó en el 3,23%. **Conclusión:** Los ancianos tenían familias en su mayoría funcionales, y se puede concluir que estas familias pueden ser una fuente de recursos psicosociales, pudiendo absorber y lidiar con situaciones de crisis.

DESCRITORES: Relaciones familiares; Composición familiar; Diabetes mellitus; Anciano; Enfermedades no transmisibles.

INTRODUCTION

Population aging is characterized by an increase in the percentage of elderly people in the population and a consequent decrease in other age groups.[1-2] Forecasts for 2025 point out that there will be 1.2 billion elderly people in the world, about 33.4 million in Brazil alone, making thus the sixth largest elderly population on the planet.[3-4] Associated with this context, there is an increase in chronic-degenerative diseases characterized by multiple etiologies, long latency periods, prolonged course and non-infectious origin with consequent loss of autonomy and independence of the elderly population.[5-6]

Among the most common chronic non-communicable diseases (NCDs) in the population is Diabetes Mellitus (DM), its prevalence, in particular that of Type 2 Diabetes Mellitus (DM2), increases exponentially and is more found precisely in advanced age groups.[7-8] DM has high morbidity and mortality and significantly reduces people's quality of life, with long-term consequences, damage, dysfunction and failure of various organs.[9-10]

In addition, the elderly who have diabetes, when compared to the non-diabetic, are subject to being more medicated, presenting depression, falls and fractures, urinary incontinence and chronic pain[7], contributing to the emergence of functional and / or cognitive limitations generating dependency and need of special care, which generates adjustments in family dynamics and organization.[11]

The family environment constitutes a privileged space, characterized by the concern with the integrality and uniqueness of the human being, by valuing the relationship and respect for the other, as long as the family participates and provides the necessary support[12]. The family is the main source of emotional, instrumental, financial and informational support for the elderly, so the assessment of family functionality is a fundamental axis to understand whether the family is prepared to satisfactorily meet the demands of care for the elderly that has a chronic condition.[13]

Exploring and visualizing family dynamics in search of harmony or disharmony in relationships from the perspective of the elderly, in relation to the support received from their family and the care provided, is of fundamental importance for health professionals, who after knowing the reality, through research like this, they can work together with the family; seeking to minimize risk factors and improve family relationships. Thus, knowing the dynamics of the functioning of the family system is an essential part of comprehensive care for the elderly in different health care settings.

Therefore, this research aimed to: assess family functionality from the perspective of the elderly with diabetes mellitus taking into account their sociodemographic, economic, clinical aspects and family configuration.

METHODS

This is a cross-sectional, descriptive study with a quantitative approach. The research was carried out at the Endocrinology Outpatient Clinic of Hospital Universitário Presidente Dutra, a reference center for the entire state of Maranhão with elderly people who have a diagnosis of diabetes mellitus.

The sample is of the non-probabilistic and convenience type, it was composed regardless of sex, ethnicity, education and marital status, residing in the capital or in the interior of the state, totaling 186 elderly people. The research included those who were 60 years of age or older, who scored higher than the cutoff point, according to their level of education, in the Mini Mental State Examination (MMSE), had a proven diagnosis of Type 2 Diabetes Mellitus at least six months and at least one living relative; elderly people with previous diagnoses of infectious diseases that prevented contact, those with severe physical and mental deficits that prevented participation in the study or those who were unable to communicate verbally were excluded.

Data collection was carried out from June 15 to November 28, 2017. Participants were approached and asked about their interest in participating in the research, after confirming the inclusion criteria, they were presented with the Free and Informed Consent Form (ICF), objectives, benefits and potential risks.

It started with the application of the Mini Mental State Examination (MMSE) to ensure that the elderly did not have any cognitive impairment that could interfere with the research result. It is noteworthy that the MMSE was used as an inclusion or exclusion criterion, not being counted for the research results. Then, the systematized script prepared by

the researcher was answered, considering sociodemographic, economic, lifestyle habits and clinical profile variables, followed by the application of the family APGAR.

The family APGAR is an instrument that was developed in 1978, by G. Smilkstein composed of five questions that allow the measurement of the satisfaction of family members, in relation to components considered basic in the unity and functionality of any family: adaptation, companionship, development, affectivity and resolving capacity, and classify family relationships as highly functional, mild dysfunction and severe dysfunction14. Each question with three types of answers: "ALMOST ALWAYS", "SOME TIMES" and "ALMOST NEVER", with quotations of 2, 1 and 0 points, respectively.

In this study, it was understood as family the people with whom the elderly person usually lives. In the case of living alone, all those with more intense emotional ties are considered family. Although the validity and credibility of this method has already been studied, we must bear in mind that it only assesses the degree of family satisfaction that the individual admits and verbalizes.

The collected data were coded, organized and analyzed in the Microsoft Excel 2016 program, being subjected to a double check to ensure the reliability of the results. The results obtained were described as a simple percentage and presented in the form of tables, graphs and in descriptive language.

The research respected all ethical and legal principles involving research with human beings in accordance with Resolution No. 466, of December 12, 2012 and its complementary ones. The present study is a subproject of the research project entitled "Diabetes Mellitus: knowledge assessment" approved by the Research Ethics Committee of the University Hospital of the Federal University of Maranhão, number 862,367.

RESULTS

The (186) elderly people surveyed were aged between 60 and 83 years. Of these (67.74%) belonged to the female sex, mostly self-declared brown and married. There was a low level of education, with a prevalence of retirees with an income of 1 to 3 minimum wages where the elderly person was the main responsible for family income.

Table 1 - Distribution of socio-demographic and economic characteristics of the elderly with diabetes mellitus treated at the endocrinology outpatient clinic. São Luís, MA, Brazil, 2017

Variables	Characteristics	N	%
Gender	Female	126	67,74
	Male	60	32,26
Age range	60-69 years	138	74,19
	70-79 years	34	18,28
	Over 80 years old	14	7,53
Color / race	Brown	120	64,52
	Black	40	21,51
	White	26	13,98
Marital status	Married	82	44,09
	Widower	28	15,05
	Single / Divorced	76	40,86
Years of study	Less than 8 years	104	55,91
	Above 8 years	60	32,26
	No schooling	22	11,83
Current occupation	Does paid work	26	13,98
	Does unpaid work	28	15,06
	Retired	132	70,97
Family income	Up to 1 salary	44	23,66
	1 to 3 salaries	116	62,37
	Above 4 salaries	20	10,76
	Could not answer	6	3,23
Contribution to family income	Only the elderly	124	66,67
	Some family members	52	27,96
	Could not answer	10	5,38
Total		**186**	**100,00**

As for the clinical profile, most of the elderly had a chronic condition other than DM and almost half had the disease for more than ten years, with most of them only undergoing drug treatment, complications are present in the report of approximately half of the interviewees and (40.86%) have already been hospitalized or have undergone surgical procedures as a result of chronic hyperglycemia.

Table 2 - Clinical characteristics of the elderly with diabetes mellitus seen at the endocrinology clinic. São Luís, MA, Brazil, 2017

| Variables	Characteristics	N	%
Another chronic condition	Yes	166	89,25
	No	20	10,75
DM diagnosis time	Less than 1 year ago	10	5,38
	From 1 to 4 years	38	20,43
	From 5 to 10 years	48	25,81
	More than 10 years	90	48,39
DM treatment	Medicated	120	64,52
	Medication and lifestyle change	46	24,73
	Insulin therapy	2	1,08
	Medication and insulin therapy	18	9,68
Complications of DM	Yes	90	48,39
	No	96	51,61
Hospitalizations or surgeries resulting from DM	Yes	76	40,86
	No	110	59,14
	Total	**186**	**100,00**

As for home arrangements, it was observed that most lived with spouses and children, followed by tri generational arrangements and elderly people who lived alone or with children and relatives, as shown in Table 3.

Table 3 - Distribution of the family arrangement of the elderly with diabetes mellitus seen at the endocrinology clinic. São Luís, MA, Brazil, 2017

| Variable	Characteristics	N	%
Home arrangement	Alone	32	17,20
	Spouse	26	13,98
	Spouse and children	48	25,81
	Tri generational arrangements	34	18,28
	Children and relatives	32	17,20
	Spouse and Relatives	14	7,53
	Total	**186**	**100,00**

Regarding family functionality, it was found that most were satisfied with family relationships, considering that in (92.47%) of the cases they had functional families. Family dysfunction was found in (7.53%) of families. Of these, eight elderly people showed moderate dysfunction and six high family dysfunction in their homes.

Figure 1 - Arrangement of family functionality in elderly people with diabetes mellitus seen at the endocrinology clinic. São Luís, MA, Brazil, 2017

FAMILY FUNCTIONALITY
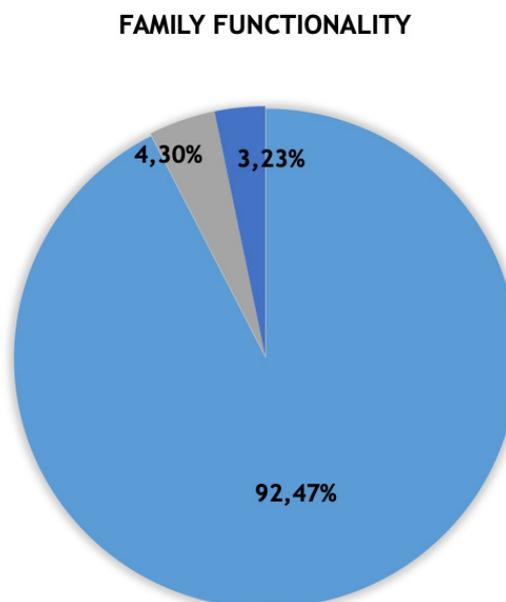
As for the dimensions assessed by the family APGAR, most respondents reported that they could always turn to their family for help (adaptation), were always satisfied with the family when it came to sharing problems (companionship), with the support received by the family (development), with the affection shown by the family members (affectivity), however only (68.89%) report that they were always satisfied with the time they shared with the family (resolving capacity), a component that had the lowest index satisfaction.

Figure 2 - Distribution of family dynamics in the elderly with diabetes mellitus seen at the outpatient clinic according to the components of the Family APGAR. São Luís, MA, Brazil, 2017
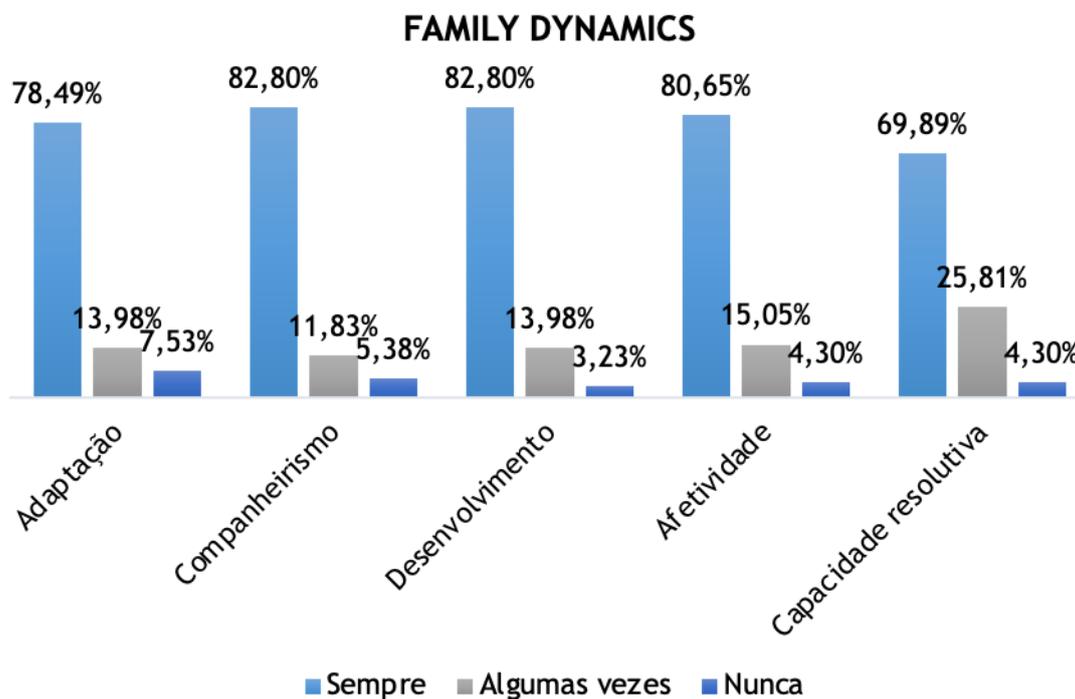
DISCUSSION

Demographic changes have affected Brazilian families, both in the economic and emotional dimensions, so that they can influence the way they care for their members. In the family context that is permeated by affective relationships, the quality of these interactions falls on the care of the elderly, as they are more resistant to changes and have greater difficulty in adapting.[2-15]

The sample of this study is characterized by being mostly female, mixed race, between 60 and 69 years old, married, with low level of education and retired. In addition, the elderly in more than half of the households were the only ones who contributed to the family income. Which is consistent with the results of the 2016 Synthesis of Social Indicators that revealed a feminization of aging, with a predominance of the age group between 60 and 69 years, with the majority self-declared population black and brown, especially in the North and Northeast regions.[1]

Similar data were pointed out in a survey carried out in the state of Bahia with 134 elderly people, where it was observed that the majority of participants were female between 60 and 74 years old, heads of family, who contributed totally or partially to the support of the family.[13]

It was also found that 89.25% of the elderly in this study had another chronic condition in addition to diabetes mellitus, which may be associated with the aging process itself, where functional changes that are characteristic of the elderly occur, causing a greater predisposition to the appearance of chronic conditions.[4-7]

In addition, almost half of the elderly had been diagnosed with diabetes mellitus for over ten years and have already manifested complications resulting from it with hospitalization or surgical procedures in 40.86% of cases. Regarding the treatment of DM, the majority of respondents underwent only drug treatment and only 24.73% underwent drug treatment associated with changes in lifestyle.

The treatment, time of diagnosis and the appearance of complications are directly related, especially when they are not associated with self-care activities related to the correct diet, physical activity and the proper use of medicines[10], that is, when pharmacological treatment is not associated with non-pharmacological treatment the chances of complications of DM are greater over the years.

Family support is considered to be significantly associated with behaviors related to self-care in diabetes, whether they are diet, exercise or adherence to drug treatment. Thus, one must know, understand and include the family in the care process, since it is part of the individual's life.[16]

In the Brazilian context, the financial, emotional and instrumental support offered by the elderly is crucial in the lives of the youngest. Therefore, when analyzing the home arrangements in this study, it was observed that 25.81% of the elderly lived with spouses and children, followed by tri generational arrangements, those who lived alone and those who lived with children and relatives. As pointed out in the research mentioned above, most elderly people lived with family members of several generations, with 41% living with descendants and 23.9% living with their spouses and descendants.[13] What demonstrates that multigenerational family life can enable greater number of people available to provide support and care, but may also experience difficulties with intergenerational conflicts.

The elderly's perception of family functioning is related to their assessment of the quality of relationships, the degree of effectiveness displayed by the family in meeting their needs, and the degree to which family relationships correspond to their expectations. In addition to assessing the idea of cohesion and emotional comfort that derive from their relationships with people who are significant to them.[17]

Therefore, the data from this research revealed functional family indexes in 92.47% of the cases in overlapping moderately dysfunctional families with high family dysfunction. Meaning that the majority of the elderly are satisfied with meeting their demands by the family in the evaluated dimensions.

In a universe of 374 elderly people in Mato Grosso do Sul, higher levels of dissatisfaction in family relationships were found with 23.8% of families with moderate or high dysfunctionality, however, even so, the families were highly functional from the point of view. view of the majority of the elderly.[15]

In another survey conducted with 430 elderly people in Ceará, the high dysfunctionality of families was almost three times that found in this study, with 9.5% of high family dysfunction, however the high rates of family functionality still predominated.[17] Which leads to the questioning of that in more comprehensive samples, high family dysfunction may be more present. However, in another study with 934 respondents, high family dysfunction was reported in 4.6% of the elderly18, rates close to those found in this research.

The functional family system is one in which its members respond to conflicts and critical situations aiming at emotional stability, have the ability to harmonize their own functions in relation to others in an integrated, functional and affective way, protecting the integrity of the system as a whole.[17-18] In the dysfunctional, however, there is no commitment to the dynamics and maintenance of the system by its members, where particular interests are prioritized over the group and I did not assume their roles within the system.[15] Often superficial and unstable affective bonds are observed and a high degree of aggression and hostility among its members.[15-18]

When assessing the components of the family APGAR separately, it should be noted that the elderly pointed out that they were always satisfied in more than 78% of the answers related to the first four components, however when they were asked about the time shared with the family, where only 69.89% of the cases they were always satisfied, 25.81% were sometimes satisfied and 4.30% were never satisfied.

In a study already mentioned, carried out in Goiás with 934 elderly people, they indicated satisfaction with family relationships regarding adaptation in 87.2%, companionship in 88.5%, development in 83.2%, affectivity in 86.3 % and resolving capacity by 80.2%, indicating that the vast majority 90.1% perceived good family functionality.[18]

Among the domains of the Family APGAR, good family functionality was estimated in the companionship and development domain, followed by affectivity, indicating that there is greater family attention to the elderly in relation to sharing decisions, support, protection and affectivity in the face of situations of family stress, with a view to family balance. As for the time shared (component of resolving capacity),

it was revealed by the elderly as having less attention by family members, corroborating other findings.

Thus, impairments in family functionality can significantly interfere with the health demands of the elderly, with deleterious effects on their independence, autonomy and quality of life.[17] The family that supports its members in situations of illness understands the changes related to the condition and makes it is permeable to the necessary adjustments to ensure support for family members, a fundamental requirement for diabetic patients to achieve self-management of their disease.[16]

It is noteworthy that the contact with the elderly person interviewed was the first and briefly, thus not obtaining a bond of trust for the better use of family issues, which may result in underestimated data.

CONCLUSION

The results showed that the characteristics found do not differ significantly from the literature, regarding sociodemographic aspects and health conditions. The elderly population attended by the surveyed clinic is predominantly female, lives with a spouse, children and grandchildren, and has low education and income. In addition, it presents health problems, often accompanied by complications of diabetes mellitus, associated with socioeconomic conditions and unfavorable lifestyle habits.

Most of the elderly had functional families, and it can be concluded that these families can be a source of psychosocial resources, being able to absorb and deal with crisis situations. The Family APGAR proved to be an adequate instrument to assess the family functionality of elderly people with diabetes mellitus.

Family arrangements suggest a deeper analysis of relationships and intergenerational coexistence, since this greater contact and the greater demand for family attention towards the elderly can induce family dysfunction due to the impact of chronic non-communicable diseases, in addition to triggering conflicts and dissatisfaction on the part of the elderly, which can lead to changes in intrafamily roles and the election of the main caregiver, which takes responsibility to a single person, generating the caregiver's burden.

In addition, the study considers the impacts that the chronic conditions of an elderly person have on family dynamics, it is essential to aim at comprehensive care, where it is extended to the elderly and the whole family, in order to operate in the care logic centered on family.

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Disclaimer: The authors claim to have no conflict of interest.