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SPECIAL CALL "GERIATRIC DENTISTRY AND ORAL HEALTH"

Geriatrics, Gerontology and Aging

Oral health care of homebound older adults: multidimensional theoretical model

Cuidado à saúde bucal de idosos domiciliados: modelo teórico multidimensional

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Abstract

Objectives: To understand the dimensions of oral health care of homebound older adults and to develop a preliminary theoretical model that explains how these dimensions are interrelated in the provision of care.

Methods: Cross-sectional, qualitative study, based on Grounded Theory. Participants were 37 intentionally selected older adults registered at a Primary Health Care center, Florianópolis (SC), Brazil. Data collection was conducted at home, following an interview script. The interviews were audio-recorded, transcribed, and analyzed by constant comparison. Formulation of the model followed the Glaserian approach.

Results: The theoretical model presents the dimensions of oral health care of homebound older adults - who, why, when, how, and where oral health care is provided. Frailties were identified in all dimensions of oral health care, with emphasis on those related to older adults' living, health, and oral health conditions, compromising dental care provided at home, access to dental services, and presence of the dentist. In combination, these frailties constitute a rupture in the possibilities for oral health care.

Conclusions: Strategies for provision of oral health care to homebound older adults should be implemented in each of the dimensions to overcome the frailties identified and promote better oral health conditions and access to dental services.

Keywords: oral health; dental care for aged; homebound persons; primary health care.

Resumo

Objetivos: Compreender quais as dimensões presentes no cuidado à saúde bucal de idosos domiciliados e elaborar um modelo teórico preliminar que explique de que modo essas dimensões estão inter-relacionadas na produção do cuidado.

Metodologia: Estudo transversal, qualitativo, com referencial da Teoria Fundamentada nos Dados. Participaram 37 idosos, intencionalmente selecionados, cadastrados na Atenção Primária à Saúde, Florianópolis (SC). A coleta de dados foi realizada no domicílio, seguindo roteiro de entrevista. As falas foram gravadas em áudio, transcritas e analisadas por comparação constante. A elaboração do modelo seguiu a vertente glaseriana do método.

Resultados: Identificaram-se fragilidades no processo de cuidado em todos os elementos de caracterização (quem, porque, quando, como e onde), destacando-se as relacionadas ao próprio idoso, a sua condição de saúde bucal, ao cuidado realizado no domicílio, ao acesso aos serviços odontológicos e à participação do cirurgião-dentista. O somatório dessas fragilidades promove uma ruptura nas possibilidades de cuidado à saúde bucal nas múltiplas dimensões: individual, familiar, profissional e institucional.

Conclusões: Estratégias de cuidado à saúde bucal prestado aos idosos em domicílio devem ser implementadas em cada uma das dimensões identificadas a fim de superar as fragilidades e promover melhores condições de saúde bucal e acesso aos serviços odontológicos.

Palavras-chave: saúde bucal; assistência odontológica para idosos; pacientes domiciliares; atenção primária à saúde.

INTRODUCTION

Population aging caused by improved living conditions and health of the population, declining birth rate, and increased life expectancy is a worldwide phenomenon.[1] This process raises questions about the health conditions of the growing older adult population, due to increasing demand for care and support.[1,2] Longevity can be accompanied by many impairments and accumulated frailties in terms of general and oral health, in addition to changes in living conditions. This is due to the occurrence, at varying degrees, of disabilities, loss of autonomy, lack of independence, lack of mobility, and psychological and financial problems.[3,4]

Some older adults become homebound because of multiple chronic conditions and functional disabilities[5] and face several physical, social, and psychological challenges,[4] compounded by difficulty accessing health care.[6] These homebound people become unable to leave home without the help of a caregiver.[7,8] There is, therefore, a set of situations that lead to an increase in older adults' dependence on third parties for continued health care.[9] Maintaining oral health in this group is very difficult since they need help for general care, which includes oral hygiene and their oral health is compromised[6-8] since it receives less attention.[10,11]

Homebound older adults are more prone to oral diseases, such as caries, periodontal disease, and oral mucosal lesions.[6-8] These oral diseases are also associated with increased risk of systemic diseases. Given that homebound older adults have health problems that make it difficult for them to leave home to get medical and dental care, in addition to insufficient family income to use private dental services,[6,7] oral health care and how to meet the demand for oral care at home is still a challenge.[12]

In the family sphere, caregivers are the people who attempt to fulfill these needs, accompanying and helping with daily activities.[9,13] Taking on this role, unpaid and often full-time, leads them to abandon their activities, jobs, and occupations to care for the older adult. Thus, stressful, and overloaded situations are the norm for those who fulfill this caregiving role.[9,13]

The difficulties, or even impossibility, of displacing older adults to receive health care should be circumvented with home care provided by health professionals.[2] However, absence of domiciliary oral health care services is widespread.[9] The combination of limitations on displacement, insufficient family income to use private dental services, and lack of priority within public services, often results in abandonment of homebound older adults.[6]

To effectively meet the needs of this population, it is important to identify and understand their oral health care needs from the perspectives of the homebound older adults themselves and of their caregivers and also to understand the broader context in which they live. The literature addresses oral health care from the theoretical development perspective,[14-18] but, to the best of our knowledge, there are no studies dealing with the living conditions of homebound older adults and the challenges and singularities of oral health care in this context. Thus, the following research question is raised, "What are the health and life dimensions that interfere with the oral health care of homebound older adults and how they are intrinsically related?"

This study aims to understand the dimensions that interfere with the oral health care of homebound older adults and to develop a preliminary theoretical model that explains how these dimensions are interrelated in the provision of care.

METHODS

This is a cross-sectional, qualitative, descriptive-analytical study, following the Grounded Theory (GT) framework, the objective of which is to build theory through a systematic analysis of the data, taking a Glaserian approach to the method,[19] which conceives of the GT as a relationship between concepts that emerge from the study population — from each subject's perception or meaning — by constant comparison, which are then also related to each other through theoretical codes.[20]

Participants were homebound older adults aged 60 or older, cared for by primary health care (PHC) teams in the municipality of Florianópolis (SC, Brazil).

The Brazilian public healthcare system offers universal coverage and is centrally organized around local PHC services and actions provided by professional healthcare teams, comprising doctors, nurses, and nursing technicians. Oral health care is also provided on the PHC level, by oral health teams comprising dentists and dental assistants. These professionals are responsible for assisting a referred region-based population, with preventive actions and treatments, including older and homebound people.

Homebound older adults with disabilities (physical, mental, or other), who were monitored by the PHC teams, were included in the study. In cases in which the older adults could not speak rationally and clearly, their caregivers were accepted as participants, representing the respective older adult for whom they care.

The participants of the study were included intentionally, from a list of homebound older adults cared for by the

PHC health teams in the municipality of Florianópolis. These teams had been randomly selected and defined in a quantitative, epidemiological stage prior to this qualitative study. The healthcare teams were contacted, either in person or by telephone, and invited to contribute to the study. All teams accepted. The researchers scheduled home visits together with members of the healthcare team and personally invited the older adults to participate. Homebound older adults aged 60 years or over were recruited to the study, while older adults who were not found at home after three attempts at a home visit were excluded.

Data collection was home-based and was conducted between September 2019 and February 2020. Older adults were interviewed by two trained interviewers (an undergraduate and a post-graduate student, both coauthors). The collection focused on understanding the oral health care of homebound older adults. Individual interviews were conducted following a semi-structured script with previously prepared guiding questions. Questions were directed to and answered by the older adult. However, in the case of older adults with physical or a cognitive limitations making it impossible to answer the questions, the responsible caregiver who accompanied the older adult at home answered the questions on their behalf. In this situation, the caregiver had to be at least 18 years old.

The interview script comprised the following guiding questions, adapted in case the respondent was the caregiver:

1. Tell us about how you take care of your health and your oral health.
2. What do you do to take care of your mouth, your teeth, and your dentures?
3. You stay at home most of the time. How does this situation interfere with your health care? And with your oral health?

The interviews were audio-recorded with a cellphone, saved, and then transcribed verbatim using the Microsoft Word® word processor.

Data collection was suspended according to the theoretical sampling criteria. Following the GT method, the decision to collect more data and when to stop collecting was based on the density of the categories that emerged from the data to develop a preliminary theoretical model.

All the text transcribed was saved in a single Microsoft Word® file. The data were analyzed using inductive-deductive analysis, as advocated by the GT.

The analytical process was conducted by a single researcher (post-graduate student, co-author) and consisted of dividing, conceptualizing, and relating the data through three interdependent steps:[21] Open coding: this was the first analytical step in which concepts were identified and their properties and dimensions were discovered in the data. A detailed line-by-line analysis of the material began by coding the data and grouping them by similarity, resulting in subcategories; — Axial coding: the second step was relating subcategories according to their properties and dimensions; data were regrouped into categories; — Selective and Theoretical coding: this is the continuous process of integrating and refining the theory. Relevant data were selected and irrelevant data discarded and relationships between categories were identified based on theoretical references and the literature. The categories were finally organized around a central explanatory concept.

All data were treated the same way, regardless of origin, with constant comparison. The GT proposes that the process of analysis, or coding, comprises comparison of data with data and of data with codes.[19,20] Coding is the key link between collection of data and development of an emerging theory to explain that data. In this study, the analytical process employed the categories: who, why, when, how, and where.

To validate and integrate the dimensions/categories, three researchers (an undergraduate student, a post-graduate student, and a lead coordinating researcher, all coauthors) held two meetings to discuss and construct the theoretical model. The selection of theoretical codes was based on ordered integration of the categories and dialog with the scientific literature and other supporting references, relating the data to the theory elaborated and enabling construction of a theoretical model, still preliminary at this point, about the dimensions of oral health care of homebound older adults.

This research was submitted to the Human Research Ethics Committee, in compliance with National Health Council Resolution number 466/2012. It was approved on March 28, 2019, under opinion number 3.168.868. After accepting the invitation to take part, participants were informed about the study procedures. All participants signed an informed consent form (the older people themselves or their responsible caregivers). The researchers protected participants' anonymity and confidentiality. Quotes from the interviews are presented in the order E1 to E37.

RESULTS

A total of 37 interviews were conducted. Of these, 24 were conducted with homebound older adults who were able to answer without help; the remaining 13 required the assistance of their respective caregivers. Table 1 shows the characteristics of the study participants.

Most of the homebound older adults were women, aged 70 to 79 years. In cases in which caregivers answered the questions, most of them performed the caregiver role informally (without regular payment), were female, and were family members (daughters and wives predominated).

The results of the data analysis were used to produce a theoretical model entitled Dimensions of oral health care for homebound older adults (Figure 1), composed of the following characteristic elements: who provides oral health care and why/in what manner, how, when/in what context, and where/in what environment it is provided (Table 2). Each dimension will be presented below, with some additional details.

Who provides oral health care

This dimension of care encompasses who is assigned the role of providing care to the homebound older adult. When older adults take care of themselves, it is noticeable that they continue to maintain some autonomy to take care of themselves, but without independence. Most of them need the help or supervision of others or are dependent on their caregivers. These are mostly close relatives, usually women, who are responsible for caring for the older adult, along with an overload of duties. Some families share caregiving practices among more than one family member, but this situation turns out to be an exception.

Another form of care provision, even rarer, is care provided by a paid professional as private home care services provided by nurses, for example.

TABLE 1. Characteristics of the participating older adults (n=37).

Variables	n	%
Sex		
Female	21	56.75
Male	16	43.25
Years of age		
60 to 69	5	13.51
70 to 79	15	40.54
80 to 89	8	21.62
90 or older	9	24.33

Why and in what manner care is provided

This dimension represents the practices that were mentioned by older adults and caregivers in relation to the care they need and/or are provided. General care such as feeding, attention to medication, general hygiene of the older adult, such as bathing and changing clothes, and maintenance of the environment in which the older adult lives, such as cleaning the house and shopping at the supermarket, were the most frequently mentioned types of care. In some cases, practices such as exercise and walking, sunbathing, and physical therapy sessions were mentioned.

Some older adults perform their oral hygiene by themselves, while others need the help of a caregiver. Also, some older adults do not like or do not allow the caregiver to look at, care for, or access their mouths for oral care, which interferes with the quality of oral care.

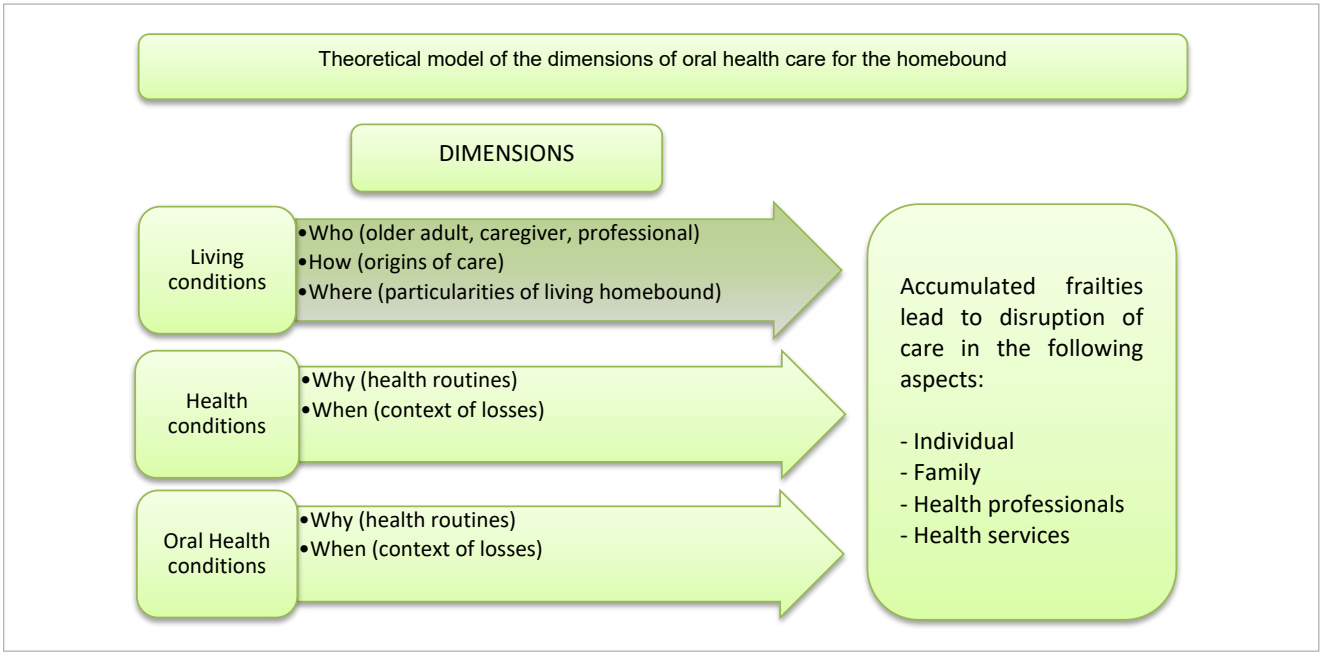

FIGURE 1. Theoretical model of the dimensions of oral health care for homebound older adults.

TABLE 2. Categories, sub-categories and example quotes (translated from Brazilian Portuguese to English).

Categories	Subcategories	Example of quotes
Who provides the oral health care	Older persons Caregivers Private dentists	"The [caregivers, daughters] who take care of me." E29. "I take care of her as if she were a child. I make such an effort; I do everything I have to do... that's how my life is every day." E7. "I have a private dentist that I visit, I need one every 6 months, if I need one earlier then I go." E10.
Why and the means by which care is provided	General care Oral Hygiene	"All food, medication, cleaning, everything a person needs. E1. "Yes, he takes care of [his oral health] by himself. I'm just careful to leave the material for him to use, toothpaste, toothbrush." E6. "He brushes his teeth during the day. Every time he eats, drinks coffee, he washes his mouth, rinses his mouth with water." E14. "I brush my teeth, sometimes I ask my husband to clean my mouth for me, then he gives me a little help. On a daily basis, I take care of it. I brush my dentures." E13.
When and in what context care is provided	General losses Losses related to oral health	"It's not a day or two, it's 30 years. For his age, he lost a lot of things." E6. "Each day something else appears, giving water, giving food, another day the legs, it's the disease of older people." E4. "The difficulty now is because of the age, but it's normal. It's just some ideas that get in my way sometimes, some thoughts, that's what gets in my way." E23. "Mentally, I'm out of my mind, depression issues." E25. "I'm going to check my mouth, I feel like I'm rotting from my mouth. My teeth are mostly loose, it doesn't hurt, but they're loose and some rotten ones too." E16. "I have difficulty with his hygiene, he's quite angry. So, even mainly oral hygiene is far from ideal." E37. "We just brush his teeth, use mouthwash and stuff like that. Apart from brushing, we don't do anything, we don't receive any guidance about this issue." E22. "It's always been like this [resistant behavior], even when she had autonomy, she was hard to get to see the dentist." E7. "What's the use of taking care of [oral health]? If I don't brush them, it will affect my health, but what health? If I was healthy, I'd be on the street!" E27.
How care is provided	Homecare Care outside the home	"I leave [home] when my children take me to the doctor." E24. "If I need to go somewhere, my son will take me." E6. "I have good neighbors, my daughter, they help me." E9. "I get all [medication] from the [public] health center, I take it every day." E5.
Where and in what environment care is provided	Safe environment Feeling a prisoner	"I'd rather stay at home than go out and not be able to walk. Walking a lot makes me short of breath. Sometimes it's more comfortable and safer to stay at home." E12. "I was alone for 10 years, all night I stayed inside the house alone. It makes us unhealthy. There are days when the heart is sad and the other day it is happy." E4. "I don't go anywhere, I don't talk to anyone, I don't know anyone, I don't know anything. I got stuck in time" E31.

Dentate older adults and those who use dentures say they brush and clean them, either by themselves or with caregiver assistance. Some said that they at least rinse their mouth with water or mouthwash.

When and in what context care is provided

The context of caring for homebound older adults is one of various losses and changes that lead to various problems. Among these are the general losses generated by the senescence process that happens to many homebound older adults.

Diet issues such as difficulties chewing and swallowing were reported. Because of these, food choices are restricted, and some are limited in variety or quantity. Living with chronic pain and comorbidities prevents autonomy and performing activities that used to be routine. The loss of this previous routine and the impossibility of performing activities that used to be usual, such as fishing, walking, or going out dancing, are frequent complaints.

All these issues accumulate and lead to nostalgia, moments of depression, irritation, and mood swings, as well as a lack of motivation to take care of one's health. People once known as talkative and communicative now find themselves quiet, isolated, and demotivated. Therefore, the accumulation of years homebound interferes with mental health.

Oral health losses were also covered in the questions. Despite some reports of no problems or of just being used to an oral situation that they have sustained for years, many seniors and caregivers reported certain difficulties.

The most common oral health complaints reported were tooth pain, loose teeth, complaints of dry mouth (xerostomia), and feelings that oral health is not good and that the teeth are not good.

Some of the caregivers of older adults who are totally dependent on them for hygiene routines reported difficulty in performing oral hygiene. These could be due to overload of daily functions, the older adults' difficulties with opening their mouths or refusal to allow care to be provided, or lack of correct instruction on how to proceed with hygiene.

Another factor that interferes with the oral health conditions of this population is lack of prioritization of oral health. Moreover, in the current, even more complicated, scenario, the opportunity to see a dentist is even less possible and far from being seen as a health care priority.

In addition, some older adults' lack of motivation to maintain or improve their general health condition also impacts their oral health, as they see that any attempt to improve care would be in vain since their homebound condition would remain unchanged.

How care is provided

This dimension aims to identify the origin of the care provided and whether there is any interaction between family and health services in provision of care. In most cases, the caregivers remain the main source of care. In addition to daily care, they are also responsible for taking the older adult to the health care service for consultations or in emergencies. For many older adults, this is the only time they leave the house.

The older adults who live alone and are responsible for self-care report that they often rely on their neighbors, and their community, to always be attentive and ready to help.

Most of the older adults in this study are dependent on the care offered by their health center and by the PHC team that provides home visits. Some of them reported receiving regular home visits, usually from a doctor or nurse, which configures the provision of care from outside the home. The health units guarantee the provision of basic medicines.

Unfortunately, the dentist and/or oral health team were rarely present during home visits. Oral health issues usually need to be identified by older adults, caregivers, or nurses to later initiate attempts to make an appointment with a dental professional. Most homebound older adults go for extended periods without oral health care or guidance.

Few of these older adults use private healthcare services. For the minority who do, it is possible to get medical consultations whenever necessary, including with a dentist. Some can also benefit from a home care service and have health professionals at their disposal to treat them at home, such as doctors, nurses, and physical therapists.

Where and in what environment care is provided

In this dimension of care, the home environment was evaluated, which is where these older adults have spent almost every moment of the day for many years. It was noticeable that living homebound involves a duality with respect to the meaning of home: it is both a place of safety and a place of imprisonment.

The home was identified as a place of safety and comfort for older adults. Due to the physical limitations of age, anxiety about long distances, fear of falling and stumbling, doubts about whether other places will have good seating or rest areas, and whether there is wheelchair accessibility or sidewalks are in good condition were the most reported complaints about environments outside the home. In contrast, the home is also seen with a sense of imprisonment. Being restricted to the home is a daily reminder of how life has changed and of all the accumulated, often irreversible, losses.

The theoretical model of the phenomenon of Dimensions of oral health care for homebound older adults (Figure 1) is the result of integration of the categories emerging from the data analysis, which refer to the dimensions of the oral health care of homebound older adults.

Living conditions, health conditions, and oral health conditions interfere in all dimensions of oral health care. These are necessary elements for oral health care to be provided to homebound older adults. Thus, they shape the type and quality of oral health practices, considering how living restricted to the home affects older adults in different dimensions.

Living conditions influence the definition of the people and institutions responsible for providing care, which may be the older adults themselves, their formal or informal caregivers, family members, health professionals, or health services. Dental care can be offered in two movements: one is care provided from outside to within the home and the other is care which arises inside the home. Despite this, there is an absence of oral health professionals providing home care.

Poor health conditions influence the means and outcomes of oral health care. Why dental care is provided is related to the general routines adopted to maintain the health and well-being of the older adult, adding specific routines focused on oral health to these general routines.

Frailties were found that lead to disruption of oral health care, whose responsibility and commitment should

be present in the individual aspects of both the older adults and the caregivers. A home is a place of duality between comfort/safety and prison/isolation, a fine line that must be considered when implementing strategies to promote oral health care for older adults in these conditions.

DISCUSSION

This study highlights the main dimensions that affect the oral health care of homebound older adults, with a particular emphasis on living conditions, oral health care, and practices, and how living restricted to the home affects older adults in several ways.

It was noticeable that the health of homebound older adults is often marked by a universe of limitations and losses. Provision of care is usually the responsibility of a caregiver, an unpaid family member, or a woman. The results demonstrate how general and oral care routines are affected by the condition in which homebound older adults and their caregivers live. Oral health care is provided inside the home, with the presence and support of the caregiver, and outside the home. It is provided by the oral health care teams attached to PHC public services and, in rare cases, by dentists, in private services. The absence of in-home general dentist visits was observed, and, therefore, there was a lack of specialized oral health care.

The reality and profile of the homebound older adults and caregivers in this study are in line with the findings of some other studies carried out with this specific population, which is characterized by a majority of female older adults[5] and the presence of caregivers.[9,13]

Despite all having the condition of restriction and the need for constant care from a caregiver, homebound older adults have a range of degrees of dependence. Some are considered totally dependent - their oral and general care routine depends entirely on their caregiver — while others are partially dependent — they need help or supervision only for oral care.[6] Thus, it is relevant to recognize the living and health conditions of each homebound older adult so that care provision can be consistent with and adapted to their needs.[22]

Although some older adults have reported performing routine oral health care themselves, data shows this ends up being more of a responsibility of the caregiver in supporting or providing just the basic daily oral hygiene procedures.[7] This population requires oral health practices that replace the clinical and procedural approaches,[19] which requires that the dentist or oral health teams properly train caregivers, promote health, and monitor the oral conditions of homebound older adults. However, there is a lack of institutional commitment to oral health care at home.[23] PHC services in particular should be aware of their responsibility to homebound people, including helping with their oral health needs. By conducting the home visits and diagnosing their situations, it is possible to plan the interventions needed for each family. The oral health team can encounter the context of homebound older adults and their caregivers through home-based and multidisciplinary PHC activities.[17,22]

The aging process is complex and can lead to deterioration in older adults' functionality, thus increasing the chances of compromising their health — both general and oral — with disabilities and frailty.[1,4,24] Chronic degenerative comorbidities associated with advanced age can compromise the quality of life of older adults, since they lead to a loss of independence and autonomy, resulting in an increase in the number of older adults living restricted to their homes (homebound) due to accumulated frailty.[1,4] The home is perceived as a space of duality combining comfort and safety with prison and isolation. Maintaining it as a space of comfort and safety is a concern for caregivers.[22] However, this same environment carries a burden of imprisonment and is a daily reminder of how the older adults' living conditions have changed over the years. One prominent point about the influence that living restricted to the home has on the general and oral health of these older adults was revealed in the several reports of melancholy and/or depressive thoughts. This population has a high prevalence of suspected depression and a need for psychological care,[23] and this is an important factor to be prioritized in provision of care to this group of older adults.

Oral health care is necessary to promote overall health, quality of life, and well-being.[24] It is therefore important to highlight the association between general and oral health, particularly in homebound older people with complex medical conditions and frailty.[25,26] Poor oral health is recognized as a risk factor for several important diseases, since the oral cavity and dental plaque constitute a reservoir for infectious pathogens that cause systemic diseases.[27] Edentulism and lack of dental rehabilitation can impair masticatory ability and cause malnutrition.[28] Poor oral hygiene and higher levels of dental plaque are risk factors for pneumonia, for instance. Provision of periodontal treatment and improving the oral hygiene of fragile older patients can prevent severe respiratory infections,[29] the provision of oral care is also likely to improve the overall health of disabled people.[27] The inefficiency of traditional healthcare assistance models for older people has been demonstrated.[30] Recommended

strategies associated with improvement of health and living conditions include better communication and education, organizational changes, community development, and advocacy in public policies, focusing on homebound people.[31]

A regular and comprehensive health check-up of older adults should be one of the responsibilities of PHC professional teams.[32] PHC services must include skilled care provided by an interprofessional team, regular oral check-ups, and training caregivers to promote oral health for homebound older people.[33,34] Health professionals should work as multidisciplinary teams to provide health promotion education and to investigate oral health and common risk factors.[27] Moreover, the literature has recommended focusing on permanent training of health professionals and caregivers to prevent overburdening, to eliminate incorrect beliefs about oral health for older people, and to increase oral care knowledge and self-efficacy in home-based settings.[35,36]

In the educational sphere, inclusion of geriatric dentistry content in the curricula of undergraduate courses is the first step to enabling students to develop the skills to provide better oral health care for older adults, impacting their professional training as a general practitioner.[37] In addition, it is important to promote interprofessional dialogue with health professions that are not directly involved with dental care, such as medicine and nursing.[38,39] Community access to dental care must be addressed by public health policies to improve the health and quality of life of older people. In particular, to increase the use of dental services, efforts will have to be made to reduce barriers and make dental care culturally competent, which is a primary healthcare responsibility for health services.[40]

This study stands out for its broader look at the experiences and specificities that involve homebound older adults, in addition to its attempt to understand the implications of their condition on their general and oral health. It sounds an alert to the need for specialized attention from the public health system, with emphasis on the PHC system and its oral health team, since most older adults depend on public health services for access to dental care.

This study has some limitations mainly related to the investigation being restricted to the local PHC context of one Brazilian municipality and to only listening to older people's points of view, with little contribution from caregivers, relatives, health professionals, or health managers. It presented a preliminary model of the complex interactions between the dimensions of caring for homebound older adults, which still requires further contributions in future studies.

CONCLUSION

The theoretical model presented illustrates the dimensions of oral health care of homebound older adults as an integration of the characteristics of who, why, when, how, and where oral health care is provided. Aspects of frailty are addressed in each dimension, with emphasis on those related to the older adults themselves, their oral health condition, and their living conditions. The study highlights the home care provided by caregivers, who are overburdened, in addition to the lack of access to dental services, lack of home dental care provided by a dentist, and absence of the PHC team taking care of dental issues at home. The combination of these frailties culminates in a rupture of the possibilities for oral health care.

Strategies for oral health care provision to homebound older adults should be implemented in each of the dimensions identified to overcome the frailties revealed and to promote better oral health conditions and access to dental services.

It is expected that the results obtained and the initial analysis of the complex and singular interaction between the dimensions that influence and condition the oral health care of homebound older adults will provide support for rethinking improvements in the oral health care of this population. Therefore, it is suggested that focused strategies should be implemented in the primary health care work process to provide adequate care to this population group and its needs.

Conflict of interest

The authors declare no conflicts of interest.

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Authors' contribution

TFSO: data curation, formal analysis, investigation, writing – original draft. BE: data curation, formal analysis, investigation, project administration, writing – original draft. ALSFM: conceptualization, formal analysis, supervision, validation, writing – original draft, writing – review & editing.

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