

Aging in (urban) Place: a multidimensional study to explore opportunities for healthy longevity in the city

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Abstract

Aging in place is an increasingly discussed topic in the study of urban aging, especially in light of the new challenges of our century: population aging and urbanization. Understanding the interaction between individuals and their environment is critical to promoting healthy longevity. A mixed-methods case study in the Italian city of Bergamo examines this relationship, focusing initially on two models of aging in place: senior housing and home ownership. Preliminary data reveal individual differences in social life and in the use of urban space between the two groups. The research, which aims to investigate how to support healthy “aging in place”, could involve policymakers, urban planners, and architects in promoting inclusive and age-friendly urban environments, by introducing a new perspective to aging in place studies.

Keywords: Aging in place, age-friendly city, healthy longevity, empowerment, inclusion

Topic and theoretical focus

The 21st century has to face two important challenges: the aging of the population and the continuous urbanisation of land and urban growth (especially in some areas of the planet). The World Health Organization (WHO, 2017) and the United Nations (UN, 2019), dedicate a lot of attention to them, promoting projects and good practices to sustain the shaping that the world is living, and relative challenges in social, economic, cultural, and political, that it's called to face. It's properly this intersection of population aging and urban environments that is the privileged field in which fits “urban aging”, an increasing field of research all over the world.

However, the prevailing perception of aging as a ‘problem’ or ‘economic burden’ on society (Phillipson, 2013) persists, hindering efforts to empower older individuals and communities. A paradigm shift is needed to embrace a holistic view of aging that recognizes the active role older adults play in shaping their aging trajectories and promoting healthy longevity, in a lifespan course perspective (Morganti, 2022). Initiatives such as the WHO's Age-Friendly City program (WHO, 2007) aim to create urban environments that are conducive to the well-being and participation of older adults by addressing multiple domains such as housing, transportation, and social inclusion. This underscores the importance of both the physical and social environments in enhancing the quality of life for older individuals, which is consistent with scholars' emphasis on the significance of place in the aging experiences (Skinner, Andrews, and Cutchin, 2016).

Within this context, there is a strong emphasis on conceptualizing aging in place (AIP) as an achievable and valuable objective (Vasunilashorn, et al., 2012), driven by two main factors. Firstly, it responds to political movements advocating for support for older individuals,

particularly in the face of uncertainties about the sustainability of welfare systems (Pynoos et al., 2008). Secondly, it reflects the individuals' desire to remain in their own homes (see, for example, Golant, 2020) and the recognition of the importance of place for older people (McGrath and Hand, 2021). This concept has been integrated into public policies in many countries, such as the United States (Metlife, 2010) the United Kingdom (Lofqvist et al., 2013; Hammarström and Torres, 2012; Sixsmith et al., 2014), and Australia (Stones and Gullifer, 2016), where it serves as a strategy to conserve resources (Greenberg and Schwarz, 2012) and empower older people by expanding access to support services, that enable them to maintain their independence (Stones and Gullifer, 2016). In some cases, such as in the UK, housing-related programs aim to support older individuals in maintaining and enhancing their residences, facilitating extended periods of independent living at home. The rationale behind such initiatives lies in the belief that informal support networks are more cost-effective than institutional care (Wiles et al., 2011).

Since its inception, the concept of AIP has evolved, as highlighted by Rogers et al. (2020). The term originated in 1978, with Grass and Wiseman, focusing on the growing number of older adults. It gained traction in the 1990s, with increasing emphasis on the significance of familiar environments, albeit with vague descriptions. From the 2000s onwards, the literature diversified with various definitions of AIP, becoming a central concept, particularly for policymakers, as noted by Vasunilashom et al. (2012).

Nevertheless, the definition of AIP remains an open topic, encompassing functional, symbolic, and emotional attachments and the importance of homes, neighbourhoods, and communities (Wiles et al., 2011). Multiple disciplines approach AIP from different perspectives, leading to varied definitions and interpretations. To better understand the concept, there is a need for a comprehensive definition that integrates its heterogeneity and complexity. Aging in place stimulates reflections across various fields and sparks critical discussions about its theoretical ambiguity and its implications for spatial justice and inequality (Finlay et al., 2021). To summarize the different definitions of AIP, three main categories are often considered when it is studied: people, places, and time (Rogers et al. 2020).

In this contribution, we propose to study aging in place by exploring the nuanced interplay between individuals and places, focusing on older adults living in the city, so in the dimension of "Aging in (urban) Place".

The research selects the Municipality of Bergamo as a case study due to its well-defined spatial, social, and institutional conditions, which exemplify those of a "medium-sized city". Medium cities are urban entities of significance within Italy, representing approximately one-fifth of the country's residents, with a population ranging between 200,000 and 500,000 inhabitants (Organisation for Cooperation and Economic Development, 2014).

Bergamo stands in the Lombardy Region, the most populous Italian region with nearly 10 million residents and 1,504 municipalities across 12 provinces, with Milan as its capital. Located in northern Italy, the region spans 23,860 square kilometers, with terrain divided almost equally between plains, hills, and mountains. It sits at the crossroads of routes linking the Mediterranean and Central Europe. The city of Bergamo has over 120,000 inhabitants and serves as the capital of the province, which boasts more than 1.1 million residents. It is a city with a complex spatial structure. It is internally organized into 22 neighbourhoods, which are characterized by the presence of both ancient and modern urban fabrics, affected in the 20th century by important processes of urban growth. At the same time, this city is part of a large megalopolis that runs from East to West, incorporating various cities and metropolitan areas (Torino, Milano, Padova).

Due to its characteristics, Bergamo represents an example of a "medium city" useful for the definition of an analytical-interpretative model applicable to other urban contexts. This research, in fact, represents a first exploratory phase that will provide us with useful indicators

to develop a more complex analysis model, which will attempt to involve the entire Bergamo population over 65, which is around 30,000 people. This innovative multidimensional and multilevel methodology to examine the correlation between urban environments and longevity could produce results applicable to similar medium-sized cities across Italy.

Since we believe that studying the subtle space between people and contexts, and their relationships, can be crucial in offering opportunities to promote the empowerment of individuals for their healthy longevity within the city, the research question we ask ourselves is how to study the urban context not as a neutral space, but as a place of constraints and possibilities for older adults so that it can constitute for them opportunities for healthy longevity or limitations (not only physical) that lead people towards potential trajectories of fragility.

Research objectives

Focusing on the small geographic areas (neighbourhoods) that characterize mid-sized cities, the research aims to analyse individuals and places, to understand how the different possibilities of aging in place can contribute to healthy longevity. To achieve this, a comprehensive understanding of the older adults in urban areas and their interactions with urban spaces is essential. By adopting a bio-psycho-social and ecological model of development throughout the lifespan (Bronfenbrenner, 1979), with a strong multidimensional and multilevel connotation, we intend to give importance not only to the AIP choices of individuals and the creation of their proximal relationships, but also to the role of the entire system surrounding the individual capable of determining them. Through the creation of a complex methodological model of analysis, the project intends to understand how urban space can prove to be a constraint or a resource, when placed in relation to the motivations to move, the personal characteristics of individuals and the urban spatial variables. Starting from the individual level up to the macro context, we intend to analyse not only the physical barriers that could hinder everyday life in the city, but also the cognitive ones. In other words, an analysis is proposed able to integrate the psychological and complex determinants of individuals into the concept of space. The outcomes of this research will be able to provide suggestions to support AIP policies in the city, allowing the redesign of more inclusive urban spaces capable of supporting active aging and healthy longevity. This new methodology for investigating the relationship between cities and longevity could ultimately produce results that can be generalized to other medium-sized Italian cities.

Research methods

The research focuses on the Municipality of Bergamo as a case study due to its distinct spatial, social, and institutional characteristics, making it an exemplar of a "medium city" suitable for developing an analytical-interpretative model applicable to similar urban contexts. The methodology chosen for the indicated objective is the mixed-method case study (Curry et al., 2009; Phillips et al., 2013). The study, which has two main focuses – people and places – adopts an epistemological complex approach, in a biopsychosocial and ecological perspective of development throughout life (Bronfenbrenner, 1979), and integrates the determinants indicated by the WHO for the creation of Age Friendly cities (WHO, 2007).

Two groups of individuals over 70-year, living in two different AIP models situated in two different neighbourhood in the city of Bergamo are analysed as case study. One sample group is composed by 16 aged persons (14 females; 2 males) living in their home and attending activities in an association dedicated to older adults placed in "Sant'Alessandro" neighbourhood. The other group is composed by 13 older adults (11 females; 2 males) living in a senior house (a group of independent apartments organized around common services) situated in "Borgo Palazzo" neighbourhood. This housing model is particularly interesting for

our research as it is the first form of independent senior living not only in Bergamo but also in Italy. The reference neighbourhoods of the two sample groups are almost similar: residential and central in the city of Bergamo.

Starting from an individual perspective the research assesses the healthy status by quantitative measurements and the motivation to empower in aging by qualitative method. The first step of the study is a qualitative interview (audio-recorded) lasting approximately thirty minutes, composed by three questions aimed at investigating the motivations for aging, resources and difficulties during this process, the motivation of certain housing choices and how much and how the space around them (neighbourhood) home is used. The second part of individual analysis is made using quantitative measurements, and represents a multidimensional evaluation of the participants, resumed in four dimensions: Cognitive, Functionality in daily life, Emotional state, Quality of life.

This first part of the analysis allows us to have a complete and in-depth picture of the older adults, not only from a health point of view, but also in terms of thoughts, life stories, needs and motivations, also in relation to the use of urban environments.

Preliminary results

The preliminary results are about the qualitative and quantitative data on the individual focus. With the current analysis, we will delve into the examination of qualitative data, which proves to be more revealing and thought-provoking.

Into the sample we had to drop out two subjects. As shown in Table 1, the definitive sample is composed by 13 over 70 years old living in the senior house (2 males; 11 females); and 14 people living in their homes (2 males; 12 females).

Table 1
 Socio-demographic and self-reported health details of participants.

	Own Homes	Senior House	total	% of total
Population				
total	14	13	27	100%
female	12	11	23	85%
male	2	2	4	15%
Age				
70-74 years	0	1	1	4%
75-79 years	2	2	4	15%
80-84 years	7	5	12	44%
85-89 years	4	2	6	22%
90 + years	1	3	4	15%
Marital status				
Married / Living with Partner	3	2	5	19%
Separated / Divorced	2	2	4	15%
Widowed	5	9	14	52%
Single / Never Married	4	0	4	15%
Qualification				
Elementary School	1	1	2	7%
Secondary school	2	5	7	26%

High school	10	6	16	59%
Degree-Para-university diploma	1	1	2	7%

From an individual perspective preliminary quantitative data revealed no significant differences between the two groups. These two case studies appeared, in fact, to be similar in the four dimensions examined. On the other hands, qualitative preliminary data reveal differences between the two groups, in particular in the personal aspects of empowerment in aging, in social life, in the motivation of the housing choice, and in the use of urban environment. Several themes are emerged during the interview, some about their life histories, resilience, needs, thoughts, while some others about the current life in the AIP model chosen, and their relationship with urban environments.

Starting the analysis with the first question posed to them, about their perceptions of aging and about resources and difficulties linked to this period of life, the two groups appear quite homogeneous. For both the themes of sociality, physical health and safety appear to be very important. Among the resources, sociability is most often cited, while among the difficulties, motor fragility or the loss of independence, in some cases forced, mostly emerge. Some of them raise the issue of the stereotype of old age, emphasizing their role and dignity as self-determined people, before being tied to the sole label of "old". Below we report a reflection proposed by one person of "own homes" group on this regard: *"but what also annoys me in quotation marks, these stereotypes, which surround this passage of life, that up to a certain point you can do some things, after that you cannot do others, however this also has a value socially, because you still feel , I'm labelled, you don't belong to that age group, okay, you're allowed to do things, after which I don't know you go beyond that, so you already seem out of the sphere, let's say, of a certain type."* In both two groups, we observe stories of resilience, where moments such as the death of children, widowhood, or COVID are indicated as very difficult times in life.

Analysing the question relating to housing choice, for the group of individuals who have chosen to live in their own home, emerge the issues of autonomy and attachment to the place in which they have lived for most of their lives. All the subjects interviewed decided to live in the home in which they are located autonomously and independently. This choice seems to reveal a good degree of empowerment in one's aging process. As highlighted by the literature (Rowles, 1983; Degnen, 2016), place attachment where one has lived throughout one's life seems to have a strong connection with healthy longevity, particularly due to the presence of a great relationships between people and places, which encourage movement and social networks, and, as a consequence, the maintenance of active aging. The group interviewed, in fact, has a good social life, thanks also to attending the association two days a week as a point of reference and input for reflecting and doing activities. Deficiencies in this sense are highlighted if the person finds himself in difficulty from a motor point of view and is therefore dependent on third parties for his travel, whether on foot or by car. Out of fourteen interviewees, most are independent in their travels. Almost half of them drive a car, while the others travel by other means such as public transport, bicycle, or on foot. Only one person needs to be accompanied even for very short journeys. The meetings that the association proposes also allow them to have a moment of discussion and cultural enrichment. In addition to this, those affiliated with this group regularly participate in exhibitions, concerts and guided tours of the city and trips out of the city, encouraging movement, sociability, and curiosity to learn. Furthermore, from the analysis of the interviews, a good degree of awareness and self-determination regarding one's aging emerges. For example, during an interview, an 80-year-old woman, with a good degree of physical and mental health, states: *"I want to be a "subject" until the end, and I decide on my own"*, also adding how it was fundamental throughout her life to make conscious choices capable of orienting her towards healthy aging. Some of them, in recent years, have become actresses, accepting the challenge of putting themselves on stage. Urban

space appears to them as the place where they can carry out their services, but also where they can carry out the activities they prefer.

The qualitative data obtained from the older adults living in the senior house reveal that the choice of this specific form of housing is guided by two main concepts: the sense of security and the need for sociability. Among the reasons why a certain housing choice is made, in fact, the theme of loneliness stands out a lot, either as an event that has already happened or something that is feared. Most of them urged their children to look for a possible solution away from loneliness. Differently from the group that lives in their own home, for the "senior house" sample, the attachment to the place is rather poor, since they mostly come from elsewhere. Only three persons was resident in Bergamo city, including one in the same neighbourhood. In fact, the latter, appears to continue to move easily within the city. Some of them miss their home and the place in which they have always lived, while some complain that they have not found what they thought, because loneliness is an element that continues to stay, despite believed they would defeat it thanks to such a place. Only three residents declare that they went to the senior house by their own choice, the others mostly demonstrate that they received an address from their closest family members. Among the latter, however, there are those who maintain a certain degree of self-determination, having in fact accepted and chosen to live there, while others are dissatisfied and have given up on the idea of returning to their home, even though they want it. In other words, they experience the choices made by others (generally their children) with extreme passivity. Another important theme emerged is the need of security. Many individuals have opted for this housing model to enhance their sense of security. They expressed concerns about potential falls or health issues when alone at home. Additionally, this living arrangement offers greater ease of movement compared to their previous residences.

The older adults who have chosen this housing model generally have a daily routine that unites the residents. There is great participation in the proposed activities, but in general, they do not organize other activities on their own initiative inside or outside the senior house. The structure organizes daily moments in which to meet, including outdoor activities, from shopping to the use of leisure services, such as the cinema, but only some of them participate in the latter. The use of urban space is, in fact, mostly relegated to the satisfaction of some needs. Only a few of them continue to maintain their independence, participating independently in the activities proposed by the Municipality and taking advantage of leisure services, such as the gym. The others feel hindered in the use of urban spaces, both for reasons contingent on the city (e.g. traffic), and because they do not know the spaces or do not feel safe in moving around, also due to a fragile walk.

Preliminary conclusion, future research, and study implications

From our preliminary findings, we can draw some initial conclusions.

The group of people who live in their own homes seems to be more aware and empowered about their aging trajectory. Furthermore, the latter seem to be in a more favourable situation capable of supporting healthy longevity. In fact, attachment to the place, as also supported by the literature (Rowles, 1983), allows them to keep social networks active within their community, favouring, as a consequence, good sociability, and a certain degree of mobility within of the city, both protective factors considered fundamental to supporting active aging (Holt-Lunstad et al., 2010; Hause et al., 1988).

In contrast, living in a senior house appears to limit activities within the city, possibly due to the availability of services within the facility and a lesser attachment to the place by the older adults' residents. This situation raises the question of how to increase the relationship of senior house residents with the broader community and urban environment. Furthermore, the high degree of sociability that could act as a protective factor for those who live in their own homes (Holt-Lunstad et al., 2010; Hause et al., 1988) seems not to be so present in the group of

individuals who live in the "senior house", who tend to feel lonelier. This reflection prompts us to consider how we can help these residents increase their social interactions. These insights and questions will guide the next steps of our research, as we seek to improve the quality of life for the over 65 population in Bergamo through comprehensive analysis.

Since the research is ongoing, to have a complete a multidimensional and multi-level photography of the analyse the interaction of people with urban spaces we will proceed to run a participant ethnographic observation (Geertz and Leonini, 1988) combined with spatial analysis (e.g. functional and morphological setting; presence of physical barriers or limitations) in order to understand the differences on using spaces in depending of the role/motivation to move in the city. We think that the use of ethnographic observation will be fundamental for the research because it allows a more accurate understanding and complete with the individual and spatial characteristics that determine the use of city space in the context of Aging in Place. It also allows us to collect qualitative field notes, which will help focus attention on topics deemed important to research participants. For the in-depth analysis of the latter will be carried out in specific focus groups (Morgan, Krueger, King, 1998). The collaboration with urban planners and geographers will also allow the analysis to be conducted in the 22 neighbourhoods of the city of Bergamo, focusing on: 1) Demography 2) The story 3) The spatial organisation, which will be explained in: - Prevalent uses and functions - Service system - Mobility - Environmental ecological system. The spatial analysis will result in the creation of specific maps of the 22 neighbourhoods analysed (Software QGIS®).

The research presented constitutes an initial exploratory phase, offering valuable insights for the construction of a more sophisticated analytical model, to involve the entire population over 65 in Bergamo, also through automated data collection.

A possible implication of this study could be the involving of policymakers, urban planners, and architects, in order to propose new empowerment possibilities of urban spaces for aging individuals. Moreover, this study will contribute to introduce urban and services innovation that can turn cities into age friendly and affordable places for people who decide to adopt an AIP model. In particular this research will contribute to innovate Bergamo as a city of longevity. This will be congruent with the World Health Organization proposal (WHO, 2017) and with the concepts of inclusion and equality suggested by the NextGeneration EU (next-generation-eu.europa.eu).

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