Social characteristics and comorbidities of older adults associated with home care

Características sociais e comorbidades de idosos vinculados à atenção domiciliar

ABSTRACT

Objective: To identify the social characteristics and comorbidities of older adults in type 1 home care. Method: A cross-sectional study, with a quantitative approach, was conducted via telephone, with older adults assisted by the home care of the primary health care system of a municipality located in the central region of Rio Grande do Sul, Brazil. A questionnaire was administered by telephone to identify the sociodemographic profile and comorbidities associated with the aging process and health conditions. Results: Predominance of women (71.3%), mean age of 78 years, married (44.4%), incomplete primary education (43.5%), Catholic (64.8%), retired (76.9%), total household income between one and two minimum wages (51.9%), average of three people living in the household and whose child is the main caregiver (56.5%) prevailed. The high rate of comorbidities and multimorbidity was highlighted, with a predominance of systemic arterial hypertension (63.9%), diabetes mellitus (38%), arthritis/arthrosis (32.4%), depression (19.4%) and others. Conclusion: The results justify the expansion of new care strategies, considering the aging process, to maintain the functionality of older adults with comorbidities monitored in home care.

RESUMO

Objetivo: Identificar as características sociais e comorbidades de idosos da Atenção Domiciliar tipo 1. Método: Estudo transversal, com abordagem quantitativa, conduzido via contato telefônico, com idosos vinculados à Atenção Domiciliar da Atenção Básica à Saúde de um município localizado na região central do estado do Rio Grande do Sul, Brasil. Aplicou-se, via contato telefônico, questionário para identificação de perfil sociodemográfico e de comorbidades associadas ao processo de envelhecimento e condições de saúde. Resultados: Predomínio de mulheres (71,3%), idade média de 78 anos, casados (44,4%), fundamental incompleto (43,5%), católicos (64,8%), aposentados (76,9%), renda domiciliar total entre um e dois salários mínimos (51,9%), média de três pessoas residentes no domicílio e que possuem o filho como o principal cuidador (56,5%) prevaleceu. O elevado índice de presença de comorbidades e multimorbidade foi destacado, com predominância de hipertensão arterial sistêmica (63,9%), diabetes mellitus (38%), artrite/artrroses (32,4%), depressão (19,4%) e outros. Conclusão: Os resultados justificam a ampliação de novas estratégias de cuidado, considerando o processo de envelhecimento, com vistas à manutenção da funcionalidade das pessoas idosas com comorbidades acompanhadas na Atenção Domiciliar.

HOW TO CITE THIS ARTICLE:

INTRODUCTION

In recent years, the aging of countries, particularly in Latin America and the Caribbean, has been marked by declines in fertility and mortality rates and increases in life expectancy.\(^1\)

The aging process should not be seen as synonymous with disease, but in this age group there is an increase in clinical-functional vulnerability and predisposition to chronic non-communicable diseases (NCDs), which are directly related to functional disability. NCDs are classified as the leading cause of morbidity and mortality worldwide.\(^2\)

The health of older people must be constituted and characterized by clinical-functional and socio-familial aspects. Healthy aging is the process of developing and maintaining functional capacity, i.e., the way in which individuals express their autonomy and independence in Activities of Daily Living (ADL), which enables them to manage their own lives and take care of themselves in old age.\(^3\)

Frailty is not a sum of diseases, but the result of interactions between several chronic conditions that are most prevalent in this population, whose individual importance is unquestionable, but which, when combined, can have profound consequences for the autonomy and independence of the older person. Frail older people are more vulnerable to chronic conditions and more susceptible to acute conditions such as infectious diseases and external causes such as falls. Early recognition of their presence is essential to implement interventions that can prevent rapid progression to functional dependence and other adverse outcomes.\(^3\)

In the Brazilian health system, this identification is deficient, characterizing it as a challenge for the current health care model, which needs to focus on the older adults, minimize the progression of frailty and reduce adverse events, allowing the maintenance of quality of life, life with guaranteed autonomy, social interaction, and independence, contributing to a life free of disability.\(^4\)

In comparison, Home Care (HC) has been shown to be an effective health care modality. Linked to Primary Health Care (PHC), HC guarantees and enables health actions and services to ensure comprehensive care, organized at distinct levels of technological density, in addition to integration with Healthcare Networks (HN).\(^5\)

HC recognizes three types of health care, HC type 1 (HC1), indicated the individuals who require less complex and frequent care; and the responsibility of PHC, which is the target of this study. HC type 2 (HC2) and HC type 3 (HC3) are intended for patients who require frequent and intensive care, which is the responsibility of the Home Care Service (HCS).\(^5\)
According to Decree 825/20165, the teams that make up the HCSHC system are multidisciplinary, called Multiprofessional Home Care Teams (MHCT), and are classified into three types: Type 1, Type 2, and Multiprofessional Support Team (MST). Among the professionals involved, nurses deserve to be highlighted because, in addition to their skills and role in clinical monitoring, they provide support for quality of life through bonds with patients and families and a comprehensive approach in different contexts. In addition, they are exclusively recognized by the HC regulations.7

In this context, home visits (HVs) are considered a comprehensive care tool, a health intervention technique, as well as something that brings the family closer to the health service and the reference professional for the care of vulnerable people, reducing the cost of health services and promoting the optimization of hospital beds.8

The knowledge of the main comorbidities and social characteristics of the older adults makes it possible to understand the vulnerabilities and needs of this population, as well as contributing to the individualized care of the user, assisting in the planning and implementation of appropriate interventions for the older adults and caregivers at home. Moreover, it is imperative to highlight the scarcity of literature related to the older adults monitored by HC and the evaluation of home care, making it relevant to determine health and social indicators, with the aim of designing strategies that help professionals in the PHC network.

OBJECTIVE

To identify the social characteristics and comorbidities of older adults registered in type 1 home care.

METHOD

A cross-sectional study, with a quantitative approach, was conducted by telephone with older adults assisted by the HC1 of PHC in a municipality located in the central region of Rio Grande do Sul, Brazil, in four Family Health Strategies (FHS), with the city having 14 FHS.

We chose to select the four FHS that have most older adults registered in HC1 of the municipality, which they represent 28.5% of the total. The selection of these health units was done through a survey together with the person responsible for the older adults’ health policy of the Municipal Health Service. The total population of older adults associated with HC1 of the four FHS was 247 persons.
This study included older adults aged 60 years or older, of both sexes, who were registered in HC1 of the four FHS. Older adults who were institutionalized or hospitalized at the time, who had cognitive disability or insufficiency, and/or who were diagnosed with advanced dementia were excluded.

The Clinical Practice program\(^1\) was used to calculate the sample size. Of the 247 older adults associated with HC1, based on the study by Lins et al.\(^1\), a 95% confidence level, 5% margin of error, and 10% expected proportion were considered, resulting in a sample of 108 participants.

Users' telephone numbers were identified through lists provided by health services, without regard to the study's eligibility criteria. Of the 247 older people identified by the FHS, 139 were excluded according to the exclusion criteria. Data were collected in August 2021.

Elders who met the inclusion criteria were contacted by phone to schedule an available time to conduct the dialog according to their preference, which could be video or voice only. Three telephone contacts were attempted per user, both for the initial scheduling call and for the interview, on different shifts and days.

A structured questionnaire developed by the authors of this study was used to collect data on sociodemographic and health conditions, including the following variables: caregiver's degree of kinship, age, sex, marital status, education, religion, total household income, source of income, number of persons living in the household, HC1 follow-up time, and comorbidities. The latter included the presence of systemic arterial hypertension (SAH), diabetes mellitus (DM), arthritis/arthrosis, depression, dyslipidemia, congestive heart failure (CHF), cancer, Parkinson's disease, chronic kidney disease (CKD), and others (not specified in the questionnaire).

During the interviews, which lasted an average of 20 minutes, the researcher made telephone contact with the older person, along with the caregiver or family member, to assist with responses to the administered questionnaire, if necessary. The researchers were previously trained in data collection.

The data were double entered into a spreadsheet and analyzed. In the descriptive analysis, the mean and standard deviation were calculated for quantitative variables, and absolute and relative frequencies for categorical variables. This study was approved by the Research Ethics Committee of the Universidade Franciscana (UFN) under number 3.308.174.
RESULTS

Of the 108 older persons, the mean age is 78.7 years, with a prevalence of females (71.4%). Most participants were married/in a stable union (44.4%), with incomplete primary education (43.5%), retired (76.9%), so that the total household income was one to two minimum wages. (51.9%). The most common religion was Catholicism (64.8%).

Regarding the degree of relationship of the caregiver, the child was the most common (56.5%). In relation to the number of persons living in the household, the average observed was 3.1 (Table 1).

**Table 1.** Sociodemographic characterization of older adults in Home Care type 1 of Primary Care, Brazil, 2021.

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>%</th>
<th>Mean (standard deviation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>77</td>
<td>71.3</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>31</td>
<td>28.7</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>60</td>
<td></td>
<td>78.7 (±9.3)</td>
</tr>
<tr>
<td>Maximum</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Married/Stable union</td>
<td>48</td>
<td>44.4</td>
<td></td>
</tr>
<tr>
<td>Single</td>
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<td>4.6</td>
<td></td>
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<tr>
<td>Divorced/Separated</td>
<td>8</td>
<td>7.4</td>
<td></td>
</tr>
<tr>
<td>Widower</td>
<td>47</td>
<td>43.5</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomplete primary education</td>
<td>71</td>
<td>65.7</td>
<td></td>
</tr>
<tr>
<td>Complete primary education</td>
<td>23</td>
<td>21.3</td>
<td></td>
</tr>
<tr>
<td>Incomplete high school</td>
<td>7</td>
<td>6.5</td>
<td></td>
</tr>
<tr>
<td>Complete high school</td>
<td>7</td>
<td>6.5</td>
<td></td>
</tr>
<tr>
<td>Religion</td>
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</tr>
<tr>
<td>Catholic</td>
<td>70</td>
<td>65.7</td>
<td></td>
</tr>
<tr>
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<td>25</td>
<td>21.3</td>
<td></td>
</tr>
<tr>
<td>Spiritist</td>
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<td></td>
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<tr>
<td>No religion</td>
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<td>3.7</td>
<td></td>
</tr>
<tr>
<td>Source of income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retired</td>
<td>83</td>
<td>76.9</td>
<td></td>
</tr>
<tr>
<td>Beneficiary</td>
<td>16</td>
<td>14.8</td>
<td></td>
</tr>
<tr>
<td>Family</td>
<td>5</td>
<td>4.6</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td>Total household income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(minimum wage)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 1</td>
<td>4</td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td>1 – 2</td>
<td>56</td>
<td>51.9</td>
<td></td>
</tr>
<tr>
<td>2 – 3</td>
<td>32</td>
<td>29.6</td>
<td></td>
</tr>
</tbody>
</table>
Table 2 shows the comorbidities of older people receiving home care. A high presence of comorbidities was found in 98.1% of the study sample.

The most prominent comorbidities were SAH (63.9%), followed by DM (38%), arthritis and/or arthrosis (32.4%), and depression (19.4%). A considerable proportion of the sample also reported having other comorbidities, the most prevalent being: sequelae of stroke (19.7%), Acute Myocardial Infarction (AMI) (8.4%), anxiety (7.04%), and osteoporosis (5.6%).
It was found that the average follow-up time for older people with Alzheimer's disease was 61.8 months, with a standard deviation of 46.4 months.

DISCUSSION

The ageing of the population is an irreversible process that involves changes that require adjustments on the part of the ageing individual, the family, society in general and the public authorities. Thus, ageing is a period characterized by the maintenance of functional capacity and the full exercise of citizenship and the right to come and go.11

Studies12,13 show that NCDs affect health in a multidimensional way, reducing the functional capacity and autonomy of older people and, consequently, their quality of life. Thus, new considerations, technologies, adaptations in the model of care, organization and management are emerging among professionals involved in HC. By promoting HC as a point of strategic health care, the integration of the multidisciplinary team with the patient's family is offered, promoting the continuity of assistance, bonding, and reception from the FHS to the home.5

There was a greater incidence of women, confirming the feminization of old age.14 A study15 cites that women have low protection, security, and well-being in this stage of life, with a high probability of lower income and education levels, and a greater number of chronic diseases. In addition, the National Health Survey 2019-2022, conducted by the Brazilian Institute of Geography and Statistics (IBGE)16, showed that women aged 75 or more had more functional limitations in ADL than men.

Regarding the male sex, the inadequacy and devaluation of men in self-care are due to neglect, a culture of machismo, reluctance to seek health care, and fear. Factors such as these can have a direct impact on longevity, the occurrence of aggravating factors and co-morbidities.17 In this sense, the importance of treatment and care for the different sexes is highlighted, as they have distinct characteristics and specific contexts, also encouraging earlier contact with health services, especially in the FHS, to reduce inequalities in health care.

Regarding the age, it ranged between 60 and 100 years, with an average of 78.7 years, showing similarity with the study18 conducted with institutionalized older adults, where the minimum and maximum age were 60 and 101 years, respectively. Furthermore, in relation to research19 conducted with older adults FHS users, it is shown that most participants (76.4%) lived with more people, which is consistent with the results
of the present study in which the number of residents in the same household was three people.

Regarding marital status, most participants self-declared to be married or in a stable union, meeting another study\textsuperscript{14} in which it is in research, 46\% of long-lived respondents declared this type of union. As a caregiver for these older adults, the son was the most present in this study, which confirms Brazilian research\textsuperscript{20,21}.

Based on these data, we ask about those older adults who are spousal caregivers and family caregivers. Who is caring for whom? It is appropriate to rethink the provision of assistance by health professionals so that there is no overburdening of care for both the older adults and the family.

The predominant level of education was incomplete primary education, which is similar to the study\textsuperscript{22} showing that 80\% of the older adults did not complete primary education. Regarding the source of income and total household income, the main sources identified were pension and income of one to two minimum wages, in line with research\textsuperscript{23}.

It is observed that the educational level of the older adults reveals differences in income and self-reported health status, demonstrating that the more years of study, the more chances of better salary income and less chance of getting sick, given the difference in perception of health\textsuperscript{24}. Also, individuals with low education and income are considered the most socially vulnerable and prevalent population to NCD risk factors\textsuperscript{25}.

Regarding religion, Catholicism was more prevalent, meeting the research\textsuperscript{26} conducted in Primary Healthcare Units in the interior of the State of Amazonas (AM), shows walk that 96.6\% of the older adult population was Catholic. Religion is important for the older adults in coping with everyday problems and contributes to their health and better quality of life. There is a growing need for health professionals to appreciate or understand the importance of addressing this issue, which requires the development of specific studies that incorporate religiosity/spirituality into clinical practice\textsuperscript{27}.

Regarding comorbidities, a high rate was found (98.1\%), which confirms a cross-sectional analytical study\textsuperscript{23}, conducted in a municipality in the State of Bahia (BA), where more than 90\% of dependent older adults also had a high rate of comorbidities (92\%).

The older adults interviewed had an average of two simultaneous comorbidities. This finding is corroborated by a study\textsuperscript{28} of older people in different regions of Brazil, in which 50\% had at least two concurrent NCDs, and about 20\% had three or more. This confirms that this group of diseases is an important public health problem.

SAH, the comorbidity most frequently mentioned by respondents, is considered the most important chronic disease in the geriatric population\textsuperscript{29}. An integrative study\textsuperscript{30}
found that in 15 countries, SAH and DM are prevalent in the older adults, and noted that these and other comorbidities, such as obesity, respiratory and liver diseases, are emerging issues on a global scale and require interventions and management.

DM was the second most common comorbidity in older adults. A multicenter study of dependent older adults in Brazil had the same results, showing that cardiovascular diseases were the most common (88.1%), followed by DM (23.1%).

Another finding was the presence of arthritis and/or arthrosis (32.4%). Osteoarthritis negatively affects physical well-being, such as functional limitation and inactivity, and mental well-being, such as anxiety, depression, and risk of isolation in older adults, causing dependency, reduced quality of life, and physical and psychological symptoms. Depression has also been found to be prevalent in older people receiving home care, as shown in a study conducted in the Federal District (DF) that found an association between depression and female gender and age (70 to 79 years).

Treatment of NCDs can also be directed towards non-pharmacological measures to maintain healthier lifestyles (regular physical activity, standardized healthy diet and limited alcohol intake), in addition to integrative and complementary practices (ICPs) to reduce pain and symptoms.

Therefore, professionals need to outline strategies and interventions to promote the health of older adults receiving home care, seeking to understand the subjective, cultural, economic, and social factors associated with quality of life and health in older adults.

The average duration of home monitoring found in this study was five years, with the longest duration found being 17 years and the shortest being one month. An exploratory study, conducted in 34 Family Health Centers and four macro-health areas in a municipality in Ceará (CE), showed a growing demand from seniors at HC by FHS, in the last five years, and others monitored by FHS teams more than 10 years ago, reflecting the importance of longitudinality.

Meanwhile, the role of the nurse in the monitoring of older adults at home, based on the management of the care process, in the health education of family caregivers and in the nurse’s work process, in the context of the health team, stands out. Furthermore, health promotion, maintenance and recovery practices can be permeated by situations that promote autonomy in the face of the realities of the ageing process, leading to a productive old age.

However, the challenges of home care are well known, such as the work environment, the development of a care plan, the preparation of health professionals to
provide comprehensive care, the context of the user's life, and teamwork. Regarding the demographic and epidemiological scenario, in a country with regional inequalities and territorial coverage, the task is to guarantee access and care for multiple chronic diseases on a continuous basis.\textsuperscript{38}

The limitations of this study are related to its cross-sectional nature, which makes it impossible to establish cause and effect relationships, and to the specific population of older adults monitored in home care, which does not allow the generalization of the results.

**CONCLUSION**

The study investigated the main comorbidities and social characteristics of older adults assisted by HC1. There was a predominance of females, mean age 78.7 years, married persons, with incomplete primary education, Catholic, retired, with a total household income between one and two minimum wages, average of three people living in the household, and those with the child being the main caregiver. A high rate of comorbidities and a predominance of arterial hypertension, diabetes mellitus, arthritis/arthrosis, depression, and others, stood out.

The data justify the expansion of new care strategies, considering the aging process, with a view to maintaining the functionality of elderly people with comorbidities who are monitored through home care.

Based on the results, new research is urgently needed to assess and strengthen the overall functionality of the elderly in home care, in order to support the implementation of interventions for specific demands, encouraging aging with quality of life.

**CONTRIBUTIONS**

All authors contributed equally to writing and reviewing the manuscript and approved the final version of the manuscript.

**CONFLICTS OF INTERESTS**

There were no conflicts of interest.
REFERENCES


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