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Paths to urban mobility and accessibility: challenges and perceptions of older adults in the city of Pelotas (Rio Grande do Sul)

Caminhos para a mobilidade e acessibilidade urbana: desafios e percepções da Terceira Idade na cidade de Pelotas (Rio Grande do Sul)

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Abstract

This study analyzes urban mobility and accessibility based on the perception of older adults aged 60 and over in the city of Pelotas (RS), located in southern Brazil. The objective is to identify the challenges that these people face daily when moving and accessing services, amenities, leisure and housing spaces in urban areas characterized by different socioeconomic conditions. Data collection was based on the application of two qualitative methods: Participatory Mapping and World Café. The methodology sought, through a participatory approach, to enhance the voice of residents and understand which aspects should be considered as a priority to plan age- friendly communities, that is, that provide all the support necessary for healthy aging with access to support and possibilities for safe movement. Data collected in three communities are presented in this article: the Central area, representing a higher income, a section of the Fragata neighborhood, representing an average income, and the Navegantes subdivision, representing a lower income. The data collected and analyzed is part of an international research project called "Place-Making with Older People: Towards Age Friendly Communities", conducted between 2016 and 2021 and funded by the British agency ESRC. The results highlighted fundamental issues such as safety and walkability, indicating that the possibility of remaining active in the neighborhood is directly linked to the perception of safety when traveling. It is hoped that the discussions presented can contribute to research in the field of public police, urban planning, and urban design for older adults.

Keywords: City. Urban design. Healthy aging. Urban planning.

Resumo

*Este estudo analisa a mobilidade e a acessibilidade urbana a partir da percepção de pessoas com 60 anos ou mais na cidade de Pelotas (RS), localizada no sul do Brasil. O objetivo é identificar os desafios que essas pessoas enfrentam cotidianamente ao se deslocarem e acessarem serviços, amenidades, espaços de lazer e de moradia em áreas urbanas caracterizadas por diferentes condições socioeconômicas. A coleta de dados partiu da aplicação de dois métodos qualitativos: o Mapeamento Participativo e o World Café. A metodologia buscou por meio de uma abordagem participativa potencializar a voz dos moradores e entender quais aspectos devem ser prioritariamente considerados para planejar comunidades amigas do envelhecimento, ou seja, que forneçam todo suporte necessário para um envelhecimento saudável com acesso a apoios e possibilidades de deslocamento seguro. Dados coletados em três comunidades são apresentados neste artigo: a área Central, representando uma renda econômica mais alta, um recorte do bairro Fragata, representando uma renda média, e o loteamento Navegantes, representando uma renda mais baixa. Os dados coletados e analisados fazem parte de um projeto internacional de pesquisa denominado "*Place-Making with Older People: Towards Age Friendly Communities*", realizado de 2016 a 2021 e financiado pela agência britânica ESRC. Os resultados destacaram questões fundamentais como segurança e caminhabilidade, indicando que a possibilidade de se manter ativo na vizinhança está diretamente ligada à percepção de segurança no deslocamento. Espera-se que as discussões apresentadas possam contribuir para pesquisas na área de políticas públicas de planejamento e desenho urbano para a terceira idade.*

Palavras-chave: *Cidade. Desenho urbano. Envelhecimento saudável. Planejamento urbano.*

Introduction

This article examines issues related to the mobility and accessibility of individuals aged 60 and over in the city of Pelotas, located in southern Brazil. It analyzes governmental responses and local community perceptions, which indicate urban solutions and/or deficiencies that require long-term structural actions. Urban mobility refers to the conditions under which people and goods move within the city, peri-urban areas, and urban-rural interfaces, ensuring greater spatial fluidity when effectively planned (Brasil, 2004, 2012). Urban accessibility, in turn, concerns the ease or difficulty individuals face when navigating the urban space autonomously (Cox, 1972; Taaffe; Gauthier; O'Kelly, 1996; Brasil, 2000, 2012). Therefore, urban mobility and accessibility are interconnected concepts, and to be fully achieved, they depend on the development of urban planning public policies that prioritize, in the following order of importance: (1) pedestrians and cyclists, (2) public transportation, (3) taxis/application vehicles, and (4) private cars.

The lack of formal support, understood as inclusive mobility public policies, accessible transportation services, and adapted urban infrastructure, can compromise the social well-being of older people. This impact is especially relevant in contexts of countries in the Global South, where such services may be more limited, affecting the freedom, independence, and autonomy of this group to move around the city (Ziegler; Schwanen, 2011; Stjernborg, 2017). Urban environments can become hostile places for people over 60, discouraging opportunities for active aging and placing them at risk of isolation and loneliness (Buffel *et al*., 2012; Smith; Victor, 2019). The increase in loneliness in old age can lead to both physical and mental health problems (Herbolsheimer *et al*., 2017). This phenomenon can negatively impact the individual's sense of cohesion with the community where they reside, as well as their sense of usefulness, resulting in adverse consequences for the creation and/or maintenance of support networks and friendships, social capital, and civic participation (Woolrych *et al*., 2019). The isolation of older adults can also cause an increase in the demand for health services, premature morbidity, and early institutionalization (Longman *et al*., 2013). In old age, participation in outdoor activities, social cohesion, and urban identity have proven to improve health and well-being (Oswald; Konopik, 2015). In response to this, public policies

have pointed to the need to support the older population to live actively and participate in their communities in the city (World Health Organization, 2016).

Both population aging and increased urbanization have proven to be significant challenges in recent decades, especially from the beginning of the 21st century, raising debates about how to develop communities that support and promote social well-being and a healthy urban life for older people (Buffel; Phillipson; Scharf, 2018). The member states of the Organization of American States (OAS) approved the Inter-American Convention on Protecting the Human Rights of Older Persons on June 15, 2015. Brazil was the first country to sign this convention, along with Argentina, Chile, Costa Rica, and Uruguay. According to the Convention (Organization of American States, 2014), member states must guarantee the personal safety and exercise of freedom and mobility of older people, in order to enable citizens in old age to effectively enjoy their human rights. Article 26 of the Convention, which deals with the right to accessibility and personal mobility, states that people aged 60 and over have the right to accessibility to the physical, social, economic, and cultural environment and to their personal mobility (Organization of American States, 2014). To this end, government authorities must adopt measures that include the identification and elimination of obstacles and barriers, in order to ensure that older people have access, on an equal basis with the rest of the population, to the physical environment, transportation, information, and communications, including information and communication systems and technologies, as well as other services and facilities open or for public use. Urban mobility and accessibility must be understood as a right that provides citizens with access to other rights, such as the possibility of participating and assuming a sense of citizenship in the context of the city (Gutiérrez, 2012).

Thus, it is necessary to reflect on how cities can promote an environment conducive to healthy aging, ensuring mobility and full access to health, culture, services, and support networks, taking into account the economic and cultural situation of both countries and the most vulnerable populations. This approach should focus especially on those disadvantaged in the face of structural urban, social, and economic inequalities. In urban and cultural contexts marked by a scarcity of economic, environmental, and social support, older people may become more vulnerable, as their ability to generate income is generally more limited, and they may not have the essential community resources to support aging in place. The risk of entering and/or remaining in poverty for older adults in countries of the Global South is high, making public policies for this group a priority need.

According to studies by the Economic Commission for Latin America and the Caribbean (ECLAC), Latin America is one of the regions of the world with the most people aged 60 and over in absolute numbers and where populations are aging most rapidly. While some European countries had more than a century to respond to population aging, countries like Brazil will have to adapt in a shorter time (Kalache; Veras; Ramos, 1987; Bezerra; Almeida; Nobrega-Therrien, 2012). In Latin America and the Caribbean, the elderly population totaled 57 million people, corresponding to 10% of the total population (Economic Commission for Latin America, 2011). According to data from the *Instituto Brasileiro de Geografia e Estatística* (IBGE, Brazilian Institute of Geography and Statistics) (2021), the Brazilian population aged 60 and over corresponded to 14.7% of the total residents in the country, totaling, in absolute numbers, more than 31 million people.

The following, our analysis focuses on the discussion of data on urban mobility and accessibility of older people in Brazil, focusing on data investigated by the international research project called "Place-Making with Older People: Towards Age Friendly Communities", carried out from 2016 to 2021 and funded by the British agency Economic and Social Research Council (ESRC).

PlaceAge Project

The investigation into urban mobility and accessibility, and their influence on population aging, was a primary objective of the project "Place-Making with Older People: Towards Age Friendly Communities," also known as "PlaceAge." This was a five-year, UK-funded international research project involving case studies in Brazil, the United Kingdom, and India. The study was developed through a partnership led by Heriot-Watt University in the UK, the *Universidade Federal de Pelotas* (UFPel, Federal University of Pelotas) in Brazil, and Sri Venkateswara University in India. The study aimed to establish and compare how individuals aged 60 and over, from diverse socioeconomic backgrounds, urban contexts, and cultural settings, construct their sense of place, focusing on the identification of opportunities, challenges, facilitators, and barriers to social participation, independence, and community engagement. This was investigated through the capture of daily routines, urban mobility, and access to community spaces and facilities. Three cities were selected for case studies in Brazil (Pelotas, Belo Horizonte, and Brasília), the United Kingdom (Edinburgh, Manchester, and Glasgow), and India (Hyderabad, Calcutta, and Delhi). The cities were chosen to represent a broad spectrum of urban areas in terms of demographics (aging populations), economics (social and health inequalities among high, middle, and low socioeconomic groups), topography (different types of density and form within the city space), and urban development. To define the areas investigated in each city, maps were initially produced based on census data from each country. These maps were developed considering the age and income distribution of the population in the studied cities. Three areas were selected in each city, representing concentrations of individuals aged 60 and over, and encompassing different socioeconomic strata.

This article discusses and presents the perceptions of three communities within the Pelotas city case study, located in southern Brazil (Figures 1 and 2, Tables 1 and 2): the central area, representing a higher economic income; a section of the Fragata neighborhood, representing a middle income; and the Navegantes housing development, indicating an economically vulnerable income.

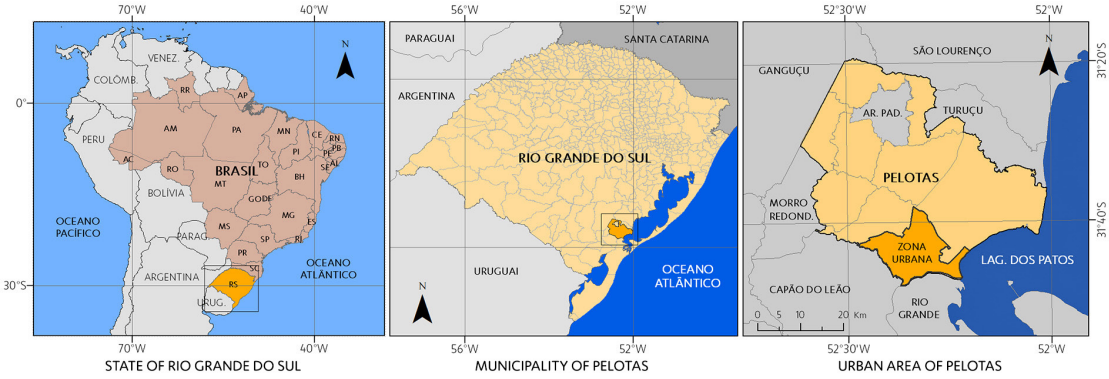

Figure 1 – Location of the case study of the city of Pelotas (RS, Brazil).

Source: prepared by the authors (2024).

Table 1 – Demographic characteristics of the city of Pelotas (RS, Brazil).

Municipality of Pelotas	
Population	325,689 people
Density	202.44 people/km²
Total number of residents aged 60 or over	49,794 people (15.28%)
Life expectancy	75 years
HDI	0.739

Source: *Instituto Brasileiro de Geografia e Estatística* (2022).

Table 2 – Demographic characteristics of the studied areas in the city of Pelotas (RS, Brazil).

Variable	Areas studied in the city of Pelotas		
	Downtown	Fragata	Navegantes
Area in km²	1.28	1.10	0.70
Population	10,335	8,375	9,389
Density	8,074 people/km²	7,613 people/km²	13,412 people/km²
Total number of residents aged 60 or over	2,569 people (24%)	1,748 people (21%)	1,014 people (11%)
Average income per dwelling	R$6,208.74	R$2,988.62	R$1,767.77

Source: *Instituto Brasileiro de Geografia e Estatística* (2022).

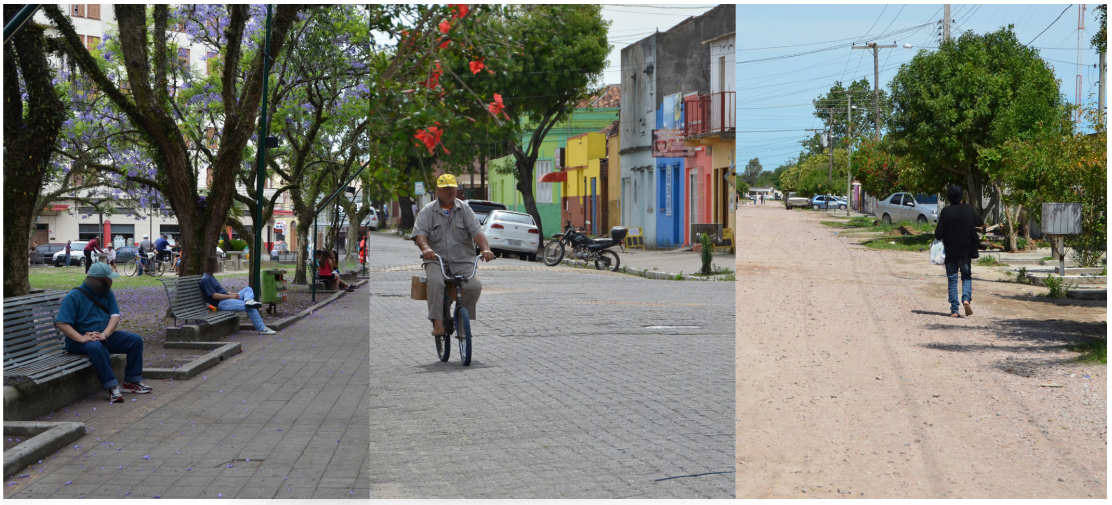

Figure 2 – Urban landscape of the areas studied in the neighborhoods of Downtown, Fragata, and the Navegantes housing development in the city of Pelotas (RS, Brazil).

Source: PlaceAge (2019).

Methodological Procedures

The research sought, through a participatory approach, to amplify the voice of residents of the areas studied and to understand which aspects should be prioritized in order to plan age-friendly communities and ensure the necessary support for healthy aging, including access to support and possibilities for safe travel. To this end, data collection was based on the application of two qualitative methods: "Participatory Mapping" and "World Café".

Participatory Mapping

In general terms, cartographic mapping processes aim to produce a visual and symbolic representation of reality, without being restricted to the nature of the data. Thus, different types of knowledge from the social sciences can be mapped, since territoriality is both a spatial and sociocultural phenomenon (Emmel, 2008; Lawson, 2000). Participatory Mapping is a resource that allows communities to articulate their knowledge about the environment that surrounds them (Anderson *et al.*, 2017), seeking to represent the relationship between place and people. Participatory maps provide a unique representation of how a community perceives the place and allow the identification of its physical and sociocultural meanings (Cochrane; Corbett, 2018). It is an interactive approach that uses accessible visual methods, aims at the production of qualitative data, and the identification of significant elements for the target population (Emmel, 2008; Araújo; Anjos; Rocha-Filho, 2017).

The Participatory Mapping developed in each community studied in the city of Pelotas was characterized by group discussions around a printed map of the analyzed areas. Researchers acted as moderators, while residents of each area interacted with the map, spatially identifying the necessary demands in each location to make their neighborhood more age friendly. This activity was accompanied by a meal, with the aim of making the meeting pleasant and less formal. Invitations for each meeting were delivered personally to people in their homes and in elderly meeting groups, such as those that take place in the *Centros de Referência de Assistência Social* (CRAS, Social Assistance Reference Centers) of each community (Chart 1).

Chart 1 – Participatory Mapping carried out in each community studied in the city of Pelotas (RS, Brazil).

Variable	Downtown Community with the best socioeconomic condition	Fragata Community with average socioeconomic condition	Navegantes Community with the lowest socioeconomic condition
Date (dd/mm/yyyy)	06/12/2017	23/03/2018	06/11/2017
Location	Museum Doce – UFPel	Cohaduque party hall	Navegantes' CRAS
Address	Praça Cel. Pedro Osório, 8	Rua Domingos Guedes Cabral	Rua Dona Darci Vargas
Duration	03 hours (from 2 to 5 pm)	03 hours (from 2 to 5 pm)	03 hours (from 2 to 5 pm)
Participants	13 (09 women & 04 men)	19 (15 women & 04 men)	28 (24 women & 04 men)
Ages	62 to 78 years	62 to 83 years	61 to 84 years

Fonte: PlaceAge (2019).

Following the presentation of the study, its objectives, and the dynamics of the meeting, participants and researchers were seated at tables, around which maps of the studied areas were positioned. A maximum of seven participants per table was established. The discussion was initiated with the following question: 'What support services, leisure facilities, infrastructure, public areas, transportation, walkability, and other characteristics are necessary for your community to become better for you?'. The maps were printed in A1 size and depicted an aerial photographic image of each studied area. 'Post-it' notes and colored push pins were utilized by residents and researchers to indicate, on the map, the locations of each participant's residence and other places of significance to them, as well as to record the content of the discussions. Additionally, pen and paper were used to annotate key points during the discussions. Participants also indicated, on the map, the challenges and positive aspects they identified in their communities and their use of public spaces. For recording the meeting, audio recorders were placed on the tables, with the participants' permission, for subsequent transcription and data analysis (Figure 3).

Figure 3 – Record of the application of Participatory Mapping in the Navegantes housing development in the city of Pelotas (RS, Brazil).
Source: PlaceAge (2019).

World Café

The term "World Café" refers to a qualitative method proposed by Brown and Isaacs (2001), which aims to foster collaborative dialogues and promote knowledge sharing among groups of participants gathered around tables in a welcoming and informal atmosphere. The term is a metaphor that portrays the world as a conversation circle around a coffee table (Necochea; Cline, 2008; Löhr; Weinhardt; Sieber, 2020). This gathering consists of a conversational space that helps groups engage in constructive dialogue around critical issues and specific themes, through collaborative learning. In comparison to other collaborative approaches, the World Café stands out in terms of its use of cross-pollination of ideas through rounds of conversation on different themes and the use of a social context, seeking the equitable sharing of information (Fouché; Light, 2011).

The World Café was proposed with the intention of bringing together residents aged 60 and over from the studied communities, along with municipal government secretaries, local businesspeople, NGOs, activists, and groups responsible for interventions in the city. Invitations were delivered to residents to participate in the World Café: researchers went door-to-door and promoted the meeting at CRAS meetings in each neighborhood, where activities of senior citizen groups were identified. The other participant groups were identified by the research team, considering the themes discussed by residents in the participatory mapping, and were invited through direct contact (personal or telephone) or by email, directed to the agencies and/or entities to which they belonged. The locations chosen for holding the World Café were easily accessible to participants, within their own neighborhoods. The number of thematic tables for discussion was defined at the beginning of each meeting based on the number of people who attended. The aim was to distribute participants across tables ranging from five to eight people. Due to this, in some neighborhoods there was a larger number of thematic tables.

As in the Participatory Mapping workshops, there was an initial presentation of the study, its objectives, and the workshop dynamics. Immediately after, participants and researchers (who acted as moderators) sat in chairs around the tables so that everyone could participate in the discussions. White sheets of paper were placed on the tables, and colored pens were made available to participants so that they could write down important comments about each theme on the paper (Figure 4). The discussions were initiated with questions related to the themes of each table, with these questions being based on the results obtained from the Participatory Mapping workshops. The speeches were recorded and subsequently transcribed and analyzed. The chart below presents the data from the World Café meetings in the studied areas in the city of Pelotas (Chart 2).

Chart 2 – World Café activities carried out in each community studied in the city of Pelotas (RS, Brazil). 1 of 2

Variable	Downtown Community with the best socioeconomic condition	Fragata Community with average socioeconomic condition	Navegantes Community with the lowest socioeconomic condition
Date (dd/mm/yyyy)	25/05/2018	09/05/2018	19/04/2018
Location	Museum Doce – UFPel	Hall of the Church of N.Sa. do Horto	Navegantes' CRAS
Address	Praça Cel Pedro Osório, 2	Avenida Visconde da Graça	Dona Darci Vargas
Duration	03 hours (from 2 to 5 pm)	03 hours (from 2 to 5 pm)	03 hours (from 2 to 5 pm)
Participants	12 (8 women & 4 men)	20 (15 women & 5 men)	29 (26 women & 3 men)
Ages	64 to 78 years	60 to 78 years	61 to 83 years

Source: PlaceAge (2019).

Chart 2 – World Café activities carried out in each community studied in the city of Pelotas (RS, Brazil). 2 of 2

Variable	Downtown Community with the best socioeconomic condition	Fragata Community with average socioeconomic condition	Navegantes Community with the lowest socioeconomic condition
Participants/representatives of local sectors	3 from the Municipal Department of Education and Sports, 3 representatives from the Department of Management and Urban Mobility, 2 from the Department of Housing and Land Regularization, 1 from the Municipal Department of Social Assistance.	2 from the Department of Health, 2 from the Municipal Guard, 1 from the Municipal Department of Education and Sports, 1 from the Department of Management and Urban Mobility, 1 Councilwoman from Pelotas, 1 from the National Employment System, 1 from the Cohaduque Condominium.	1 from the Municipal Council for the Elderly, 1 from the National Institute of Social Security, 3 representatives from the Municipal Department of Culture, 2 from the Department of Management and Urban Mobility, 3 representatives from the Municipal Guard, 1 from the city's Public Security Department, 1 from the private construction sector.
Topics discussed	Green Areas, Services and Commerce, Urban Mobility and Security, Inclusion, Social Participation, Employment, Health and Housing and Memory and Identity	Health, Public Policies, Memory, Identity, Security and Urban Mobility, Leisure, Green Areas	Security, Social Policies and Health, Public Spaces and Maintenance, Urban Mobility and Leisure, Memory and Housing and Civil Construction

Source: PlaceAge (2019).

Figure 4 – Record of the application of World Café in the Fragata neighborhood in the city of Pelotas (RS, Brazil).

Source: PlaceAge (2019).

Results and Discussion

In the Participatory Mapping workshop of the studied area in the Downtown neighborhood, two tables were organized with the participation of 13 people in total (nine women and four men). Table 1 had six residents, and table 2 had seven, with the constant presence of a researcher acting as a moderator at each table. The following thematic categories emerged from the analysis of the participants' statements, in order of priority and considering the quantification of the information discussed:

(1) urban mobility and walkability; (2) leisure and tourism; (3) health and sanitation; (4) volunteer work; (5) social participation; (6) insecurity; (7) neighborly relations; (8) services and commerce; (9) technology, communication and information; and (10) memory. Considering the analyzed data, issues of urban mobility and walkability predominated in the statements. The majority of older adults (9 out of 13 participants) reported enjoying walking in the neighborhood, however, sidewalk conditions, the existence of few pedestrian crossings, curb height, and the

precarious conditions of accessibility ramps were cited not only as barriers that hinder and even impede elderly pedestrian mobility but also as a safety factor that negatively affects the confidence and autonomy of the elderly when moving around. The lack of consideration by drivers towards the elderly during walks or when waiting at the bus stop was also highlighted. Additionally, the existence of "parklets" in the central region, frequently intended exclusively for the benefit of private businesses, is perceived negatively. Of the 13 participants, six mentioned that they do not consider "parklets" as a public space, but rather as an improper privatization of road space. Only one of the elderly participants demonstrated perceiving these facilities as a positive insertion in the urban environment. On the other hand, several positive aspects were mentioned, including the presence of bike paths and the availability of numerous taxi stands, which are particularly useful for elderly people with financial resources, facilitating their travel over longer distances.

In the Participatory Mapping workshop conducted in the studied area of the Fragata neighborhood, 19 residents participated (four men and fifteen women), divided into two tables: table 1 had nine participants, and table 2 had ten, with the continuous presence of a researcher serving as a moderator at each table. The following categories were identified as priorities for the community, based on residents' statements: (1) urban mobility and walkability; (2) neighborly relations; (3) health and sanitation; (4) services and infrastructure; (5) insecurity; (6) leisure and group activities; and (7) respect. Once again, narratives related to urban mobility and walkability emerged as particularly emphatic compared to the others, as analyzed from the participants' narratives. Similar to the workshop in the Downtown neighborhood, the majority of participants (11 out of 19) reported enjoying walking in the neighborhood and perceived the urban design and poor sidewalk conditions as limiting factors for moving around and, consequently, social interaction. Numerous complaints were recorded regarding potholes on the pavement, difficulty crossing roads due to the absence of pedestrian crossings, and the disrespectful behavior of drivers speeding on the neighborhood's main avenue. The limitations imposed by this reality hinder the appropriation and use of the neighborhood by its residents. Despite the variety of services and commercial establishments available in the community, elderly residents often face difficulties accessing them. Public transportation, especially buses, is widely used, but presents a series of challenges for people aged 60 and over, as they are not designed considering the specific accessibility, mobility, and comfort needs of this age group. The absence of benches at bus stops represents a significant gap in the city, especially considering its efforts to become an "Age-Friendly City," as defined by the World Health Organization.

In the Participatory Mapping workshop held in the Navegantes neighborhood, 28 residents participated (24 women and 4 men). It is important to highlight the consistently high level of community engagement in research activities within this neighborhood. For the conversational sessions, four tables were organized in Navegantes neighborhood: table 1 comprised seven residents, table 2 nine residents, table 3 five residents, and table 4 seven residents. Based on the analysis of the narratives collected during this meeting, the emergent themes from the residents' discourse were classified in the following order of prominence: (1) urban mobility and walkability; (2) services and infrastructure; (3) leisure and group activities; (4) health and sanitation; (5) insecurity; (6) leisure; (7) technology, communication, and information; (8) sense of place; and (9) housing. Issues related to urban mobility and walkability were equally prominent in the residents' accounts from the Navegantes neighborhood, with requests primarily focusing on public transportation. The reduced weekend bus schedule, the limited infrastructure of bus stops, the lack of information regarding bus schedules and routes at each stop, and the revocation of free bus fares for individuals aged 60 to 64 were extensively discussed. The lack of paving on the majority of roads and the absence of sidewalks also emerged as significant limiting factors to walkability.

The prominence of mobility and walkability as key themes across the three participatory mapping workshops underscores the direct impact of these issues on the lives of older adults. Difficulties in locomotion not only affect their physical capacity to move but also generate negative emotions, such as frustration and a sense of insecurity. These factors become significant barriers to community and social participation, contributing to isolation and negatively affecting the well-being and quality of life of the elderly population.

Despite the challenges identified through the material generated in the Participatory Mapping workshops across the three areas, the analysis of the overall perception of the place, based on the participants' narratives, reveals that the vast majority appreciate their residential environment and state they would not exchange it for another. This evidence underscores the crucial role of neighborhood networks in people's lives, where residents, even when facing adverse conditions of mobility and urban accessibility, establish bonds among neighbors and family members that transcend infrastructural deficiencies. In the study area with the most vulnerable socioeconomic conditions, residents acknowledge the presence of individuals within the community experiencing extreme vulnerability, lacking even housing. However, they identify this issue as a problem that should be addressed by municipal and state authorities, not considering it a factor that would depreciate the neighborhood.

Data collected and analyzed from the application of the World Café methodology indicated that the theme of urban mobility is integrated with that of safety in the perception of residents across the three studied areas. Residents' discourse primarily focused on critiques regarding the conditions of sidewalks, the carriageways of public thoroughfares, the mode of transportation utilized by each participant, and how they felt in relation to the physical challenges posed by the city's urban design upon leaving their homes. The primary complaint among participants was the precarious state of sidewalks, particularly emphasized by elderly residents for whom their good condition is crucial due to their reduced agility compared to younger individuals. Consequently, they expressed a need for the regularization of paving to prevent uneven surfaces on sidewalks (Figure 5).

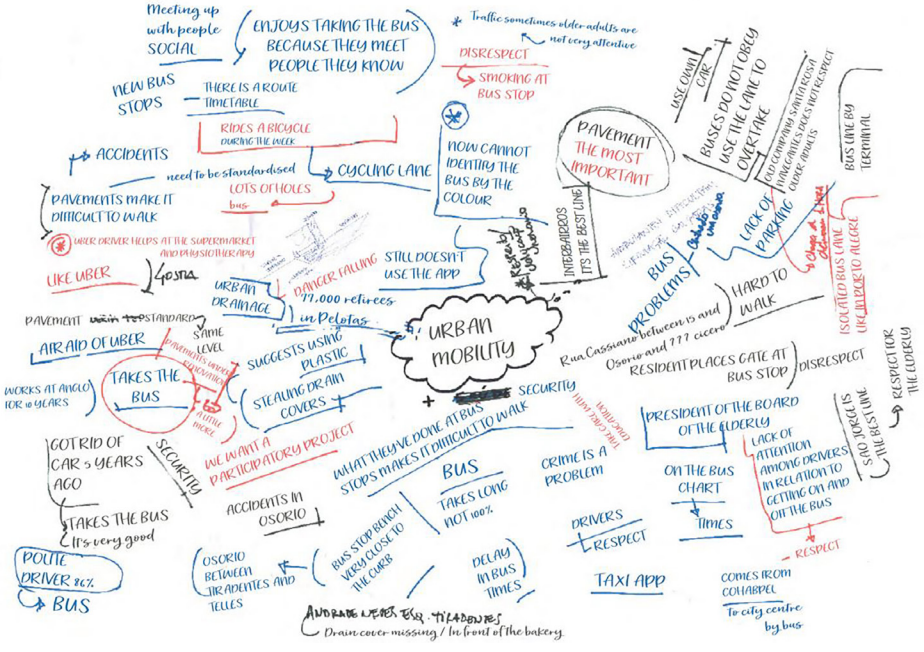

Figure 5 – Written demands on the Urban Mobility theme table during the World Café Workshop in the Centro neighborhood in the city of Pelotas.

Source: PlaceAge (2019).

Another issue raised by the participants concerned the lack of respect shown by bus drivers towards elderly individuals. Across the three studied areas, participants highlighted the discrimination faced by older adults when accessing public buses, stemming simply from their fare exemption (for those over 65 years of age) and their diminished physical agility compared to younger individuals. However, some participants reported experiencing few difficulties in utilizing public transportation, stating that they received considerate treatment and were able to navigate and enjoy the city due to bus routes connecting them to other neighborhoods and localities. It is important to note a significant disparity in terms of urban mobility and accessibility between individuals aged 60 to 65 and older individuals; this discrepancy may account for the varying perceptions regarding the use of public transportation. During the World Café discussions, the issue of perceived insecurity while walking within the neighborhood was also observed, leading numerous residents to choose to remain at home, thereby avoiding the challenges posed by the city's urban design and urban insecurity.

In the middle-income neighborhood, the narratives emerging from the World Café sessions indicate that participants experience a sense of confinement within their own homes, as illustrated by the following quote:

> *We don't go out at night—we stay locked up. We have to lock ourselves in. Our community has been going through difficult times. We are the ones trapped inside our homes. Robberies are frequent, deaths are frequent, attempted murders, shootings on every street in the neighborhood. We are hiding. It is even good that the military is here to hear our demands. We are making a petition to ask for security for our community* (Resident of the Fragata neighborhood, 65 years old).

In the neighborhood exhibiting the highest level of socioeconomic vulnerability, discussions held during the thematic table on security corroborated data previously gathered in the Participatory Mapping workshop. Specifically, residents expressed a pervasive sense of insecurity when walking through the neighborhood at night, attributed to incidents of robbery, inadequate public lighting infrastructure, and the presence of drug trafficking in the area. Some participants recalled a time when the neighborhood was considered safe, contrasting this with the current situation, as evidenced by the following statement: 'A neighborhood that always had security no longer does. There is no one to speak for us. Only ourselves' (resident of the Navegantes housing development, 75 years old). As a positive aspect, Navegantes residents noted that they still felt secure walking through the neighborhood during daylight hours. However, these same residents also identified the significant number of children present on the streets during their off-school hours as a factor exacerbating the perception of violence and insecurity within the district. Many of these children are unsupervised due to parents working full time and subsequently form groups that engage in vandalism targeting neighborhood infrastructure, urban furniture, and vegetation, thereby increasing the perceived risk for pedestrians. In response to these concerns, and in conjunction with the representative from the Municipal Department of Security who participated in the discussion, the potential implementation of an 'opposite school shift' was proposed as a possible solution. This initiative would involve offering free educational and practical activities for children and adolescents during the periods when they are not attending regular school. These activities would be organized and funded by the municipal or state government. The following statements illustrate this proposed solution:

> *Children's safety is a concern. They spend a lot of time on the streets while their parents have to work, and there's no one to take care of them. The older siblings end up looking after the younger ones, and that's not right. There should be a place for*

> *these children to engage in activities—teenagers, too. There should be a space during their off-school hours where someone can help them with their homework and provide activities. There should be a public body responsible for these children and teenagers. Kids under 15 and teenagers are out skateboarding on the streets, doing whatever they want* (Resident of the Navegantes housing development, 61 years old).

> *It would be great if public services could offer some courses for young people, providing them with education and even psychological support. We would all be happier and feel safer* (Resident of the Navegantes housing development, 70 years old).

Furthermore, residents of the Navegantes housing development have requested that the local school offer classes for senior citizens. This demand arises from the fact that a significant portion of the elderly population is illiterate and desires to acquire literacy skills, or alternatively, wishes to complete their primary and/or secondary education. During the World Café event, residents reported that such classes were previously offered by the state school in the neighborhood but were conducted in the evening. These classes were subsequently canceled due to residents' concerns regarding robberies and violence during their commute between school and home. Consequently, the elderly population finds itself lacking opportunities for participation in community activities, as they feel unsafe navigating the neighborhood, whether by public transportation or on foot. This perception of insecurity imposes greater barriers to mobility and urban accessibility for older adults than physical obstacles themselves, leading to the social isolation of this demographic within their residences.

As primary demands, the residents of the Navegantes housing development emphasize the importance of reopening the local military police outpost, situated in front of the CRAS building. The past presence of the police outpost deterred criminal activity, and residents felt more secure moving around and utilizing the neighborhood's public spaces. It was observed that the primary concern among individuals aged 60 and over is their safety, as well as the safety of their families and the neighborhood in general. The participation of the municipal representative from the Pelotas Department of Security in the World Café involved acknowledging the residents' demands but emphasizing the financial limitations of both the municipality and the state in addressing these requests. Regarding the reopening of the police outpost, authorities provided no indication that this would be a viable possibility. Concerning activities for children and adolescents during their off-school hours, present municipal employees merely indicated that some educational initiatives are already being conducted at the CRAS with neighborhood children, in collaboration with Municipal Guard agents. These agents visit the neighborhood once a week for an hour to raise awareness among children about the importance of caring for the neighborhood and refraining from vandalizing urban infrastructure. They explain that public areas are also their property and, therefore, should be maintained and well-cared for by everyone.

Regarding urban mobility and leisure in the Navegantes housing development, discussions focused on the precarious physical infrastructure of the neighborhood, where the majority of streets are unpaved, and sidewalks are nonexistent. Pedestrian mobility is severely compromised, particularly during rainy periods, as some streets become completely flooded. Some residents reported being unable to leave their homes because of flooding. Public transportation is a point of divergent opinions among participants, with some residents considering the service adequate, while others disagree. Residents' statements also reflect a sense of disrespect, as some bus drivers allegedly do not stop at designated stops when only elderly individuals are waiting, citing their fare exemption and the longer time they take to board the vehicle. Concerning leisure, residents expressed a desire for public leisure areas, such as a suitable walking path around the main square.

However, the currently existing spaces in the neighborhood lack basic infrastructure that would enable activities for older adults. The walking path has precarious paving, and there are no public restrooms, rest areas, or any facilities that would encourage a more active and healthier lifestyle outside of their homes.

The growing awareness of the importance of a healthier and more autonomous life underscores the priority of urban planning policies that promote an active, healthy, and independent lifestyle in older age. Today's seniors wish to maintain their physical autonomy and remain active throughout their later years. Numerous individuals interviewed by the Project do not identify with the term "elderly," as they consider it pejorative and associated with dependent and non-autonomous individuals. Currently, people aged 60 and over seek to remain healthy and still consider themselves young. Various participants in this study expressed the desire for their neighborhood to become more conducive to walking, with a network of services and amenities connected by pedestrian- and cyclist-friendly routes.

Final Considerations

The findings derived from the collected and presented data underscore that the elderly population in the city of Pelotas still requires significant attention to fundamental aspects of urban ambience and infrastructure. When considering Maslow's hierarchy of needs, it becomes evident that the participating residents of the Participatory Mapping and World Café initiatives continue to prioritize concerns at the base of the pyramid, which are essential for human well-being, such as safety and security (Figure 6). Regarding the theme of urban mobility and accessibility, the results demonstrated that older adults recognize a direct correlation between the conditions of the physical environment and the prevalence of chronic diseases in old age. The state of pedestrian spaces, including steep inclines and a lack of accessibility features, contributes to falls and other accidents. The absence of urban furniture for rest discourages walking, while the scarcity of accessible leisure spaces reinforces feelings of isolation.

Factors related to neighborhood walkability emerged prominently across all narratives, irrespective of the diverse economic characteristics of the groups. The walkability for older adults is negatively impacted by both the precarious or even non-existent paving of sidewalks and public roads, as well as the perceived insecurity because of crime and other public safety concerns.

The lack of accessibility in public transportation was also extensively discussed, as older individuals face difficulties boarding buses with stairs that are not adapted to the principles of universal design, and they are required to wait for public transport at stops lacking benches or shelter from weather conditions. Furthermore, some drivers, potentially because of fare exemption for seniors and the longer boarding times, fail to stop at locations where only elderly individuals are waiting, further compromising the mobility of this population.

To enhance the quality of public transportation and walkability, it is crucial to implement measures such as the adaptation of buses to the universal design concept, the installation of benches and shelters at bus stops, and the regular maintenance of sidewalks. The implementation of tax incentives for property owners to maintain sidewalks could be an effective solution to reduce the risk of falls and encourage walking, which is the most common form of physical exercise for people of all ages. Additionally, it is fundamental to adopt actions that improve public safety, such as enhancing street lighting and increasing police presence, to foster a greater sense of security and thereby encouraging the utilization of public spaces.

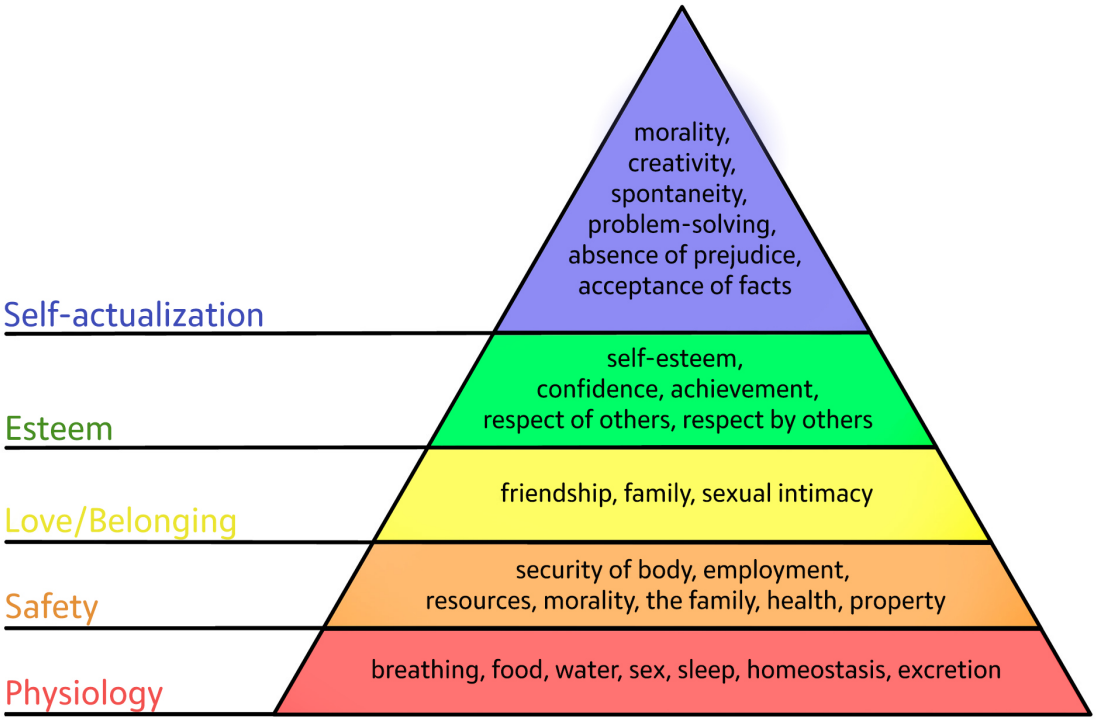

Figure 6 – Maslow's hierarchy of needs is often represented as a pyramid, with the most basic needs at the bottom.
Source: Modified from Finkelstein (2007).

It is also pertinent to consider that public policies aimed at promoting the quality of life of current adults are essential to ensure healthy aging. Research indicates that residing in neighborhoods with enhanced walkability is significantly associated with a reduction in the likelihood of developing chronic diseases related to sedentary lifestyles. As demonstrated by Speck (2016), living in a neighborhood with improved conditions for walking is linked to a 35% decrease in the probability of developing chronic diseases, whereas residing in areas with lower walkability increases this probability to 60%. Therefore, it is fundamental to plan cities that promote pedestrian activity and prioritize safe, high-quality public spaces.

The concentration of the population in urban areas is high in Brazil. In 2022, 124.1 million individuals, corresponding to 61% of the country's total population, resided in urban areas (Instituto Brasileiro de Geografia e Estatística, 2022). Transforming the reality of older adults within the urban context is essential, providing opportunities for them to feel integrated into society throughout their later years. To achieve this objective, it is crucial to consider their experiences and life histories and to develop public policies that address their actual needs.

The participatory methodologies employed in this study are widely recognized and effective in research within the field of environmental perception. Their application to diverse urban contexts can provide valuable insights for the development of public policies and the creation of suitable and age-friendly environments for older adults nationwide. The significant challenge, as in other areas of research, lies in ensuring that the findings of these studies are effectively adopted by public agents and utilized in the creation of policies and public actions that promote the well-being and inclusion of older adults in society, thereby creating cities that are truly accessible and adapted for all ages. It is anticipated that this article will contribute to these discussions and to future research in the area of global aging.

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Contributors

All authors contributed to the conceptualization, data curation, formal analysis, investigation, methodology, and writing (original draft). S. C. Xavier contributed to the writing (review and editing). A. Portella contributed to funding acquisition and project administration.