REFACS

Original Article
Rev. Fam., Ciclos Vida Saúde Contexto Soc.
http://seer.uftm.edu.br/revistaeletronica/index.php/refacs/index
ISSN: 2318-8413 DOI: 10.18554/refacs.v12i3.7844

Health conditions and care demands of residents of long-term care facilities: regional overview

Condições de saúde e demandas assistenciais de residentes de instituições de longa permanência: panorama regional

Condiciones de salud y demandas asistenciales de los residentes en Intituciones de Larga Estancia: panorama regional

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Received: 07/08/2024 **Accepted:** 26/11/2024 **Published:** 30/12/2024

Abstract:
Objective: to analyze the health conditions and care demands of elderly individuals living in Long-Term Care Facilities for the Elderly. **Methods:** cross-sectional, descriptive, quantitative, conducted with residents of institutions registered in the Unified Social Assistance System (*Sistema Único de Assistência Social*), from the five regions of Brazil. Data were collected on site, from August of 2015 to 2018, with a specific questionnaire for cognitive capacity, functional assessment, health condition, and depression scale. The analysis was descriptive, with the aid of Stata™ software, version 15. **Results:** the 4,250 elderly individuals represented the five Brazilian regions and were, for the most part, male, 80 years or older, with some form of cognitive decline, multimorbidity, and using polypharmacy (South and Southeast regions), with functional impairment for activities of daily living. They did not had falls and had at least one medical appointment in the 12 months prior to the collection, most of them at the institution itself. **Conclusion:** most institutionalized elderly people have significant functional and health impairment, cognitive alterations, multimorbidity, use daily medication, requiring specialized assistance to meet their needs, even though the long-term care institution is not a health institution.
Keywords: Health status; Aged; Aged, 80 and over; Homes for the Aged.

Resumo:
Objetivo: analisar as condições de saúde e as demandas assistenciais de pessoas idosas residentes em Instituições de Longa Permanência para Idosos. **Método**: transversal, descritivo, quantitativo, realizado com residentes em instituições cadastradas no Sistema Único de Assistência Social, das cinco regiões brasileiras. Os dados foram coletados in loco, no período de agosto de 2015 a 2018, com questionário específico para capacidade cognitiva, avaliação funcional, condição de saúde e escala de depressão. A análise foi descritiva, com auxílio do software Stata®, versão 15. **Resultados**: as 4.250 pessoas idosas representaram as cinco regiões brasileiras e eram, na maioria, do sexo masculino, 80 anos ou mais, com presença de declínio cognitivo, multimorbidade e fazendo uso de polifarmácia (regiões Sul e Sudeste), com comprometimento funcional para atividades de vida diária. Não apresentaram quedas e realizaram pelo menos uma consulta médica nos 12 meses que antecederam a coleta, sendo a maioria na própria instituição. **Conclusão:** a maioria das pessoas idosas institucionalizadas têm comprometimento funcional e de saúde significativos, alteração cognitiva, multimorbidade, fazem uso de medicação diária, requerendo assistência especializada para o atendimento de suas necessidades, mesmo a instituição de longa permanência não sendo uma instituição de saúde.
Palavras-chave: Nível de saúde; Idoso; Idoso de 80 anos ou mais; Instituição de Longa Permanência para Idosos.

Resumen:
Objetivo: analizar las condiciones de salud y las demandas de cuidados de ancianos residentes en Intituciones de Larga Estancia para ancianos. **Método:** estudio transversal, discriptivo y cuantitativo de residentes de instituciones registradas en el Sistema Único de Asistencia Social en las cinco regiones brasileñas. Los datos se recogieron *in situ* entre agosto de 2015 y 2018, utilizando un cuestionario específico para la capacidad cognitiva, la evaluación funcional, el estado de salud y la escala de depresión. El análisis fue descriptivo, utilizando el software Stata®, versión 15. **Resultados:** los 4.250 ancianos representaban las cinco regiones brasileñas y eran en su mayoría hombers, de 80 años o más, con deterioro cognitivo, multimorbilidad y utilizan polifarmacia (regiones Sur y Sudeste), con deterioror funcional para las actividades de la vida diaria. No presentaban caídas y habían tenido al menos una consulta médica en los 12 meses anteriores a la recogida, la mayoría de ellas en la propia institución. **Conclusión:** la maypría de los ancianos intitucionalizados presentan un importante deterioro funcional y de salud, deterioro congnitivo, multimorbilidad, utilizan medicación diaria y requeiren aistencia especializada para cubrir sus necesidades, aunque la institución de cuidades de larga duración no sea una institución sanitaria
Palabras-clave: Estado de salud; Anciano; Anciano de 80 o más Años; Hogares para Ancianos.

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INTRODUCTION

One of the most striking global phenomena in today's society is the increasing pace of aging, with an increase in the older population and a decrease in the younger population. According to the Brazilian Continuous National Household Sample Survey (*Pesquisa Nacional por Amostra de Domicílios Contínua* - PNAD Contínua), carried out in 2022, people aged 60 or over represent 14.7% of the population, which means around 31.2 million elderly people in Brazil in 2021[1].

This demographic transition process goes hand in hand with the development of the epidemiological transition, changing the profile of acute diseases to chronic diseases, directly impacting public health. Chronic diseases emerge as a critical aspect of this scenario, with conditions such as Systemic Arterial Hypertension (SAH), Diabetes Mellitus (DM), cardiovascular diseases and respiratory diseases assuming a central role[2].

The increase in the prevalence of these diseases among the elderly requires a comprehensive preventive approach, aiming to mitigate the impacts of these conditions and minimize the decline in cognitive status and functional capacity, thereby promoting healthier aging[2]. Both cognitive and functional conditions can change with age and are directly related to the individual's autonomy and independence in carrying out daily activities[3].

In a context of greater vulnerability and fragility, the elderly may reside in Long-Term Care Facilities for the Elderly (LTCFEs). LTCFEs are governmental or non-governmental institutions, of a residential nature, intended for the collective residence of people aged 60 or over, with or without family support, in conditions of freedom, dignity and citizenship[4].

This vulnerability and fragility are even more present among the elderly who reside in LTCFEs of a public or philanthropic nature, as is the case of those registered in the Census of the Unified Social Assistance System (*Sistema Único de Assistência Social* - SUAS), when compared to the general elderly population. Non-profit public and private LTCFEs can be registered with SUAS, and an annual census is conducted for these institutions to obtain information on the services, programs and benefits that are being implemented by the public administrator and by entities and organizations registered with the Municipal Social Assistance Council[5].

Residents of institutions registered with SUAS belong to more precarious socioeconomic levels and communities with low purchasing power, and there is often an increase in the prevalence of chronic diseases, which are influenced by socioeconomic, environmental and behavioral factors. In addition, limited financial resources often hinder access to ongoing

treatments and medications, worsening the impact of these conditions on the cognitive state and functional capacity of elderly people, and consequently, on their quality of life[2].

The increase in life expectancy and the change in the panorama of diseases and their aggravating factors increases the need to produce knowledge about the health conditions of the elderly population living in LTCFEs , as well as their care demands[6].

Few Brazilian studies have been conducted on non-family care modalities for the elderly population, especially from the perspective of the elderly themselves. Furthermore, regional differences in terms of population characteristics and their access to social and health care services should be taken into account in order to better reorganize current public policies.

This study aims to analyze the health conditions and care demands of elderly people living in long-term care facilities for the elderly.

METHODS

This is a cross-sectional and descriptive study, with a quantitative approach, which used data from the second phase of the research: "*Estudo das condições sociodemográficas e epidemiológicas dos idosos residentes em instituições de longa permanência para idosos registradas no censo SUAS (Sistema Único de Assistência Social)*"[7] (Study of the sociodemographic and epidemiological conditions of elderly people living in long-term care facilities for the elderly registered in the SUAS Census), carried out throughout Brazil.

In the first phase, 1,451 LTCFEs registered in the 2014 SUAS Census, with at least 10 residents, were evaluated with the managers of the institutions; in the second phase, a sampling with regional representation was carried out, in which 50 LTCFEs were selected, drawn by region, with the exception of the North region, which did not have 50 LTCFEs, using data from the entirety of the region.

Sampling to maintain regional representativeness was carried out in advance, and 20 elderly people were randomly selected from each LTCFEs, totaling an estimated 1,000 residents/region. There was no replacement in the event of refusal, absence or death, thus maintaining the initial representativeness, calculated using data obtained in the census.

The data were collected on site, from August of 2015 to 2018, from LTCFE residents or from a proxy, in case the elderly person selected was not physically or cognitively able to respond. The interviews were conducted by a team of professionals who had been properly trained using a questionnaire specific to the study.

In this study, the variables selected relate to: cognitive status, health conditions, falls, functional status and use of health services.

The assessment of cognitive status was performed using a brief instrument that tracks cognitive losses, the Mini Mental State Examination (MMSE), in the version that reduces the impact of education on the results, and which has a cut-off point for positive screening of cognitive decline of 12 or less points[8]. In addition, the "Pfeffer Functional Activities Questionnaire" (PFEFFER)[9] was also applied in order to obtain greater reliability in the results for the cognitive assessment. Thus, those elderly people who obtained 12 or less points in the MMSE and simultaneously 6 or more points in the PFEFFER were classified as having cognitive deterioration, that is, with more compromised cognitive decline.

The assessment of health conditions included: a) the presence of chronic diseases: hypertension, DM, respiratory diseases, heart diseases, joint diseases, stroke, cancer, osteoporosis, dementia, psychiatric diseases, neurological diseases, among other diseases (gastrointestinal, renal, urological, neurological, ophthalmological, psychiatric, vascular, endocrine diseases, infectious conditions, and trauma); b) chronic conditions: depressive symptoms, urinary and fecal incontinence, and chronic pain; c) multimorbidity; and d) the number of medications in use. Vaccination status (influenza, pneumococcal and tetanus) and the occurrence of falls were also verified.

Symptoms of depression were assessed using the five-item Geriatric Depression Scale (GDS-5), where depression was suspected when a score was equal to or greater than 2[10]. Regarding the number of diseases, multimorbidity was considered the presence of two or more chronic diseases[11,12]. Regarding the simultaneous use of five or more medications, polypharmacy was considered[11,12].

The assessment of falls considered any event of falls in the 12 months prior to the interview, as well as the number of times the patient fell, the place and reason for the fall, the need for health care and the occurrence of fractures (in relation to the last fall) and their details.

Functional status was assessed by the performance of Basic Activities of Daily Living (BADL): walking across a room, getting dressed, bathing, eating, lying down and getting out of bed and using the toilet. In the data collection questionnaire, participants were asked about the presence of difficulties or the need for help in each activity. Elderly people were classified as independent if they performed all BADLs alone, even with difficulty, and were classified as dependent when they reported that they did not perform or needed help with at least one of the BADLs.

It was found that institutions in different Brazilian regions did not allow the performance of Instrumental Activities of Daily Living (IADLs) (69.3% to 96.5%) among residents, and for this reason, they were not included in the analysis.

Mobility was assessed by asking whether the elderly person could walk, whether they were bedridden or wheelchair-bound. The categories used were: preserved mobility and altered mobility (wheelchair-bound and bedridden).

Regarding the use of health services (medical consultation, hospitalization and emergency care), the period of 12 months preceding the interview was considered.

The data were stored in an electronic spreadsheet and analyzed using descriptive statistics, with the distribution of relative and absolute frequencies for each region of the country, with the aid of the statistical software Stata™, version 15. The variables that did not receive a response (missings) were excluded from the analyses. It should be noted that, because they were regional samples, it is not possible to add the number of cases or their frequencies.

This study was submitted to the Research Ethics Committee of the School of Public Health, and was approved under opinion No. 1,077,982, on May 25, 2015, with CAAE: 44953415.6.0000.5421.

RESULTS

A total of 4,250 elderly people participated in this study, 736 from the North region, 890 from the Northeast region, 887 from the Central-West region, 912 from the South region, and 825 from the Southeast region. Most of the elderly people (approximately between 53.0 and 65.0%) were not physically or cognitively able to answer the data collection questionnaire, which was answered by a proxy. In most regions, this proxy was the formal caregiver of the elderly person.

The majority of the elderly people interviewed were male (51.8 to 61.9%), except in the Northeast region, where there was a prevalence of female elderly people (62.1%). The predominant age group was 80 years or older (37.3 to 50.5%), except in the South region, where the age group of 70-79 years (37.5%) was the largest.

There was a predominance of cognitive decline among institutionalized elderly people, ranging from 63.8% to 83.5%. In the PFEFFER Scale assessment, a predominance of more dependent people was observed (86.0% to 92.4%). The combination of the variables described (MMSE and PFEFFER) indicated the presence of cognitive deterioration or more severe cognitive decline (60.2% to 81.0%) (Table 1).

Table 1. Cognitive status of elderly people living in Long-Term Care Institutions for the Elderly registered in the SUAS, according to MEEM and PFEFFER by region of the country, Brazil, 2015-2018.

COGNITIVE STATUS	Regions of Brazil				
	North %	Northeast %	Central-West %	South %	Southeast %
COGNITIVE DECLINE (MMSE)					
Yes	78.4	83.5	63.8	70.4	72.5
PFEFFER SCALE					
≤ 5 points	10.4	9.9	15.7	7.6	14.0
≥ 6 points	89.6	90.1	84.3	92.4	86.0
COGNITIVE DETERIORATION					
MMSE + PFEFFER	75.6	81.0	60.2	69.2	68.8

MMSE: Mini Mental State Examination; **PFEFFER**: Pfeffer Functional Activities Questionnaire.

The most prevalent diseases in all regions were those related to the cardiovascular system (78.3% to 87.5%). Among them, the most prevalent was hypertension. The second most prevalent disease in most regions was DM, followed by psychiatric diseases. Despite this, most elderly people did not present depressive symptoms. Urinary incontinence was detected in between 9.4% and 15.9% and fecal incontinence in between 6.3% and 12.7% of residents. Between 35.2% and 47.1% of the elderly people evaluated used diapers continuously. Chronic pain was present in between 9.7% and 22.7% of residents (Table 2).

With regard to the number of diseases, it was noted that most elderly people (54.3% to 59.4%) presented multimorbidity. There was a prevalence of residents who used medications continuously (86.8% to 92.2%), with between 40.8% and 58.3% using one to four medications and 28.5% to 51.4% using polypharmacy (South and Southeast regions) (Table 2).

Vaccination coverage against influenza was higher (87.1% to 94.9%) when compared to that against pneumonia and tetanus (Table 2).

Table 2. Elderly people living in Long-Term Care Institutions for the Elderly registered in the SUAS, according to the presence of diseases, depressive symptoms, incontinence, chronic pain, multimorbidity, polypharmacy and vaccination status by region of the country, Brazil, 2015-2018.

HEALTH CONDITIONS	Regions of Brazil				
	North %	Northeast %	Central-West %	South %	Southeast %
PRESENCE OF DISEASES					
Arterial Hypertension	62.4	57.5	57.7	55.0	58.1
Diabetes Mellitus	13.9	22.0	18.5	19.3	22.6
Respiratory Diseases	3.1	2.4	5.0	9.8	4.2
Heart Diseases	8.6	9.4	9.9	11.3	10.7
Joint Diseases	7.2	10.6	14.0	15.6	10.1
Stroke	16.5	11.4	16.3	14.1	12.6
Cancer	2.2	2.8	2.4	4.3	3.6
Osteoporosis	3.4	5.5	6.8	7.2	2.8
Dementia	15.0	10.0	16.7	15.7	11.2
Psychiatric Diseases	16.6	16.6	11.3	14.4	14.5
Neurological Diseases	8.0	5.7	4.6	3.4	6.9
Other Diseases	18.5	10.9	13.4	11.3	15.4
DEPRESSIVE SYMPTOMS					
Yes	44.5	45.1	30.2	39.5	50.0
INCONTINENCE					
Urinary Incontinence	9.4	11.8	14.5	15.9	12.1
Fecal Incontinence	8.4	9.3	6.3	12.7	10.9
Uses diapers	46.7	47.1	37.8	35.2	45.2
CHRONIC PAIN					
Yes	22.7	16.4	17.1	11.4	9.7
MULTIMORBIDITY					
No diseases	8.3	13.3	11.2	12.6	12.0
No (1 disease)	32.3	32.4	31.4	30.9	31.0
Yes (2 or more diseases)	59.4	54.3	57.4	56.5	57.0
POLYPHARMACY					
Does not use medication	7.9	13.2	10.3	7.8	7.8
No (1 to 4)	57.9	58.3	57.2	44.4	40.8
Yes (5 or more)	34.2	28.5	32.5	47.8	51.4
VACCINES					
Influenza	92.1	87.1	91.9	94.0	94.9
Pneumoccocal	33.8	25.2	72.8	75.8	45.1
Tetanus	23.5	22.4	59.2	67.0	33.7

Regarding residents who suffered falls (21.8% to 24.3%), it was observed that the majority fell once, in the LTCFE itself, with the main reason being slipping/tripping, not requiring health care and not had fractures. Among those who had fracture, the most common fracture site was the hip, pelvis or femur (Table 3).

Table 3. Elderly people living in Long-Term Care Institutions for the Elderly registered in the SUAS, according to history of falls, quantity, location, reason, need for care and fracture by region of the country, Brazil, 2015-2018.

FALLS (ON THE LAST 12 MONTHS)	Regions of Brazil				
	North %	Northeast %	Central-West %	South %	Southeast %
FALLS					
Yes	24.3	21.8	22.0	22.6	21.9
NUMBER OF FALLS					
Once	60.0	47.0	58.3	56.1	59.8
Twice	18.3	24.6	17.0	21.5	21.8
3 or more times	21.7	28.4	24.7	22.4	18.4
WHERE THEY FELL					
At the institution	86.5	88.2	82.8	94.1	86.9
Outside institution	13.5	11.8	17.2	5.9	13.1
REASON OF LAST FALL					
Slipped/tripped	50.3	53.8	59.9	57.9	55.0
Felt dizzy/fainted	16.0	11.4	11.5	13.2	13.6
LL weakness	11.2	11.4	7.3	8.6	8.3
Was pushed	0.6	1.6	2.6	3.0	4.1
Others	21.9	21.8	17.8	17.3	19.0
NEEDED HEALTH CARE BECAUSE OF THE FALL					
Yes	48.9	38.6	42.3	54.1	42.1
HAD FRACTURES					
Hip/pelvis/femur	5.1	4.0	10.8	13.6	7.2
Elbow/wrist/hand	3.4	3.4	3.1	6.8	5.5
Other	3.4	2.5	4.1	9.2	5.0

LL: Lower Limbs.

Regarding functional status, Table 4 shows that most elderly people in all regions are dependent for some Basic Activity of Daily Living. The activity of greatest independence is eating, with a variation of 79.9% to 86.5%, and the activity of greatest dependence is bathing, which varies from 51.6% to 60.5%. Regarding mobility, the majority presented no changes.

Table 4. Elderly people living in Long-Term Care Institutions for the Elderly registered in the SUAS, according to their ability to perform Basic Activities of Daily Living and mobility by region of the country, Brazil, 2015-2018.

FUNCTIONAL STATE	Regions of Brazil				
	North %	Northeast %	Central-West %	South %	Southeast %
WALK ACROSS A ROOM					
Can do it	53.0	52.4	62.6	56.8	57.6
Cannot do it	47.0	47.6	37.4	43.2	42.4
GET DRESSED					
Can do it	46.1	43.6	52.2	46.6	46.2
Cannot do it	53.9	56.4	47.8	53.4	53.8
BATHE					
Can do it	44.7	40.0	48.4	39.5	43.9
Cannot do it	55.3	60.0	51.6	60.5	56.1
EAT					
Can do it	80.7	79.9	86.5	84.0	83.1
Cannot do it	19.3	20.1	13.5	16.0	16.9
LIE DOWN AND GET UP FROM BED					
Can do it	54.2	54.6	62.2	56.0	57.6
Cannot do it	45.8	45.4	37.8	44.0	42.4
USE TOILET					
Can do it	51.4	48.5	58.2	55.5	53.6
Cannot do it	48.6	51.5	41.8	44.5	46.4
DEPENDENCE ON BADL					
Independent	37.2	31.7	44.4	34.9	38.9
Dependent	62.8	68.3	55.6	65.1	61.1
MOBILITY					
Preserved	61.1	60.7	67.4	65.8	65.2
Altered	38.9	39.3	32.6	34.2	34.8

The survey data show that some elderly people (10% to 17.0%) used a device or support instrument to walk across a room, with the most commonly used being a cane, followed by a walker.

With regard to the use of health services, Table 5 shows that the vast majority of elderly people (between 82.8% and 89.3%) had a medical consultation, was not hospitalized or treated at an emergency service in the 12 months prior to data collection. Medical consultations were carried out at the LTCFE itself, outside the LTCFE, and in both types of service.

Table 5. Elderly people living in Long-Term Care Institutions for the Elderly registered in the SUAS, regarding the use of health services in the last 12 months by region of the country, Brazil, 2015-2018.

USE OF HEALTH SERVICES IN THE LAST 12 MONTHS	Regions of Brazil				
	North %	Northeast %	Central-West %	South %	Southeast %
MEDICAL CONSULTATION					
At institution	54.4	49.8	41.2	40.1	49.0
Out of institution	26.7	22.5	25.3	18.2	29.3
In and out of institution	8.2	10.5	22.2	25.1	10.4
NOSPITALIZATION					
Yes	18.3	14.8	18.3	19.3	17.2
URGENT CARE/EMERGENCY					
Yes	22.1	17.1	16.9	17.7	15.9

DISCUSSION

It was observed that the majority of elderly individuals are male, similar to that found in studies conducted in the state of Minas Gerais[13] and the city of Maceió/AL[14]. This profile is found in few studies, given that most of those conducted in LTCFEs find a predominance of females, considering the greater life expectancy of this group[15]. On the other hand, this data was found in the Northeast region.

Regarding age group, there is a predominance of older elderly individuals (80 years or older), except in the South region. A similar result was found in a study conducted in the city of Ponta Grossa/PR, where it was observed that 62.2% of residents were 80 years or older[6].

The majority of participants presented cognitive decline, corroborating the findings of research conducted in three cities in different regions of the country in different studies: Porto Alegre/RS[11], Maceió/AL[14] and Pindamonhangaba/SP[16]. One of the justifications for this finding may be related to the greater need for attention and care that these elderly people require, and most Brazilian families are unable to provide this at home. Various international studies have shown that greater longevity is associated with a higher prevalence of cognitive alterations, increasing the need for more specialized care, which may be associated with the creation of the National Care Policy, currently in progress[17].

As for health conditions, a higher prevalence of cardiovascular diseases was observed, corroborating a study carried out in the city of Curitiba/PR, where these diseases affected 62.3% of residents[18]. Among cardiovascular diseases, hypertension was the most prevalent, followed by stroke[3,6]. It is worth remembering that hypertension is the most prevalent disease in the elderly population, whether institutionalized or not.

The second most prevalent disease was DM, ranging from 13.9% to 22.6%, depending on the region analyzed. Similar findings were found in another study, in which DM was the

second most prevalent disease, with an approximate percentage of 30% among elderly people[6]. It is noteworthy that psychiatric illnesses appear in third place, ranging from 11.3% to 16.6% among residents. This finding corroborates that found in a study in the Northeast region in 2022, in which psychiatric illnesses appeared right after heart disease and DM[3].

Mental suffering brings great challenges and affects not only elderly people, but also their caregivers and family members. Understanding these challenges and implementing appropriate interventions, such as psychological therapies, pharmacological therapies, social activities and cognitive stimulation programs, are essential to preserve the mental health and quality of life of elderly people[19].

Most participants did not present depressive symptoms in the interview, similar to what was found in a study carried out in the state of São Paulo, where approximately 68.0% of residents did not present depressive symptoms[16].

Urinary and fecal incontinence were identified among residents. These conditions are generally associated with a worsening of quality of life, independence, and violence[20,21]. Urinary incontinence is one of the most relevant geriatric syndromes and can be defined as any involuntary loss of urine that may or may not occur with or without effort[20]. This condition was identified in between 9.4% and 15.9% of respondents, depending on the region. Similar data are reported in a study that addresses the risk of falls in elderly people with urinary incontinence, which reports that urinary incontinence is a common condition in the general population, affecting approximately 19% of women and 10% of men over 60 years of age[20].

The prevalence of fecal incontinence was observed between 6.3% and 12.7% of residents. This corroborates the data found in the FIBRA study, where there was a prevalence of 5.9% of fecal incontinence among the elderly participants[21]. In the South and Southeast regions, the observed prevalence was almost double as that found in population studies, in addition to being associated with situations of violence.

It was observed that almost half of the residents used diapers daily, without this necessarily being associated with incontinence, which can stimulate acquired dependence and which can be associated with institutional violence against the elderly. A study with institutionalized elderly people in the state of Bahia found that the continuous use of diapers makes residents twice as likely to develop urinary tract infections (UTI), as well as a lower frequency of diaper changes, increasing the chance of UTI and changes in skin integrity[22], in addition to representing institutional care neglect.

Given this context, the following question becomes even more pressing: “What leads residents of LTCFEs to wear diapers continuously?”. The continuous use of diapers requires

systematic changes and more frequent intimate hygiene of residents, but this is not always possible due to inadequate human resources in LTCFEs[22].

The lack of professionals to care for elderly people may be a likely explanation for this finding, although it does not justify care neglect. In addition to issues related to incontinence and the reduced number of human resources, the use of diapers may also be associated with cognitive decline, the presence of multimorbidity and impaired mobility and functionality in elderly people.

The presence of chronic pain was an important finding, ranging from 9.7% to 22.7%. Similar data were found in another study, in which 16.7% of participants reported the presence of chronic pain[23]. In a study that identified the prevalence of chronic pain in non-institutionalized elderly people over 70 years of age in the state of São Paulo, a higher percentage (57%) of chronic pain reported by participants was observed, with a direct association with the variables gender, Body Mass Index (BMI), multimorbidity, and symptoms of insomnia and depression. This study also highlights that the presence of chronic pain has a negative impact on the self-assessment of the health of the person affected[24].

With regard to the number of diseases reported, most participants had multimorbidity, that is, two or more diseases. However, this prevalence is lower than that found in population studies, which may be associated with inadequate health assessment, difficulty in accessing health services, and neglect of care. The high prevalence of multimorbidity among institutionalized elderly people tends to increase with age. This condition can generate the need to use a large number of medications that, although necessary, can sometimes trigger health complications[3,11,12]. In this study, it was observed that at least 86.8% of residents used some medication daily, data that are similar to those found in other studies[11,23].

In the North, Northeast and Central-West regions, the number of medications used daily varied from one to four drugs, corroborating the findings of a study that characterized LTCFE residents clinically and epidemiologically, where 53.4% of participants used similar drugs[13]. In the South and Southeast regions, the daily use of medications observed was higher, with polypharmacy being more prevalent. Polypharmacy was also prevalent in the study that identified the social and health profile of institutionalized elderly people, in which 50.7% used five or more medications daily[3]. When comparing the regions, it is observed that in the regions that have better access to health services, there is a prevalence of polypharmacy.

The fact that the elderly population uses a large number of medications requires greater health supervision of the LTCFE, to mitigate the undesirable effects of the medications in use[3], including drug interactions, as well as better assessment, with a view to adapting the use of

these medications considering the benefits for the elderly[11]. LTCFEs are not considered health institutions and do not always have health professionals on their permanent staff.

In terms of disease prevention, prioritizing the vaccination of the elderly is imperative, given the greater occurrence and severity of complications from vaccine-preventable diseases in this group. Elderly people have reduced immunity due to the loss of antibody protection, immunosenescence and chronic conditions associated with advanced age[25].

Influenza vaccination coverage varied between 87.1% and 94.9%, depending on the region. Similar data were also found in a study conducted in the Central-West region, in which influenza vaccination coverage was 95.6%, reaching the influenza vaccination coverage target of 90%, recommended by the Brazilian Ministry of Health[26.] These data suggest that influenza vaccination is already consolidated and has become routine. It is assumed that both elderly people and health professionals recognize the benefits of the influenza vaccine, and that this is due to the practices carried out annually by services, with the role that has been played by primary care in the territories[26].

As for vaccination coverage for pneumonia, the observed prevalence was lower, which is a cause for concern, since pneumococcal disease is a serious public health problem, responsible for the deaths of 1.6 to 2 million people each year worldwide; 50% of these deaths occur in adults and elderly people[25].

Pneumonia is one of the main causes of hospitalization in people over 50 years of age. Therefore, it is necessary to pay closer attention to the immunization of elderly people, since the vaccine against pneumococcal infection is recommended, according to the Brazilian Society of Immunizations (SBIm), for healthy people over 60 years of age[25].

A low vaccination coverage for tetanus was also observed, which requires attention, since tetanus is an infectious, non-contagious disease, with a fatality rate of 35% to 40%, and can be even higher in elderly people. It is also considered a major public health problem for many developing countries, including Brazil[25].

However, both the pneumonia and the tetanus vaccines may have been administered prior to institutionalization and this information may not be included in the booklet given by the resident or their family member at the time of hospitalization.

Due to the heterogeneity of vaccination coverage among the elderly, it is necessary to actively seek out this population on a routine basis, in order to discover the reason for the low vaccination coverage and thus obtain greater adherence[26]. The health care of institutionalized elderly people should not be neglected, especially when considering the absence of family members most of the time. It is up to professionals in LTCFEs and local authorities to pay special

attention to identify the demands of this population and encourage greater adherence to care practices that are essential for health promotion, such as vaccination.

Falls among the elderly are an important issue discussed in public health, which can be considered a marker of the beginning of a significant decline in a certain function or a symptom of a new pathology among this population[27]. In this study, falls among elderly people in the 12 months prior to the interview ranged from 21.4% to 24.3%, a lower percentage than that found in another study, also conducted with institutionalized elderly people, in which the occurrence of falls reached almost 50%[28]. This finding may be associated with greater motor restriction, due to limitations of the elderly person themselves or due to mechanical restraint. This finding is due to the fact that 37.4% to 47.6% of residents were unable to walk across a room.

Among the participants who reported falls, between 47% and 60% fell once in the last 12 months prior to the collection. A slightly higher prevalence was found in a study that addressed falls among elderly people in a long-term care facility in a municipality in the Zona da Mata Mineira region of the state of Minas Gerais, where 62.5% of residents fell once in the last 12 months, and 37.5% of participants suffered more than one fall in the last 12 months[28].

In a study conducted with non-institutionalized elderly people, very different data were observed, where the number of falls in the last 12 months showed an average of 2.84% among those interviewed, showing that elderly people in the community move around more and are therefore more exposed to the possibility of falling[29].

This evidence confirms that individuals may experience other episodes of falls with some frequency throughout their lives, which is a very worrying fact, since many factors are interconnected to their occurrence[29]. It is worth noting that, when falling, elderly people can develop fear and insecurity, the fear of “falling again”, and this has negative consequences on the physical and functional well-being of these individuals, since it can lead to a loss of autonomy and independence[27].

The place where falls occurred in more than 82.8% of the residents who reported them was the LTCFE. This data is similar to that found in a study carried out in the Brazilian Northeast region, which shows a higher percentage of falls in the institution in places such as laundry room, hallways, cafeteria, medical offices and leisure areas[3].

The main reason for falls for the residents in this study was slipping/tripping, which can be associated with the physical structure of the institutions themselves, such as environments with compromised accessibility (stairs, uneven floors, wet areas, objects on the floor). In addition, the use of inappropriate footwear by residents can increase this occurrence. As the institutions participating in this study are institutions that shelter individuals in vulnerable

situations, the majority do not have the conditions to use appropriate footwear and others do not adapt and prefer rubber sandals, which do not have straps for the heels[3].

Regarding the need for health care after a fall, it was observed that approximately half of the elderly people who fell required health care, and this data is similar to that found in a study that deals with the occurrence of falls in elderly people, in the city of Picos/PI, where 40% required medical assistance[29]. Among those who fell, between 9.9% and 29.6% had a fracture, this finding being more prevalent than that found in another study, where 4.1% of elderly people had a fracture[29]. The prevalence of falls observed in this study was lower, but the occurrence of fractures was proportionally higher, showing greater frailty of the residents or greater severity of the occurrences, in a place that should be safer.

The place where there was the greatest predominance of fractures was the hip, pelvis or femur. Fractures are one of the most common consequences of falls among elderly people, especially hip and femur fractures, followed by wrist fractures[27].

In relation to falls, the consequences are not only physical, but also psychological and social, such as hospitalization, institutionalization or rehabilitation, reducing autonomy and increasing public health costs, being one of the main causes of incapacity and death[27].

With regard to functional status, it was found that the majority of elderly people in all regions are dependent in at least one of the BADL*s*. Similar data are found in the study that identified the social and health profile of residents, where a large part of the participants are dependent in carrying out their BADLs[3].

The difficulty in feeding oneself ranged from 13.5% to 20.1%. It is worth remembering that this difficulty, as a rule, is associated with the most dependent elderly people, and is much higher than the prevalence observed in a study carried out in 11 LTCFEs in the state of Rio Grande do Sul, where only 5% of the participants were dependent for food[23]. The highest prevalence of functional dependence was related to the activity of bathing, ranging from 51.6% and 60.5%. Similar data were found in another study[23].

This panorama of functional dependence in LTCFEs requires a more in-depth assessment, since the dependence reported does not make it clear whether it is related to the limitations of the elderly person or to the organizational structure of the institution itself.

It is necessary to be aware of these issues related to the functional capacity of elderly people, since a greater decline is common over time, which can intensify with the years of residence, requiring specialized care for its prevention and treatment. Thus, the elderly person gradually increases their dependence and decreases their functional capacity, and this fact is even more common among institutionalized elderly people[16].

The results point to the need to encourage elderly people in the institutional environment, for their self-care and for the maintenance and/or recovery of their functional capacity, independence and autonomy for as long as possible, but also the importance of institutions offering activities and care that stimulate this independence[11]. This perspective is important, since functional capacity has direct implications for the quality of life of the elderly person and incapacity causes greater vulnerability and dependence, contributing to the reduction of well-being[3].

Regarding IADLs, it was found that most residents do not perform these activities or the LTCFE does not allow them to do so. This condition may be due to the fact that elderly people arrive at the LTCFE with some type of impairment and, as a result, they do not perform IADLs[14].

The fact that elderly people do not perform IADLs or that the LTCFEs does not allow them to perform IADLs consequently leads to the need for these activities to be performed by other people. This condition clearly demonstrates the structural dependence that is imposed, even if in a veiled manner, on these residents. Another fact that needs to be highlighted is that IADLs are also directly related to their social participation, and when they are not allowed in institutions, can increase the isolation of the elderly person. The resident cannot go out, cannot take their own medication, cannot go shopping, cannot do household chores, cannot "do anything". The institution limits them, taking away the elderly person's ability to live autonomously and independently.

Among the elderly individuals assessed, 60.7% were able to walk. Contrary data were found in a study conducted in the city of Campo Grande/MS, in which there was a predominance of elderly individuals in wheelchairs (69%), while those who could walk represented 25% of the participants[18]. Furthermore, approximately between 13% and 21% of elderly individuals use a device or support instrument to walk across a room, with a cane being the most commonly used. A study conducted in Curitiba/PR observed the opposite, as the majority of the residents assessed used mobility devices[18]. In another study conducted in an LTCFE in Minas Gerais, 43.1% of elderly individuals used some type of device[13].

Studies on the use of health services by elderly individuals in Brazil are scarce, especially among institutionalized elderly individuals, although this population generally presents several health demands (chronic conditions, disabilities, multimorbidity and polypharmacy) that require care. It was found that, depending on the region, between 82.8% and 89.3% of residents had a medical appointment in the 12 months prior to the interview, much higher than that observed in another study, in which only 46% had medical care[30]. The high proportion of

medical appointments held at the LTCFE may be a reflection of the presence of a medical professional in the institutions.

Regarding hospitalization, between 14.8% and 19.3% of residents were hospitalized. This finding is higher than that found in a study conducted with non-institutionalized elderly people from the five regions of the country, where 11.1% of the participants were hospitalized[30].

Another important fact is that 15.9% to 22.1% of the elderly people in this study were treated in emergency services in the 12 months prior to data collection. Similar data were found in a survey that found that 16.4% of elderly people living in the community sought this type of service[30].

Studies on the use of and access to health services by residents in LTCFEs are scarce, although this is a more vulnerable population with high demands for care, leaving doubts as to whether people are adequately assisted in institutions or whether they are being neglected.

CONCLUSION

This study observed a predominance of elderly males, aged 80 or over, with cognitive decline. Regarding health conditions, multimorbidity was found in most residents, with a prevalence of diseases related to the cardiovascular system, especially hypertension.

It was also observed that almost half of the residents continuously use diapers, although urinary and fecal incontinence are present in a small number of elderly people. Regarding medication, the vast majority use it, and polypharmacy was prevalent in the South and Southeast regions. Vaccination coverage against influenza was satisfactory.

Falls were not a significant event, on the other hand, there was greater physical restriction among elderly people. Among those who fell, the main reason reported was slipping/tripping, and they did not require health care.

Regarding the functional condition of residents, most of them walk (with and without assistance), which suggests greater independence for BADLs. However, this was not what was reported, suggesting the presence of structural dependence imposed by institutions. Healthcare coverage was satisfactory.

A continuous analysis of existing health conditions and demands is essential. An assessment and adaptation of institutions is necessary, with regard to structure, professionals and current public policies, to ensure care with dignity, quality and safety.

As limitations of this study, we can mention the sampling, which, because it is regional, does not allow a national view; however, it should be considered that previous regional studies

have not been developed. The lack of representative studies that would support the discussion was also a limiting factor, showing the need to develop future studies, preferably with a longitudinal design that would allow more consistent analyses to subsidize more appropriate planning of public policies aimed at this population.

Also, the cross-sectional approach used does not allow for an evolutionary overview to be drawn up and the descriptive design does not establish causal relationships between the variables analyzed. Besides, the use of a proxy respondent in more than 50% of interviews in all regions can also be a limitation.

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Associated Publisher: Rafael Gomes Ditterich

Conflict of Interests: the authors declared there is no conflict of interests

Financing: none

Contributions:
Concept – Duarte YAO, Oliveira JM, Watanabe HAW
Investigation – Duarte YAO, Oliveira JM, Watanabe HAW
Writing – first draft – Oliveira JM
Writing – revision and editing – Duarte YAO, Watanabe HAW

How to cite this article (Vancouver)
Oliveira JM, Duarte YAO, Watanabe HAW. Health conditions and care demands of residents of long-term care facilities: regional overview. Rev Fam, Ciclos Vida Saúde Contexto Soc. [Internet]. 2024 [cited in *insert day, month and year of access*]; 12(3):e7844. DOI: https://doi.org/10.18554/refacs.v12i3.7844.

How to cite this article (ABNT)
OLIVEIRA, J. M.; DUARTE, Y. A. O.; WATANABE, H. A. W. Health conditions and care demands of residents of long-term care facilities: regional overview. **Revista Família, Ciclos de Vida e Saúde no Contexto Social**, Uberaba, MG, v. 12, n. 3, e7844, 2024. DOI: https://doi.org/10.18554/refacs.v12i3.7844. Access in: *insert day, month and year of access*.

How to cite this article (APA)
Oliveira, J. M., Duarte, Y. A. O., & Watanabe, H. A. W. (2024). Health conditions and care demands of residents of long-term care facilities: regional overview. Rev. Fam., Ciclos Vida Saúde Contexto Soc., 12(3), e7844. Retrieved in *insert day, month and year of access* from https://doi.org/10.18554/refacs.v12i3.7844.