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Physical and Social Accessibility in the territory: case studies from municipalities in Minas Gerais

Acessibilidade física e social no território: casos de estudos de municípios mineiros

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Abstract

Considering that Brazil is an aging country and the state of Minas Gerais has high percentages of elderly population and high aging rates in its municipalities, which implies changes in economic, social and political dynamics, and considering the importance of access to the city and the guarantee of safe housing for active and healthy aging, this study was proposed to verify whether municipalities in Minas Gerais are prioritizing actions and services that ensure physical accessibility. Using a mixed approach (qualitative and quantitative) of an exploratory and documentary type, situational diagnoses of the elderly people from 31 municipalities in the state of Minas Gerais were analyzed using Pearson's correlation analysis and content analysis as strategies. The results revealed evidence that municipalities with larger populations have higher Municipal Human Development Index and higher Municipal Human Development Index – Longevity. Furthermore, it was observed that the larger the population, the higher the Municipal Human Development Index, and the greater the number of inhabitants and the Municipal Human Development Index, the greater the number of actions taken. On the other hand, municipalities with a larger number of regulations carry out fewer actions related to physical and social accessibility. The content analysis of the actions undertaken or planned by the municipalities suggest that physical and social accessibility policies are incipient in the municipalities studied. In conclusion, the municipalities studied do not offer the essential conditions to enable active and healthy aging for their population, and it is necessary to adapt their cities to minimize the risks inherent to demographic changes.

Keywords: Age-Friendly Brazil Strategy. Population aging. Access to the city. Elderly.

Resumo

Considerando que o Brasil é um país com uma população envelhecida e que o Estado de Minas Gerais apresenta elevados percentuais de idosos e altos índices de envelhecimento em seus municípios, fatores que implicam mudanças na dinâmica econômica, social e política, e considerando a importância do acesso à cidade e da garantia de moradia segura para o envelhecimento ativo e saudável, este estudo foi proposto para verificar se os municípios mineiros estão priorizando ações e serviços que asseguram a acessibilidade física e social para a população idosa. Utilizando uma abordagem mista (qualitativa e quantitativa) do tipo exploratória e documental, foram analisados diagnósticos situacionais da pessoa idosa de 31 municípios do Estado de Minas Gerais, empregando como estratégias a análise de correlação de Pearson e a análise de conteúdo. Os resultados evidenciaram que municípios com maior população possuem maior Índice de Desenvolvimento Humano Municipal e maior Índice de Desenvolvimento Humano Municipal - Longevidade. Ainda, observou-se que quanto maior o número de habitantes, maior o Índice de Desenvolvimento Humano Municipal e, quanto maior o número de habitantes e o Índice de Desenvolvimento Humano Municipal maior o número de ações realizadas. Por outro lado, municípios com maior número de normativos realizam menos ações de acessibilidade física e social. Já a análise de conteúdo das ações empreendidas ou planejadas pelos municípios permitem inferir que políticas de acessibilidade física e social são incipientes nos municípios estudados. Como conclusão, os municípios estudados não demonstram ofertar condições essenciais para possibilitar o envelhecimento ativo e saudável para a sua população, sendo necessário adequar suas cidades para minimizar os riscos inerentes às mudanças demográficas.

Palavras-chave: *Acesso à cidade. Envelhecimento populacional. Estratégia Brasil Amigo da Pessoa Idosa. Pessoa Idosa.*

Introduction

In recent decades, international bodies such as the World Health Organization (WHO), the Pan American Health Organization (PAHO) and the United Nations (UN) have drawn attention to the phenomenon of ageing, the way it occurs on the world stage and the need to prepare environments to preserve the intrinsic capacities of older people.

In the World Social Report, published by the UN (United Nations, 2023) demographic changes are presented as opportunities to strengthen solidarity between the generations. In another important report, by the World Economic Forum (World Economic Forum, 2024) these demographic changes are highlighted as one of the structural forces with the capacity to impact the speed, extent and scope of global risks. Both emphasize the opportunities linked to the phenomenon of ageing, as well as the risks that need to be prepared for.

In Brazil, unlike in developed countries, the process of population ageing is taking place at an accelerated and uneven pace, implying a number of economic, political and social challenges.

In this context, it is worth highlighting the WHO initiative known as "Age-Friendly Cities and Communities", which seeks the active ageing of the population through conditions of health, participation and safety, with the focus of the initiative being the promotion and maintenance of quality of life as people age. In short, cities should be based on 8 dimensions that include fundamental characteristics for a city to be considered friendly to older people. To prepare the environments, approximately 40 municipalities have already joined the WHO's global initiative "Age-Friendly Cities and Communities". In the state of São Paulo, this care is made possible by the Elderly-Friendly São Paulo Program, which does not exclude its municipalities from joining the global initiative.

With these initiatives as a reference, the federal government institutionalized the Elderly-Friendly Brazil Strategy (EBAPI) in 2018. The Strategy, as well as the other initiatives, establishes dimensions for political analysis and evaluation, and for understanding how people age

in Brazil. Among the dimensions are those that help to promote the capabilities of older people in terms of physical and social accessibility.

The term physical and social accessibility was presented by Costa (2018), in a lecture at the launch and presentation of EBAPI, and covers dimensions such as: "physical environment", "transportation and urban mobility" and "housing". Taken together, these dimensions of the EBAPI allow us to understand whether older people have access to quality services, actions and facilities for ageing in their municipality.

More than 900 municipalities have joined EBAPI and progressed through its phases at different times. In Minas Gerais, there is a group of 31 municipalities in the Zona da Marta region of Minas Gerais that have received support from the Universidade Federal de Viçosa to advance in the phases proposed by EBAPI.

Considering the importance of access to the city and the guarantee of safe housing for active and healthy ageing, this qualitative-quantitative study aims to verify whether the group of 31 municipalities analyzed in Minas Gerais are prioritizing actions and services that ensure physical and social accessibility for the elderly population. Specifically, the aim of this study is to: (a) survey regulations related to local policies for the elderly; (b) survey actions to promote the capabilities of the elderly, implemented by a group of municipalities in the state of Minas Gerais; (c) categorize the actions and respective evaluations by local managers from the perspective of the dimensions of the Elderly-Friendly Brazil Strategy; (d) critically analyze the actions implemented to check whether they enable physical and social accessibility for the elderly population.

Theoretical Reference

Population Ageing

The sharp drop in the birth rate combined with the increase in life expectancy of people around the world has led to a rapidly ageing population (Organização Mundial da Saúde, 2015). It was in the 20th century that this phenomenon was established and came to be widely recognized as one of humanity's main achievements in the period. On the other hand, at the time, there was also recognition of the major challenges that public policies would have to face in order to maintain and promote human dignity in the context of an ageing population (Camarano; Pasinato, 2004).

The phenomenon of population ageing, and the response to it, has not occurred harmoniously and homogeneously around the world. Economically developed countries have faced aging in a favorable socioeconomic scenario that has allowed for the expansion of social protection systems. In developing countries, on the other hand, ageing has occurred more rapidly and the socio-economic scenario is a barrier to the sufficient expansion of social protection systems (Camarano; Pasinato, 2004).

Even in the 1970s, social programs to deal with the negative consequences of the aging process gained relevance in discussions in developed countries, but it was only in the 1990s that developing countries began to discuss the issue. Unlike in developed countries, the ageing process in developing countries has been more aggressive and accelerated, marked by profound economic, social and political changes (Camarano; Pasinato, 2004).

Longevity, accompanied by good health, allows people to live longer and, above all, allows people to have more time to do what they truly value. However, the opportunities that arise from longevity depend on one essential factor: health (Organização Mundial da Saúde, 2015).

Health, especially in the context of ageing, is not linked to the absence of disease. Not least because the presence of certain conditions or illnesses doesn't necessarily have a negative impact on life. Elderly people are more likely to be associated with chronic conditions, and this complexity makes it necessary to explore the meaning of "health" for this group in an attempt to give it a new meaning. It is also necessary to establish ways of measuring the health of these people, as well as ways of promoting it (Organização Mundial da Saúde, 2015).

Since health does not correspond to the absence of disease, it must be considered in the light of the impact that these conditions have had on the well-being of the elderly (Organização Mundial da Saúde, 2015). This means that health must be based on the biopsychosocial well-being of the elderly, even in the face of illnesses, whether chronic, acute or even associated.

In terms of ageing, in order to establish what is meant by "healthy ageing", it is necessary to turn to another concept: functional capacity. Functional capacity corresponds to the interaction between individuals and their environments, i.e. the attributes that allow people to be or do what they value (Organização Mundial da Saúde, 2015).

Individuals have physical and mental capacities that together make up what is understood as "intrinsic capacity", which is that which can be used at any time. In addition, the environments in which they live contain resources and barriers that impose on individuals the way in which they are allowed to interact with their environment. This means that physical and mental abilities are not the only ones that determine an individual's functional capacity. This is because the environment, with its resources and barriers, can allow or prevent individuals of different physical and mental abilities from doing or not doing what they consider important (Organização Mundial da Saúde, 2015).

In short, an individual's intrinsic capacity determines their physical and mental capabilities. The environment in which the individual lives determines what they can do, given their physical and mental capabilities. The physical and mental capacities added to the environment and the individual's interaction with it is what has come to be understood as functional capacity.

Functional capacity, understood as the interaction between the individual, their abilities and their environment, is what allows a concept of "healthy ageing" to be established. In this sense, the World Health Organization conceptualized healthy aging in the World Report on Aging and Health as: "[...] the process of developing and maintaining functional capacity that enables well-being in old age" (Organização Mundial da Saúde, 2015, p. 13).

An individual's health is directly influenced by their intrinsic capacity, the environment and their interaction. From this, it can be concluded that individuals with reduced intrinsic capacity can have good functional capacity, as long as the environment provides adequate resources to allow them to interact as they wish. Similarly, the functional capacity of individuals with favorable intrinsic capacity can be impaired if the environment has insurmountable barriers, be they physical, social or economic.

By integrating and outlining functional capacity, the environment also integrates and outlines the health of the elderly person. This means that healthy ageing is directly impacted by the environment in which the elderly person lives. Thus, the environment is an element that integrates and therefore shapes the health of the elderly.

It was no coincidence that in 2005, at the opening session of the 18th World Congress of Gerontology in Rio de Janeiro, the idea of the World Elderly-Friendly City Project was born. A joint effort by governments, non-governmental organizations and academic groups resulted in the

publication of the Global Guide in 2008: Age-Friendly City, the aim of which is to mobilize cities to become more friendly to older people, allowing them to enjoy their full potential (Organização Mundial da Saúde, 2008). This initiative has been adopted by several countries. In Brazil, as well as being adopted by around 40 cities, it was used as a reference for the development of EBAPI, which adapted it to the Brazilian reality. These are initiatives by cities that are welcoming to the elderly and promote their physical and social accessibility, as discussed below.

Welcoming Cities for Older People initiatives

In order to define what an age-friendly city consists of and what it comprises, the WHO points out: "An age-friendly city encourages active ageing by optimizing opportunities for health, participation and safety, to increase quality of life as people age" (Organização Mundial da Saúde, 2008, p. 7).

In practical terms, an age-friendly city is one that adapts its structures and services to make them accessible and promote the inclusion of older people, regardless of their needs or abilities (Organização Mundial da Saúde, 2008).

In keeping with the concept of functional capacity established earlier, it is possible to define an elderly-friendly city as one that fosters the functional capacity of the elderly by building and maintaining a physically inclusive environment that provides the elderly with access to the necessary services, optimizing their interaction with the environment and promoting their participation in society.

In order to be able to characterize an elderly-friendly city, it was necessary to listen to the elderly inhabitants of the cities. Based on the information gathered, the WHO was able to establish a set of items that are friendly to older people, which are described in the Global Guide: Age-Friendly City (Organização Mundial da Saúde, 2008).

The project started in July 2005 at WHO headquarters and was led by Brazilian doctor Alexandre Kalache and Louise Plouff (Marè; Gogliano Sobrinho; Malatesta, 2024). Plouffee and Kalache (2010) point out that, based on the concept of healthy ageing and the main characteristics of age-friendly community models, a set of eight characteristics of urban life has been identified. Through focus groups, participants were asked to identify positive and negative aspects related to each of these major areas. Focus groups were held in 33 cities around the world, 19 of which were in developing countries and 14 in industrialized countries. (Plouffe; Kalache, 2010).

The eight topics established were: Transportation; Housing; Social Participation; Respect and Social Inclusion; Civic Participation and Employment; Communication and Information; Community Support and Health Services; and Open Spaces and Buildings. The survey participants' reports on each topic were grouped by theme and made up a checklist containing the main characteristics of an elderly-friendly city (Organização Mundial da Saúde, 2008).

The checklist, however, does not correspond to a technical guideline or design specification for building an elderly-friendly city, much less does it correspond to a system for classifying the degree of friendliness that cities have with elderly people (Organização Mundial da Saúde, 2008). Implementation strategies and technical guidelines therefore depend on smaller-scale coordination, whether at federal, state or municipal level.

In Brazil, the elderly-friendly cities movement was translated into the Elderly-Friendly Brazil Strategy (EBAPI), established by Decree No. 9.328, of April 3, 2018 (Brasil, 2018) and absorbed by Decree No. 9.921, of July 18, 2019, which consolidated the normative acts issued by the federal

executive branch that dealt with the issue of the elderly (Brasil, 2019a). EBAPI aims to: "[...] encourage communities and cities to promote actions aimed at active, healthy, sustainable and citizen aging of the population, especially the most vulnerable people" (Brasil, 2019a, p. 6).

Reis, Martins and Gomide Souza Pinto (2020) point out that EBAPI can also be considered part of the formulation and implementation of the National Policy for the Elderly by training municipalities so that they can organize actions and activities to benefit the elderly.

A technical document published by the Ministry of Social Development expresses the alignment of the Brazilian strategy with the fundamentals of the Global Guide: Elderly-friendly city:

> Aligned with the fundamentals of the Global Guide: Elderly-Friendly City, the National Elderly-Friendly Brazil Strategy considers the "Elderly-Friendly" approach as an integrating element of municipal management policies based on the views of the elderly on what concerns them - which in itself is an affirmative political action of citizenship (Brasil, 2019d, p. 23).

EBAPI, therefore, adapts the requirements stipulated at a global level to the particularities of the Brazilian reality (Brasil, 2019d). Figure 1 shows the WHO methodology and its adaptation to the Brazilian reality.

Figure 1 - Comparative table between methodologies

Source: Elderly-Friendly Brazil Strategy Technical Document (Brasil, 2019d, p. 25).

EBAPI and the Age-Friendly Cities and Communities initiative are not mutually exclusive. However, unlike the Global Guide, which established eight aspects of older people's lives, EBAPI established nine. The aspect added to the Brazilian strategy was "local protagonism". In addition, the eight aspects of the Global Guide were reviewed by EBAPI and then adapted to the Brazilian reality, being established as: "physical environment, transportation and urban mobility, housing, participation, respect and social inclusion, communication and information, learning opportunities, support, health and care, and local choice" (Brasil, 2019d, p. 22).

For this work, aspects related to physical and social accessibility, which correspond to the dimensions "Physical Environment", "Transport and Urban Mobility", and "Housing", gain relevance as it is proposed to analyze the actions of Minas Gerais municipalities related to these dimensions.

The methodological procedures will then be presented so that the results can then be presented and discussed.

Methodological Procedures

Considering that Brazil is an aging country and that the state of Minas Gerais has a high percentage of elderly people and high rates of aging in its municipalities, which implies changes in economic, social and political dynamics, the research seeks to verify whether the guarantee of physical and social accessibility for the elderly population has been prioritized by Minas Gerais municipalities.

This is an exploratory and documentary study with a mixed approach (quantitative and qualitative). We chose to carry out exploratory research in order to provide an overview of the subject and greater familiarity with the problem of physical and social accessibility, which is still little explored in the current context. Gil (2002, p. 42) states: "[...] exploratory research aims to provide greater familiarity with the problem, with a view to making it more explicit or building hypotheses".

This is also documentary research because, according to Gil (1989, p. 73): "[...] it makes use of materials that have not yet received an analytical treatment, or that can still be reworked according to the objectives of the research". This is the case of the situational diagnoses of the elderly carried out in 2020 for 31 municipalities in Minas Gerais, as a result of a cooperation agreement that was made possible via a TED (Decentralized Execution Term), signed between the Federal University of Viçosa and the Ministry of Citizenship.

It is necessary to highlight the wealth of information made possible by the situational diagnoses, which are the subject of the agreement signed in the aforementioned TED. Information was gathered from the municipalities' budget and tax documents and their action plans. This information was evaluated by EBAPI's municipal management committee, which pointed out weaknesses, strengths, suggestions for improvement and complemented the information. The documents present details of the work carried out in a dialog between researchers from the Federal University of Viçosa, partner universities, managers and members of the municipal EBAPI committees.

As already mentioned in the literature review chapter, the EBAPI proposal defined eight dimensions related to the daily lives of individuals, used for adherence and evaluation of municipalities as to whether or not they are friends of the elderly. Of these, the "Physical Environment", "Transport and Urban Mobility" and "Housing" dimensions were the focus of the analysis, since together they reflect the physical and social accessibility that we are seeking to study.

To protect the ethical aspects of the study, the municipalities have been coded and will be listed as follows. Municipality 01 - M01, municipality 2 - M02 and so on, until the 31 municipalities are complete. In addition to the data from the situational diagnoses of the elderly, information was sought from the official IBGE database, Census 2022, to present the municipalities.

Two strategies were used to analyze the data: Pearson correlation analysis for quantitative analysis and content analysis for qualitative analysis.

Pearson's correlation aims to measure the linear association between two metric variables, determining both the direction (positive or negative) and the strength of this association (Hair *et al.*, 2005). The variables used in the correlation analysis included: Total Actions developed by the municipalities (Total_A); Number of Municipal Regulations (decrees, ordinances, laws,

etc.), (Total_N); Number of inhabitants in the municipalities (N_hab); Percentage of the Elderly Population (Perc_PI); Aging Index (Ind_E); Municipal Human Development Index 2010 (MHDI_2010) and Municipal Human Development Index Longevity (MHDI_Long). In terms of regulations, they refer to Decrees, Laws and Ordinances and all refer to policies for the elderly population. Due to the different magnitude scales of the variables, they were standardized to *Z Scores*, resulting in a distribution with mean 0 and standard deviation 1, thus normalizing the database (Fávero *et al.*, 2009). The data was analyzed using R and RStudio software (R Core Team, 2024).

For the qualitative analysis, considering that the dimensions of analysis were previously defined (Physical Environment, Transport and Urban Mobility and Housing), content analysis was used to present and discuss the results. Content analysis allows the representation of information to be condensed (Bardin, 2011).

In content analysis, in order to interpret the text, it must first be processed. In the words of Bardin (2011, p. 133): "To process material is to encode it". According to the author, coding is the transformation of the raw data of the text into a representation of the content or its expression by means of cutting, aggregation and enumeration so that the researcher can understand the characteristics of the text Bardin (2011).

With these guidelines, categories were established for each dimension (Physical Environment, Transportation and Urban Mobility, and Housing), which were previously extracted from official federal government documents, making it possible to deepen the analysis. In this way, the actions carried out by the municipalities have been allocated in accordance with the aspect of life to which they are oriented. In other words, in addition to the dimensions of analysis, the actions were also allocated to categories which then correspond to "sub-dimensions of analysis", as shown in Table 1. The categories were taken from Guide 2 (Brasil, 2019b).

Table 1 - Dimensions of analysis, description and categories.

Dimensions	Description	Categories
Physical environment	"List and quality of spaces available to older people for their socialization and integration into public life" (Ministério da Cidadania, 2019b, p. 14).	Sidewalks; Squares; Public Spaces and Buildings; Public Banks; Community Meeting Points; and Public Lighting.
Transport and urban mobility	"Actions to guarantee free urban and semi-urban public transport from the age of 65; to improve accessibility in public transport; to train public transport employees to understand the aging process, among others" (Ministério da Cidadania, 2019b, p. 14).	Free Transportation/Elderly People's Card for Access to Municipal, Intermunicipal and Interstate Public Transport; Public Transport Employees; Priority Seats; Priority Spaces; Society's Awareness of Priority; Accessibility of Public Transport; Accessible Bus Stops; Signage on Public Transport Vehicles; Urban Mobility Plan.
Housing	"List of actions and services that prioritize the acquisition of housing by the elderly; list of campaigns on accessibility and safety in housing, as well as on sustainability (saving water, electricity, etc.); among others" (Ministério da Cidadania, 2019b, p. 15).	Standard Project for Social Housing with Accessibility; Financing Low-Cost Housing for the Elderly; Credit for Renovations; Priority for the Elderly; Social Rent and Shelter; Campaigns and Actions on Accessibility and Safety at Home; Campaigns and Actions on Savings.

Note: Categories based on Guide 2: Strategy implementation (Brasil, 2019b) and Descriptions based on Guide 3: How to make a diagnosis (Brasil, 2019c, p. 15).
Source: Prepared by the authors.

With regard to the "Transport and Urban Mobility" dimension, it was decided to bring together three categories presented by Guide 2 (Brasil, 2019b) separately. Thus, the categories "Free public urban and semi-urban transport from the age of 65"; "Free public urban and semi-urban transport from the age of 60"; and "Accessible and free transport for the elderly to travel from one place to another, to access services that do not exist in their locality" were brought together in the "Free Transport" category. In addition, the category "Social Rent and Shelter" was included in the "Housing" dimension by the authors later on, as actions geared towards this issue were identified in the diagnoses analyzed.

Based on the allocation of the actions undertaken by the municipalities in their respective dimensions and categories, we sought to identify frequencies and patterns that would allow a critical analysis of the results. In addition, we verified the existence of a relationship between the number of actions undertaken by municipalities and other variables such as the density of municipal regulations related to the elderly and the percentage of the elderly population in the municipality.

Results and Discussion

As indicated in the Methodological Procedures section, the data was analyzed both quantitatively and qualitatively. The quantitative analysis looked for correlations between variables related to physical and social accessibility, while the qualitative analysis looked at the actions and services provided by the 31 municipalities studied, covering the categories: "Physical Environment", "Transport and Urban Mobility" and "Housing". The results will be presented in this order, quantitative and qualitative, providing an overview of the actions carried out by the municipalities participating in the research in relation to physical and social accessibility.

Profile of municipalities and analysis of correlations between variables

Table 1 shows the main characteristics of the municipalities studied, as well as the variables that will be correlated. For ethical reasons, the municipalities were coded and listed.

As can be seen in Table 1, there is a greater concentration of actions by municipalities in the "Physical Environment" dimension (147 actions), followed by actions for "Transport and Urban Mobility" (90 actions) and, lastly, actions for "Housing" (60 actions).

In relation to the population of the municipalities studied, the heterogeneity of the data can be seen, since the average established was 18,554 inhabitants, but the municipality with the most inhabitants has 104,736 and the municipality with the least has 2,433 inhabitants. These data reveal a high standard deviation that characterizes the heterogeneity of the municipalities' data in terms of population.

Using the most common correlation parameters in the literature, it was established that from 0.71 to 0.9 there is a strong correlation; from 0.5 to 0.7 a moderate correlation; and from 0.3 to 0.49 a weak correlation.

The correlation analysis of the individual dimensions revealed that there is a weak correlation between "physical environment", "transportation and urban mobility" and the number of inhabitants. In this correlation, the more actions aimed at the "physical environment", the more actions for "transportation and urban mobility" and the greater the number of inhabitants in the municipality.

Table 1 - Profile of the municipalities studied.

MUNI	Nº HAB	%PI	AI	NºReg	AC	MHDI	MHDI-L	ACTIONS			
								Tot	AF	M	TMU
M01	6,903	21.60	87.59	5	Yes	0.646	0.824	4	1	2	1
M02	9,219	17.74	64.50	1	Yes	0.645	0.849	16	6	4	5
M03	2,688	24.48	102.34	0	Yes	0.643	0.817	11	8	0	3
M04	10,167	18.19	65.61	4	Yes	0.674	0.795	9	3	2	4
M05	4,441	25.11	116.93	5	Yes	0.624	0.802	8	5	1	2
M06	31,240	21.29	86.05	38	Yes	0.695	0.837	3	1	0	2
M07	5,473	16.64	56.88	3	Yes	0.684	0.828	12	7	2	2
M08	104,736	18.16	67.11	3	Yes	0.755	0.865	14	4	3	6
M09	4,899	19.07	71.24	3	No	0.622	0.819	12	8	1	3
M10	3,875	16.95	54.88	2	Yes	0.676	0.823	10	3	3	4
M11	9,590	24.31	107.99	3	Yes	0.603	0.821	12	5	2	4
M12	4,053	23.91	104.46	2	Yes	0.716	0.835	5	4	0	1
M13	9,753	24.71	117.06	9	Yes	0.623	0.794	7	3	2	2
M14	22,692	21.85	95.49	4	Yes	0.658	0.829	12	7	2	2
M15	3,690	23.96	98.28	9	Yes	0.688	0.841	8	2	3	3
M16	4,737	25.23	129.36	2	Yes	0.672	0.834	4	2	0	2
M17	4,592	21.41	82.94	1	Yes	0.657	0.838	6	1	2	2
M18	10,373	22.18	101.41	0	Yes	0.664	0.831	7	1	2	4
M19	8,968	20.38	87.91	2	Yes	0.663	0.827	13	5	4	3
M20	6,303	16.31	50.68	24	Yes	0.675	0.822	3	1	1	1
M21	39,262	20.44	90.49	10	Yes	0.699	0.842	16	8	2	5
M22	97,139	16.07	62.20	8	Yes	0.725	0.848	15	7	3	4
M23	30,466	15.68	53.98	3	Yes	0.707	0.816	10	5	1	3
M24	10,485	17.97	66.24	1	Yes	0.648	0.821	8	4	1	2
M25	17,392	24.72	111.84	2	Yes	0.69	0.823	11	5	3	2
M26	4,800	21.58	89.66	16	Yes	0.663	0.833	14	4	5	4
M27	11,246	13.20	39.25	9	Yes	0.65	0.836	7	3	1	2
M28	6,804	20.33	81.69	2	Yes	0.715	0.845	10	3	3	3
M29	2,433	29.68	164.33	4	Yes	0.654	0.826	9	5	2	2
M30	76,430	18.37	79.13	34	Yes	0.775	0.883	16	6	3	5
M31	10,314	20.76	78.40	3	Yes	0.675	0.831	5	3	0	2

Note: Nº Hab: Number of inhabitants; %PI: Percentage of Elderly Population; AI: Aging Index; Nº Reg: number of regulations; CA: Active Council; MHDI: Municipal Human Development Index; MHDI-L: Municipal Human Development Index - Longevity; Tot: Total actions; AF: actions and services on the physical environment; TMU: actions and services on transportation and urban mobility; M: actions and services on housing.

Source: prepared by the authors based on situational diagnoses of the elderly and data from IBGE Cidades (https://cidades.ibge.gov.br/).

Actions on "transportation and urban mobility" correlate moderately with actions on "housing" and with the number of inhabitants, with a weak correlation with the MHDI and the

Longevity MHDI. This means that municipalities with a higher number of inhabitants and a higher MHDI tend to carry out more "transportation and urban mobility" actions and more "housing" actions for the elderly.

Actions for "housing" show a weak correlation with the Longevity MHDI. In any case, the existence of this correlation allows us to infer that municipalities with a higher Longevity MHDI tend to develop more "housing" actions for the elderly.

The correlation analyses that consider all the actions are shown in Figure 2.

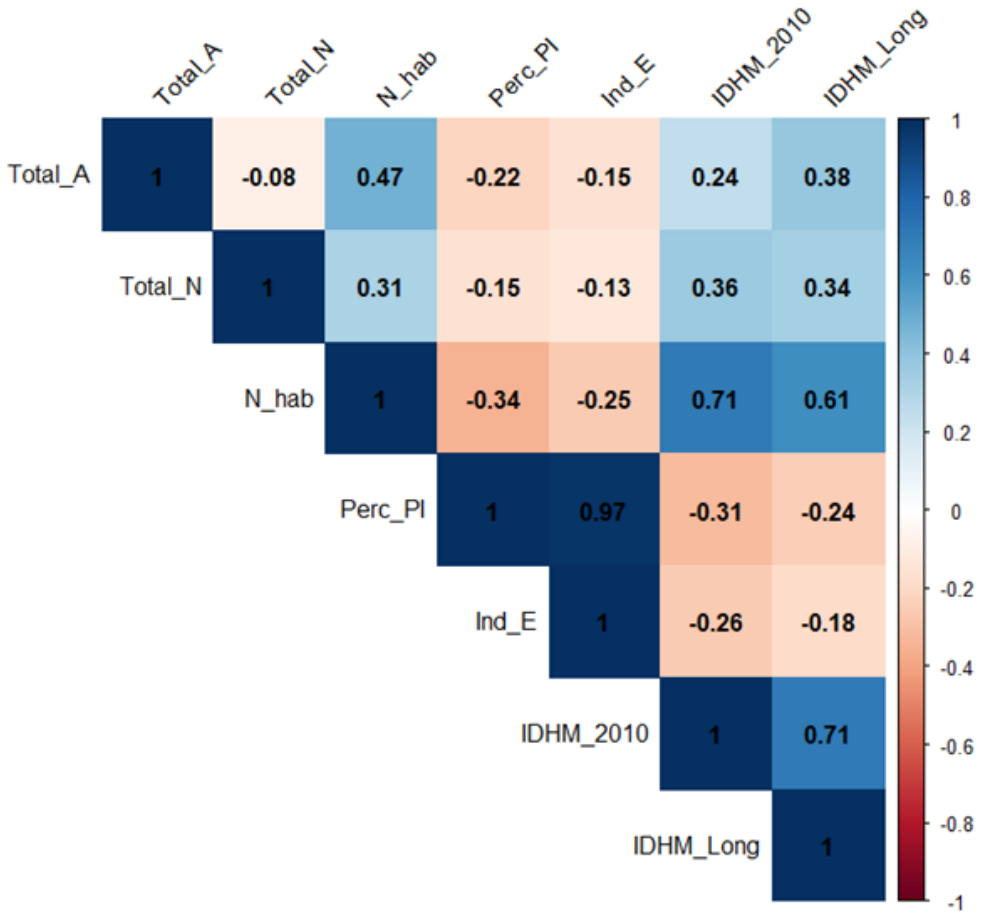

Figure 2 - Correlation diagram.

Note: Total_A: total actions; Total_N: number of regulations; N_hab: number of inhabitants; Perc_PI: percentage of elderly population; Ind_E: aging index; MHDI_2010: municipal human development index; MHDI_Long: municipal human development index - longevity.

Source: Prepared by the authors.

The analyses that considered the total number of actions showed that there is a strong correlation between the number of inhabitants and the MHDI, allowing us to infer that municipalities with more inhabitants have a higher MHDI and a higher Longevity MHDI. In addition, there is a correlation between number of inhabitants, MHDI Longevity and number of shares. This means that the higher the number of inhabitants, the higher the MHDI, and the higher the number of inhabitants and the MHDI, the higher the number of actions carried out.

Furthermore, there is a very strong and obvious correlation between the percentage of elderly people and the population's aging rate.

There was also a low negative correlation (0.08) between the total number of actions and the total number of regulations aimed at the elderly in the municipalities studied. In this sense, the number of actions carried out is negatively correlated - practically non-existent correlation - with the number of regulations aimed at the elderly. It is not possible to say why there is such a low correlation between these two variables, especially since this study did not include other dimensions, such as health and participation. In any case, it can be inferred that the legal apparatus is not always converted into practice. On the contrary, municipalities with a greater number of regulations carry out fewer physical and social accessibility actions.

Having established the main quantitative considerations that could be inferred from the data collected, we will now move on to a qualitative analysis of the actions undertaken by the municipalities in the sample in relation to the dimensions chosen as the object of study.

Physical Environment

The 31 municipalities in the sample have undertaken and/or plan to undertake 147 actions aimed at improving the "physical environment". Table 2 shows the number of actions undertaken and/or planned by the municipalities in relation to each analysis category that makes up this dimension.

Table 2 - Number of shares per analysis category.

Dimension	**Physical environment**					
Category	Sidewalks	Squares	Public spaces and buildings	Public banks	Community Meeting Points	Public lighting
Number of shares	15	37	41	2	35	17

Source: Prepared by the authors.

In the Physical Environment dimension, three municipalities (M03, M09 and M21) stand out with eight actions implemented in the six categories. In all 31 municipalities, "Public Spaces and Buildings" concentrates the largest number of actions, followed by "Squares" and "Community Meeting Points". In terms of "Public Spaces and Buildings", 58% of the actions concern paving and crosswalks, which helps to improve mobility for people of all ages. In addition, the construction of access ramps and the installation of handrails were frequently mentioned, as well as the importance of walking paths and the adaptation of public buildings to meet accessibility requirements. Among the main challenges are environmental issues such as waste collection, the need for improvements to make spaces more accessible, expansion and maintenance, and especially education in social life and respect for rules and collective spaces. One of the municipalities, M14, indicated the action "Disque Reparos: the city hall's service channel", which meets the demands of the population regarding the physical spaces of the municipality as a good practice, although it is not widely publicized.

With regard to "squares", there is recognition of the potential of this space to promote social accessibility. They were considered by 42% of the municipalities to be pleasant spaces and conducive to socializing and living together, although 13% noted that the squares are little occupied by the elderly. The data contained in the diagnoses revealed that the municipalities have very different realities when it comes to this dimension of analysis. While some point to safety, tree

planting, equipment for physical activity, accessibility and public toilets as strengths, others present them as challenges. The main demands made were to establish an agenda of physical and cultural activities to promote social interaction in the squares, the need to increase the number of squares in the municipality or spaces for socializing, expanding or carrying out maintenance on benches, accessibility and maintenance of public toilets.

In the "Community Meeting Points" category, the main focus was on outdoor gyms, considered by 16% of the municipalities to be an important space for socializing and health care. According to the diagnosis, they are found in different parts of the city, but they need attention from the public authorities in terms of maintenance, monitoring of activities by professionals and actions to make them safer, such as improvements to lighting. Also mentioned were the social spaces at the Social Assistance Reference Center (CRAS) and the sports courts, but these are spaces that need maintenance, accessibility and improvements to provide more comfort for the elderly population. The main demands mentioned are for drinking fountains, changes in lighting and better security. There is an expectation in the municipalities that these spaces can be occupied more by older people.

In terms of "sidewalks", which are essential for older people to get around and access public spaces and the service network, 29% of the 14 municipalities that presented actions in this category pointed to accessibility as a challenge to be overcome. Other actions refer to monitoring so that sidewalks can serve the purpose of people's mobility, avoiding their occupation for private purposes. The few actions undertaken and/or planned with regard to sidewalks - 15 actions in total - can be considered a negative point. The Global Guide (Organização Mundial da Saúde, 2008) highlights the importance of sidewalks in the ability of older people to get around and points out some elements that can be potentially dangerous for older people, such as narrow, uneven, cracked sidewalks, high curbs or obstacles.

In terms of the most important characteristics to encourage walking, the study carried out by Margarita Larrañaga (2016) identified, based on the *best* responses, the characteristics of connectivity, sidewalk, number of police officers and risk of accidents. As for the answers *worst* the most important characteristics were connectivity, slope, sidewalk and number of police officers. The authors of the study point out that the *worst* can offer greater practical value in the development of strategies aimed at eliminating barriers to walkability and, for this reason, the municipalities studied should pay particular attention to connectivity, slope and sidewalk when it comes to improving sidewalks.

Only 6% of the municipalities presented actions on the "Public Banks" category. They refer to seats available at different points in the city to provide rest options. It should be noted that in an elderly-friendly urban environment, the availability of benches and seating areas is essential for older people. This is because, as the Global Guide (Organização Mundial da Saúde, 2008, p. 16) points out, for many elderly people: [...] it is difficult to walk around the city if there is no place to sit and rest".

Finally, actions for the "Public Lighting" category were presented by 51% of the municipalities and refer to the lighting of the city as a whole. There is an appreciation of lighting in the central part of municipalities, which has resulted in greater security, but difficulties in extending this benefit to outlying areas.

Transport and Urban Mobility

The 31 municipalities in the sample have undertaken and/or plan to undertake 90 actions aimed at improving "transportation and urban mobility". Table 3 shows the number of actions undertaken and/or planned by the municipalities in relation to each category of analysis.

Table 3 - Number of shares per analysis category.

Dimension	Category	Number of Shares
Transport and Urban Mobility	Free transportation/Elderly Persons' Card for access to municipal, intercity and interstate public transportation	61
	Public transport workers	2
	Priority Seats	1
	Priority vacancies	11
	Raising Society's Awareness of Priority	6
	Accessibility of public transport	1
	Accessible Bus Stops	8
	Signaling Public Transport Vehicles	0
	Urban Mobility Plan	0

Source: prepared by the authors.

The categories "Urban Mobility Plan" and "Signposting of Public Transport Vehicles" had no action undertaken or planned. Although the issue of seats, boarding and disembarking vehicles are three of the main problems pointed out by the Global Guide (Organização Mundial da Saúde, 2008), the actions "Accessibility of Public Transport" and "Priority Seats" had only one action each. Similarly, although the kindness of drivers in facilitating access to public transport is defined by the Global Guide as a characteristic that is friendly to older people, the category "Public Transport Employees" only had two actions.

In general, the "Free Transportation" category concentrates the largest number of actions, representing 67.7% of the total actions undertaken and/or planned in this dimension of analysis. Of the 31 municipalities surveyed, approximately 42.0% use free transportation (city cars) to enable elderly people to travel to health treatments, especially in municipalities that do not have public transportation. The cars are also used for elderly people to access public offices to carry out examinations and apply for welfare benefits. Only municipalities M06, M08, M10, M17, M19, M21 and M22 indicated the existence of free municipal urban transport. However, on the M08, gratuity only applies to people aged 65 or over. A further 22.5% of the municipalities reported free intercity transport, but with a reduced number of places per journey. On M03, M16, M26, M27 and M29, interstate transport is free or discounted. Communication seems to be a challenge that needs to be overcome in the municipalities. Especially in terms of raising awareness about the rights of the elderly, since part of this age group is unaware of these benefits. In this sense, local radio stations can be important allies for local governments, mainly because, according to a study carried out by Sesc, SP and the Perseu Abramo Foundation (2020), 71% of the elderly people who took part in the survey said they "listen to the radio" when asked about the leisure activities they do most.

Representing 12.22% of the actions, the second category with the most actions was "Priority Vacancies". As shown in Table 3, we identified 11 actions undertaken by 10 municipalities related to the "priority vacancies" category: M06, M08, M11, M14, M18, M21, M22, M26, M30 and M31 representing 32.25% of all municipalities. Municipalities M06, M14, M21 and M30 highlight the increase in the number of exclusive parking spaces for the elderly as a point for improvement. Municipalities M11, M18, M22 and M31 highlight the need to make people aware of the exclusive parking spaces. Only M18 indicates the possibility of filling in a form for accreditation valid throughout the national territory. The reports were produced previously, but in 2023 the Ministry of Transport announced the possibility of issuing credentials via an app. Before that, it could be issued through the National Traffic Secretariat (Senatran) portal or in person at the traffic office in

the driver's city. In this sense, it is thought that standardizing the form of issuance could facilitate the accreditation of elderly people, not least because the reports themselves reveal that, at the time, each municipality carried out accreditation through different bodies. By way of example, M22 did it through CRAS; M21 through the Traffic Department; M26 through the police station in a neighboring town and M18 already used accreditation through Senatran.

The third category with the most actions in the dimension, representing 8.88% of the total, was the "Accessible Bus Stops" category. Of the 31 municipalities, eight indicated actions related to the category, which represents 25.8% of all municipalities: M05, M08, M11, M15, M21, M22, M24 e M25. Of these eight, six pointed out the need for improvements related to the roof and/or seats. Only M08 pointed out the need to expand the number of bus stops and M05 mentioned that bus boarding takes place on the opposite side of the sidewalk, meaning that people have to turn around to board, so improvements could be made by changing the boarding point or altering the direction of the road. In this regard, the Global Guide (Organização Mundial da Saúde, 2008) highlights some of the characteristics of elderly-friendly bus stops, including: (i) they are located close to where elderly people live and are equipped with covered, clean, safe and well-lit seats; (ii) stops and stations are accessible with ramps, toilets and adequate signage; (iii) stops are easily accessible and geographically well located; (iv) staff are kind and helpful.

Finally, in the category "Raising Society's Awareness of Priorities", there were six actions from four municipalities (08, 18, 26 and 30). This is because the M30 indicates the implementation of three different traffic awareness and education campaigns: "National Traffic Week"; "Traffic education blitz"; and "Traffic education workshop for the elderly". M18 provides assistance to older people so that they can access their rights; M26 undertakes awareness-raising campaigns; and M08 monitors the rights of older people in transport with the aim of raising public awareness of the issue.

Housing

The 31 municipalities in the sample have undertaken and/or plan to undertake 60 actions aimed at improving "housing". Table 4 shows the number of actions undertaken and/or planned by the municipalities in relation to each analysis category.

Table 4 - Number of shares per analysis category.

Dimension	Category	Number of Shares
Housing	Standard Project for Social Housing with Accessibility	0
	Financing Low-Cost Housing for the Elderly	17
	Granting Credits for Reforms	4
	Priority for the Elderly	1
	Social Rent and Shelter	7
	Campaigns and Actions on Accessibility and Safety at Home	18
	Campaigns and Actions on the Economy	13

Source: The authors.

Firstly, it should be noted that, with regard to the housing dimension in particular, some actions can be covered by different categories. It was therefore necessary to allocate the actions to the categories that, in some way, more precisely encompass certain actions. To do this, we tried to

identify the core meaning of each action so that it could then be allocated to the category in which the description comes closest to the theme of the action.

No actions were found under the category "Standard Project for Social Housing with Accessibility" and only one action was found under "Priority for the Elderly". This is a worrying situation, given that inadequate housing increases the risk of falls (Tissot, 2022). It is necessary to consider the need to plan cities and housing for the elderly well, taking into account the risk of falls, which have harmful consequences for the health and sociability of this age group. According to Silveira *et al.* (2018), the main consequences are fractures, mental health due to fear and social isolation, decreased activities of daily living and declining health. According to the authors, these are consequences that affect older people and society as a whole and increase the demand for institutionalization.

In this sense, Tissot and Vergara (2023), through a systematic review of the literature, point out solutions that can be adopted to prevent falls in the elderly and also indicate the stage at which each recommendation can be implemented - from the project to the adaptation of the existing physical environment. Avoiding steps or unevenness such as stairs, for example, are typical strategies in the design stage of housing. Avoiding the use of rugs or carpets, in turn, are recommendations for adapting the existing physical environment (Tissot; Vergara, 2023).

We found 18 actions related to the category **"**Campaigns and Actions on Accessibility and Safety at Home", which were undertaken by 15 municipalities: M02, M05, M08, M10, M11, M13, M14, M15, M17, M21, M22, M24, M25, M26 e M28. The actions mainly involve lectures and workshops on safety, accessibility and adapting housing, as well as home visits aimed at raising awareness and assisting the elderly with home and personal care. With regard to the latter, M17 indicates that home visits should be carried out by community workers in order to advise the elderly about personal hygiene and cleaning their homes. In fact, the provision of services at home and at an affordable price is one of the characteristics listed by the Global Guide (Organização Mundial da Saúde, 2008) of an elderly-friendly city.

With regard to the category **"**Financing Low-Cost Housing for the Elderly", 17 actions were identified in the report, which were undertaken by 13 municipalities: M01, M07, M08, M10, M13, M18, M19, M22, M23, M25, M27, M29 e M30. Of these 13 municipalities, three indicate the absence of specific quotas for the elderly and six explicitly mention the existence of quotas. Municipalities M18 and M29 point to accessibility problems in housing program residences and municipalities M08 and M25 point to the program's inadequacy in serving the elderly. In addition, Municipalities M30 and M19 offer free materials for building houses, while M19 also offers free engineering services and property regularization to the population.

It is worth noting that some of the actions mentioned above could also be included in the "Priority for the Elderly" category, since the 3% quota for housing units for the elderly is specifically mentioned. However, these actions were only allocated to the "Financing Low-Cost Housing for the Elderly" category in order to avoid distorting the results due to duplicate data.

The category "Campaigns and Actions on the Economy" included 13 actions listed in the reports. Of the 31 municipalities, only municipalities M01, M14, M15, M17, M20, M22, M26, M28 and M29, around 29% of the total, indicate the existence of discounts on electricity bills for the elderly. Some of these municipalities even point out that the granting of discounts depends on specific requirements. By way of example, M14 states that it will only provide discounts on electricity for elderly people who need electrically-powered health devices. Similarly, Municipalities M15 and M22 establish requirements for granting discounts that exclude part of the elderly: those with a

family income of more than ½ minimum wage *per capita*. On the other hand, water bill rebates were only expressly mentioned in three reports. In addition, four actions were identified related to awareness campaigns, especially on the sustainable use of resources, and two campaigns to publicize the benefits of discounts on water and electricity bills. In the context of age-friendly cities, essential services such as water and electricity must be provided at an affordable cost, as set out in the Global Guide (Organização Mundial da Saúde, 2008). Because these services are so essential to life, ensuring that they are provided at an affordable cost should in fact be one of the main actions undertaken by municipalities that wish to become friends of the elderly.

With regard to the "Social Rent and Shelter" category, seven actions were identified from six municipalities: M02, M04, M09, M15, M16 and M25. It is noteworthy that only two actions identified relate to the reception of elderly people through institutions. The action developed by M09, which is aimed at sheltering elderly people who are socially vulnerable, is carried out by a third sector organization, which has only four shelters. M04, in partnership with neighboring municipalities, promotes the reception of elderly people without family ties. With regard to social rent, five actions were identified and in three of them the benefit is occasional, i.e. for a fixed period. M25 mentions that the benefit lasts for a maximum of three months, which can be extended if necessary, and M15 only mentions that the benefit is granted for a fixed period, without specifying the maximum duration.

Finally, only four actions were identified in the category "Granting Credits for Reforms". It should be noted that the description of the category, as EBAPI points out, is aimed at granting credit for renovations aimed at adaptations that promote accessibility. In this regard, actions were only identified in municipalities M02, M07, M28 and M30.

In general, none of the municipalities analyzed presented actions in all of the categories listed in each dimension of analysis. Although the "physical environment" represents the greatest concentration of actions, 50% of them, there are few initiatives to guarantee resting places and greater safety so that older people can access the city and integrate socially. Despite the importance of the actions underway, the management committees presented numerous challenges to be overcome if they are to be effective. For example, many public buildings or community centers have accessibility problems, compromising the provision and effectiveness of services and access to constitutional rights and those guaranteed in the National Policy and the Statute of the Elderly.

In the transport and urban mobility dimension, which had the lowest number of actions (30%), the same situation can be observed, i.e. the challenge of making actions effective, even those guaranteed in the legal framework of policies for the elderly. A situation which, according to Barreto (2009), amounts to a disregard for the principle of human dignity and, consequently, for the law. The author adds that the current model of urban transport needs to be improved and that it must be public and of high quality.

Housing represents the smallest number of actions related to physical and social accessibility, only 20% of them. This is a worrying situation in a country that advocates, whenever possible, growing old with families rather than institutionalization. However, there have been cultural changes in Brazilian society that need to be taken into account. With the inclusion of women in the labor market and the reduction in the number of children, the emphasis on the obligation to "[...] care exclusively for the family, and especially for women, is proving to be unsustainable" (Cavalcanti, 2013, p. 160). It is necessary, on the one hand, to think about social facilities that provide comprehensive care and ensure human dignity and, on the other hand, to avoid institutionalization,

safer housing is needed that helps maintain activities of daily living and the physical and mental health of the elderly (Tissot, 2022).

Final Considerations

The study was carried out with the aim of verifying whether the 31 municipalities in Minas Gerais analyzed by means of the situational diagnosis reports for the elderly are prioritizing actions and services that ensure physical and social accessibility for this age group.

Initially, when carrying out the correlation analysis between the variables: number of inhabitants (Nº Hab), elderly population (%PI), aging index (IE), number of regulations (Nº Norms), total actions (tot), actions and services on the physical environment (AF), actions and services on transportation and urban mobility (TMU), actions and services on housing (M), municipal human development index (MHDI) and municipal human development index longevity (MHDI L), it was found that municipalities with more inhabitants have a higher MHDI and a higher longevity MHDI and that there is a relationship between the number of actions undertaken by municipalities and the other variables. For example, there is evidence that the higher the number of inhabitants, the higher the MHDI, and the higher the number of inhabitants and MHDI, the higher the number of actions carried out. On the other hand, municipalities with a greater number of regulations carry out fewer physical and social accessibility actions.

It is well known that municipalities with a higher number of inhabitants have better administrative structures or greater institutionalization and tend to have more public budget, which perhaps justifies the moderate correlation between the number of actions and the total number of inhabitants. Having more inhabitants means that other demands can arise (such as from people with disabilities), and actions that are specifically for the elderly, but which can have a positive impact on them, as contemplated in this study, enter the agenda. Another hypothesis that deserves to be tested in other studies is the evaluation of the higher correlation between the number of inhabitants and the MHDI, which may also be related to the larger budget, migration of elderly people from neighboring towns to these larger cities, as well as the greater availability of health services, for example.

In terms of regulations, while on the one hand the number of regulations has practically no correlation with the number of actions implemented, it is worth noting that regulations can be effective in making actions concrete and permanent over time, allowing for the consolidation of relevant policies, programs or actions and discontinuity over time due to political changes.

The content analysis of the actions undertaken or planned by the municipalities shows that physical and social accessibility policies are incipient in the municipalities studied. Not all of the actions that cover the Physical Environment, Transport and Urban Mobility and Housing dimensions are being implemented by the municipalities. There is a concentration on physical environment actions, but not to the full.

All the dimensions analyzed show that the municipalities of Minas Gerais do not offer the essential conditions to enable active and healthy ageing for their population and need to adapt their cities to minimize the risks inherent in demographic change. It is worth remembering that the actions analyzed are not necessarily for the elderly population, such as the paving which has a positive impact on the whole population and the ramps which may be more associated with the legislation on accessibility for people with disabilities.

Thus, the analysis of the actions implemented by the municipalities in Minas Gerais suggests that efforts will be needed to ensure physical and social accessibility for the elderly population and to contribute to the quality of life of the entire resident population. For future studies, we suggest analyzing the correlation between regulations and actions in all dimensions of EBAPI, so that local policies for the elderly can be understood in their entirety.

References

Bardin, L. *Análise de Conteúdo*. São Paulo: Edições 70, 2011.

Brasil. *Decreto no 9.328, de 3 de abril de 2018. Institui a Estratégia Brasil Amigo da Pessoa Idosa*. 3 abr. 2018. Disponível em: https://www.planalto.gov.br/ccivil_03/_ato2015-2018/2018/decreto/d9328.htm#:~:text=DECRETA%20%3A,principalmente%20das%20pessoas%20mais%20vulner%C3%A1veis. Acesso em: 16 set. 2024.

Brasil. *Decreto no 9.921, de 18 de julho de 2019. Consolida atos normativos editados pelo Poder Executivo federal que dispõem sobre a temática da pessoa idosa*. Brasília: Presidência da República, 18 jul. 2019a. Disponível em: https://www.planalto.gov.br/ccivil_03/_ato2019-2022/2019/decreto/d9921.htm. Acesso em: 16 set. 2024.

Brasil. Ministério da Cidadania. *Guia 2*: Implementação da Estratégia. Brasília: Ministério da Cidadania, 2019b. Disponível em: www.cidadania.gov.br. Acesso em: 16 set. 2024.

Brasil. Ministério da Cidadania. *Guia 3*: Como fazer um Diagnóstico. Brasília: Ministério da Cidadania. 2019c. Disponível em: www.cidadania.gov.br. Acesso em: 16 set. 2024.

Brasil. Ministério do Desenvolvimento Social. *Documento Técnico da Estratégia Brasil Amigo do Idoso*. Brasília: Ministério do Desenvolvimento Social, 2019d.

Barreto, S. F. *Estatuto do idoso e o transporte público*: aplicação da lei e o princípio da dignidade humana. Belo Horizonte: IBDFAM, 2009. Disponível em: https://ibdfam.org.br/artigos/546/Estatuto+do+idoso+e+o+transporte+p%C3%BAblico:+aplica%C3%A7%C3%A3o+da+lei+e+o+princ%C3%ADpio+da+dignidade+humana. Acesso em: 20 maio 2024.

Camarano, A. A.; Pasinato, M. T. O Envelhecimento populacional na agenda das políticas públicas. *In*: Camarano, A. A. (org.). *Os novos idosos brasileiros*: muito além dos 60? Rio de Janeiro: IPEA, 2004. p. 253–292.

Cavalcanti, A. D. Envelhecimento e institucionalização: uma revisão bibliográfica à luz da promoção da saúde. *Kairós Gerontologia*, v. 16, n. 4, p.159-174, 2013.

Costa, S. M. M. *Acessibilidade Física e Social*. 03 de abril de 2018. Palestra de lançamento da EBAPI.

Fávero, L. P. *Análise de dados*: modelagem multivariada para tomada de decisões. 7. ed. Rio de Janeiro: Elsevier, 2009.

Gil, A. C. *Métodos e Técnicas de Pesquisa Social*. 2. ed. São Paulo: Atlas, 1989.

Gil, A. C. *Como elaborar Projetos de Pesquisa*. 4. ed. São Paulo: Atlas, 2002.

Hair, J. *et al. Fundamentos de métodos de pesquisa em administração*. Porto Alegre: Bookman Companhia, 2005.

Marè, R.; Gogliano Sobrinho, O.; Malatesta, M. E. B. Efetividade do transporte público gratuito para inclusão de pessoas idosas (São Paulo). *Cadernos Metrópole*, v. 26, n. 60, p. 707–726, 2024. Doi: https://doi.org/10.1590/2236-9996.2024-6014.

Margarita Larrañaga, A. *et al.* Estimando a importância de características do ambiente construído para estimular bairros caminháveis usando Best-Worst Scaling. *Transportes*, v. 24, n. 2, p. 13–20, 2016. Doi: https://doi.org/10.14295/transportes.v24i2.1091.

Organização Mundial da Saúde. *Guia Global*: Cidade Amiga do Idoso. Genebra: OMS, 2008.

Organização Mundial da Saúde. *Relatório Mundial de Envelhecimento e Saúde*. Genebra: OMS, 2015. Disponível em: www.who.int.

Plouffe, L.; Kalache, A. Towards global Age-Friendly cities: Determining urban features that promote active aging. *Journal of Urban Health*, v. 87, n. 5, p. 733-739, 2010. Doi: https://doi.org/10.1007/s11524-010-9466-0.

R Core Team. *R*: A Language and Environment for Statistical Computing. Vienna, Austria: R Foundation for Statistical Computing, 2024. Disponível em: https://www.R-project.org/. Acesso em: 20 nov. 2024.

Reis, A. O.; Martins, S.; Gomide Souza Pinto, T. R. Estratégia Brasil Amigo da Pessoa Idosa em governos locais brasileiros: análise sob a perspectiva dos múltiplos fluxos de Kingdon e do modelo top-down e bottom-up. *GIGAPP Estudios Working Papers*, v. 7, n. 162, p. 411-428, 2020.

SESC SP; Fundação Perseu Abramo. *Idosos no Brasil II*: vivências, desafios e expectativas na 3ª idade. [*s.l: s.n.*], 2020.

Silveira, M. B. *et al.* Construction and validation of content of one instrument to assess falls in the elderly. *Einstein*, v. 16, n. 2, p. eAO4154, 2018. Doi: https://doi.org/10.1590/S1679-45082018AO4154.

World Economic Forum. *The Future of Growth Report 2024*. Geneve: World Economic Forum, 2024.

Tissot, J. T. *Aging in Place*: Protocolo com Diretrizes Projetuais para Ambientes de Moradia Segura para a Pessoa Idosa. 2022. Tese (Doutorado em Arquitetura e Urbanismo) – Universidade Federal de Santa Catarina, Florianópolis, 2022. Disponível em: https://repositorio.ufsc.br/bitstream/handle/123456789/241000/PARQ0466-T.pdf?sequence=-1&isAllowed=y. Acesso em: 20 maio 2024.

Tissot, J. T.; Vergara, L. G. L. Estratégias para prevenção de quedas no ambiente de moradia da pessoa idosa com foco no aging in place. *Ambiente Construído*, v. 23, n. 3, p. 25-37, 2023. Doi: https://doi.org/10.1590/S1679-45082018AO4154.

United Nations. *Global Sustainable Development Report 2023*: Times of crisis, times of change: Science for accelerating transformations to sustainable development. New York: United Nations, 2023. Doi: https://doi.org/10.18356/e31065c7-en.

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