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# Age-friendly cities – residents’ assessment of a traditional neighborhood in Chennai

## Miasta przyjazne seniorom – oceny mieszkańców tradycyjnego sąsiedztwa w przestrzeni miasta Chennai

### Abstract:

The population of urban older adults is rising rapidly, and it is challenging for older adults to age actively in place, especially in the Indian context. Most older adults are expected to stay indoors, but their needs differ. They crave social interaction, and public spaces are spatial manifestations. Older adults can be independent when neighborhoods support them to age in place actively. Analysis of the spatial dimension of neighborhoods using mapping and assessing the neighborhood’s quality would help determine the factors that influence aging in the place for urban older adults. An analysis of the perceived neighborhood by older adults in the Indian context to actively age in place is different, and it is essential to understand how the community facilities are present and how they can enhance the well-being of older adults.

The article presents the results of a survey with 62 people (55 women and 7 men) over 55 years of age, aimed at assessing their neighborhood environment. The study was conducted with residents of Mylapore, a district in the central part of Chennai, India. It is one of the oldest residential districts in the city. Understanding the parameters that influence aging in place would help create cities that are friendly for older adults rather than forcing them to stay in care institutions that would take away their independence and cause them to lose their identity in their neighborhood. Although neighborhood environments may support active aging, the research presented in the article indicates that neighborhoods do not facilitate this process in Mylapore as they grow older.

### Keywords:

active aging, aging in place, neighborhood environment, older adults, well-being

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## Streszczenie:

Populacja osób starszych w miastach szybko rośnie, dlatego wyzwaniem staje się aktywne starzenie się w miejscu zamieszkania. Jest to szczególnie ważne w odniesieniu do miast w Indiach. Oczekuje się, że większość osób starszych nadal będzie mieszkać w swoich własnych domach, choć potrzeby tej grupy wydają się zróżnicowane. Osoby takie mogą chcieć wchodzić w interakcje społeczne, dlatego ważne jest tworzenie odpowiedniej przestrzeni publicznej. Jednym z czynników niezależności osób starszych może być sąsiedztwo w przestrzeni miasta wspierające ich w procesie aktywnego starzenia się. Analiza wymiarów przestrzennych wspomnianych sąsiedztw, dokonana za pomocą mapowania, jak i ocena ich jakości pomogłyby w określeniu czynników wpływających na starzenie się w miejscu zamieszkania (*aging in place*). Analiza tego, jak postrzegane jest sąsiedztwo przez osoby starsze, oraz analiza dostępności obiektów i urządzeń w przestrzeni miasta sprzyjających aktywnemu starzeniu się pozwoliłaby na znalezienie sposobów poprawy dobrostanu osób w późnej dorosłości.

W artykule zaprezentowane zostały wyniki badań ankietowych z 62 osobami (55 kobiet i 7 mężczyzn) powyżej 55. roku życia, mających na celu ocenę ich sąsiedztwa w przestrzeni miasta. Badanie przeprowadzone zostało z mieszkańcami Maylapore, dzielnicy w centralnej części miasta Chennai w Indiach. Jest to jedna z najstarszych dzielnic mieszkaniowych miasta. Zrozumienie parametrów wpływających na proces starzenia się w miejscu zamieszkania mogłoby przyczynić się do tworzenia miast przyjaznych osobom starszym, w przeciwieństwie do umieszczania ich w placówkach opiekuńczych, często odbierających niezależność i powodujących utratę związku z miejscem zamieszkania. Mimo że sąsiedztwo w przestrzeni miasta może sprzyjać procesom aktywnego starzenia się, to jednak wyniki przedstawionych w artykule badań wskazują, że sąsiedztwo w przestrzeni miasta nie ułatwia aktywnego starzenia się w Mylapore.

## Słowa kluczowe:

aktywne starzenie się, starzenie się w miejscu zamieszkania, sąsiedztwo w przestrzeni miasta, osoby starsze, dobrostan

## Introduction

According to the Older Adults in India 2021 report, older adults in India are nearly 138 million in 2021, with 67 million men and 71 million women. The number of older adults is projected to increase to 13.1% in 2031 and 13.6% in Tamil Nadu at 13.6% (NSO, 2021). The growing population of older adults must be able to actively age at the neighborhood level without losing their sense of belonging.

The aging policy currently mentions a popular concept called *aging in place*, which means “living in the community, with some level of independence, rather than in residential care” (Wiles, 2011). Older adults are empowered to maintain independence and autonomy while connecting to the social environment (Callahan, 1993; Keeling, 1999).

Aging in place is linked to having familiarity and security, wherein homes are treated as a refuge and community as a resource. The well-being of older adults is deeply influenced by their place of belonging, that is, the neighborhood provides for them emotionally, how they perceive the community, and how they utilize such facilities (Bowling, 2007). Social spaces for older adults result from their choice of interaction and engaging social relations. Older adults tend to pick out spaces and create them into social spaces of their liking, which they frequently use (Van Melik, 2017).

Rowles (1993) explored how older adults feel a sense of belonging to a particular space, and that gives a sense of meaning and security. To bring aging in place, apart from housing options, other factors need to be considered, including access to public transport, amenities that facilitate social interaction, physical activity, volunteer activity, and engaging in sociocultural activities (Wahl, 2003). It is important to note that the relationship between physical activity and access is confounded by neighborhood-level characteristics, such as socio-economic contexts and perceptions of neighborhood, park and recreational amenities, and street configurations (Levasseur, 2015).

WHO developed the *Age-Friendly Cities* framework in the *Global Age-Friendly Cities Guide* (2007). They have proposed eight interconnected domains that address the barriers to the well-being of older adults and support their participation in their place of belonging to participate actively. The interconnected domains of urban life include community and health care, transportation, housing, social participation, outdoor spaces and buildings, respect and social inclusion, civic participation, employment, communication, and information.

In the global context, as in Japan's rapidly aging society, the focus is not just on older adults; mixed development is provided in age-integrated facilities for the young. Appropriate policy measures are taken to provide for the older adults and the children. In Singapore, policies are adopted for aging in place, empowering older adults to access public transport and public spaces independently and confidently by providing an appropriate pedestrian environment to remain mobile and active.

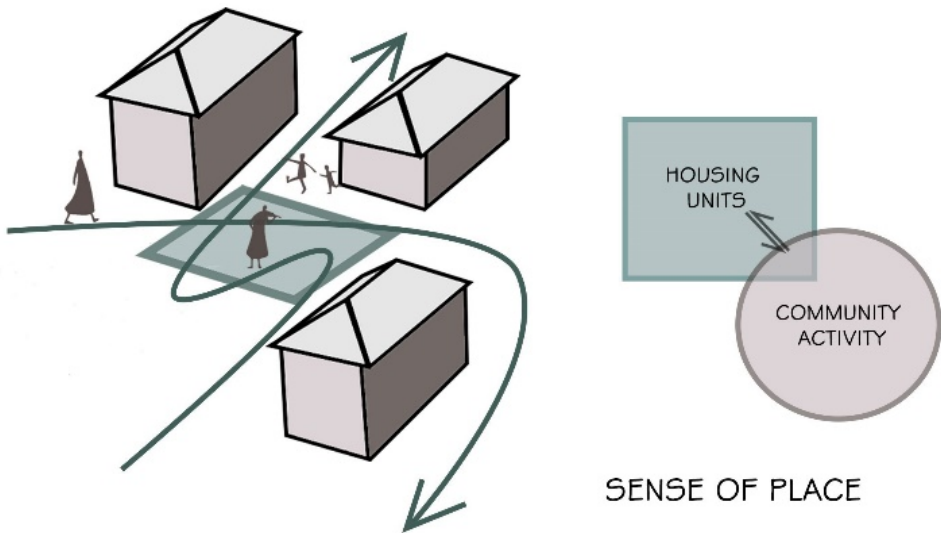
## **1.1 Neighborhood environments that facilitate active aging**

### **1.1.1 Accessibility and location**

According to the Council for Scientific and Industrial Research (1967), the deterioration of older adults' temporal and physical capacity leads to decreased social participation, which should be addressed sensitively. Social participation has attracted interest as a potential factor influencing general health and well-being (Sommerlad, 2023). The community interactions must occur as

naturally as possible and must not be burdensome to them. Community facilities include public transportation facilities like suburban railway stations, bus stops, health care facilities, and clinics, places of worship like churches, temples, and mosques, as well as entertainment facilities like shopping malls that have a relatively close or convenient link to the location the older adults so that travel becomes convenient and less burdensome when moving to and from such said locations.

**Figure 1.** Accessibility to facilitate movement



Source: author

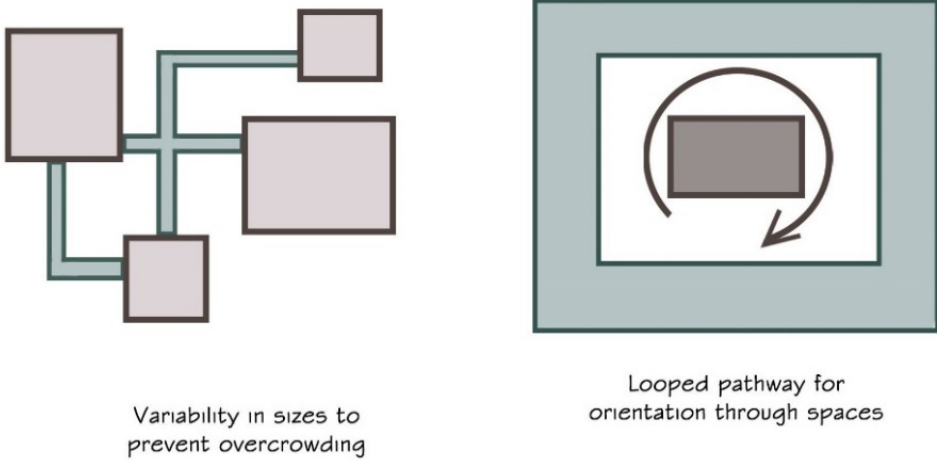
### 1.1.2 Walkability and street connectivity

Walkability and street connectivity are extremely important for older adults to engage in social activities in neighborhoods and physical activities, especially in parks and recreational facilities. Universally designed buildings and spaces enable access for everyone, including children, older people, and people with functional limitations (Carr, 2013). The buildings and public spaces are designed and accessed without having to experience the same space multiple times to have a sense of familiarity and orient themselves. However, that should occur naturally and without confusion. The spaces can be used efficiently, and less physical effort is required by creating a barrier-free environment. The physical accessibility to public transportation facilities is also vital as people with disability and older people access such facilities is bothersome, and it improves the physical well-being of older adults when the infrastructures are present so that the older adults can access such spaces independently.

### 1.1.3 Transparency and wayfinding

Kevin Lynch (1960, p. 125) described that older adults feel a sense of anxiety and fear when they lose the sense of orientation, location, or relationship with their respective surroundings. Christopher Alexander discusses the issues of circulation and orientation, which sometimes lead to confusion, unwanted stress, and anxiety, wasting one’s precious time.

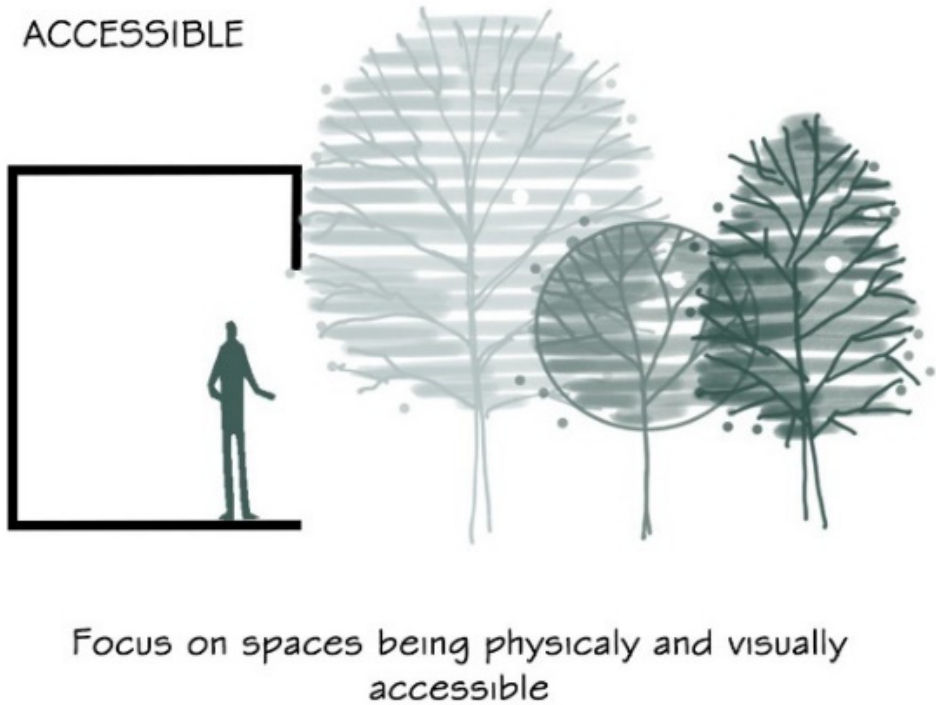
**Figure 2.** Transparency and wayfinding



Source: author

Wayfinding should require minimal effort. Older adults must be able to map out a route to orient themselves. He suggests that buildings should have a sequence and hierarchy of realms or spaces by creating a sense of order and having a ‘gateway’ leading one to another. Each realm should be named or presented with some element that simplifies orientating oneself from one to the next (Alexander, 2018).

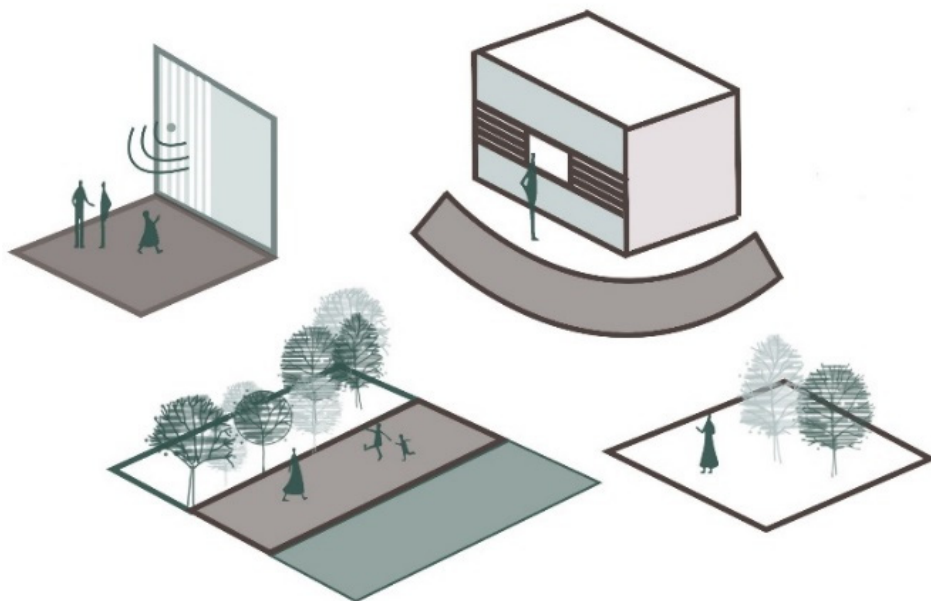
**Figure 3.** Wayfinding through sensory reach



Source: author

### **1.1.4 Contact with nature**

A study was conducted with 29 older residents in Canada. The intervention was conducted to explore if there was any relationship between the older adult's well-being and the incorporation and presence of natural features. The results were interesting because the participants expressed decreased sadness and depression when caring for plants, such as pruning and watering. This is attributed to a feeling of having ownership, a sense of restoration, and attraction to their living environment (Kiyota, 2009).

**Figure 4.** Contact with nature

Source: author

When present in an impactful way, the natural environment can be used to achieve various effects in older adults. Parks and recreational facilities help in physical well-being by providing physical exercise and walking opportunities. The natural features of residents and tourists create new opportunities for interaction and better health practices (Bedimo-Rung, 2005). The presence of parks and recreational facilities in close vicinity helps the older adults' well-being due to contact with nature.

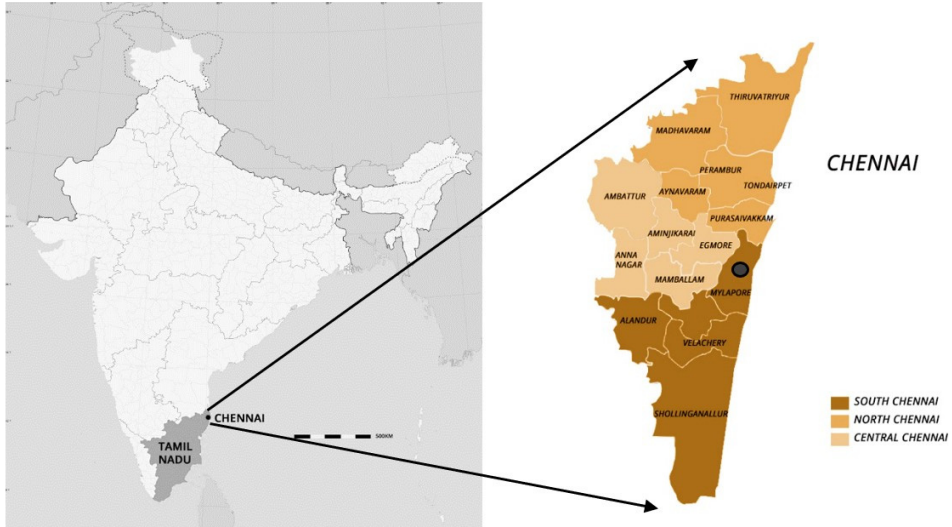
### 1.1.5 Engagement in socio-cultural activity

Older adults' social inclusion and participation in socio-cultural activities are vital for their well-being. There should be an emphasis on community-based activities and interpersonal interaction (Aroogh, 2020). This generally includes casual participation in cultural or other social and religious activities, which may be formal or informal, with family members, friends, and relatives. The focus should be on face-to-face encounters. There are opportunities for online interaction, and they grow in a world that is presently technologically oriented. Depending upon the context, the participation, the time they access these socio-cultural spaces, and the frequency with which they visit these spaces for these socio-cultural activities are distinct.

## 2. Methods

### 2.1 Study area

**Figure 5.** Location of study area



Source: author

The study area selected for the neighborhood environment that facilitates aging in place for older adults in Chennai City is Mylapore, a historic traditional neighborhood. As per the National Statistical Office (NSO) study, Tamil Nadu has the second-highest adult population at 13.6%. According to GeolQ, the temple precinct in the neighborhood of Mylapore, with an area of a 3.9 square kilometer radius for study purposes, was found to have a population of 111 409. Adults above 55 who have settled in the neighborhood account for 19.4 % of the total population.

Mylapore is an organically formed settlement in Chennai, and its history dates back to the 1st century, as per archaeological evidence. Mylapore is known for its residential colonies with distinct and different architectural styles, the Kapaleeshwarar temple and other religious facilities, community spaces like kutcheri halls and sabhas, and commercial facilities like markets and shopping malls.



## 2.2 Study methodology

The spatial analysis is conducted to understand the community facilities in a traditional neighborhood by mapping the spatial dimension. Apart from the community facilities and street connectivity to public transport, a mix of land use and density is analyzed. A questionnaire survey was conducted on older adults who were aged over 55. People were asked to rate each design and community factor on a five-point Likert scale (1=*very poor*, 2=*poor*, 3=*satisfactory*, 4=*good*, 5=*very good*). Assessment of the neighborhood environment for the older adults to actively age in place in Mylapore is done by considering the sampling, which is classified as follows: age, economic condition, and gender. A questionnaire survey was conducted for 62 older adults, 55 women, and seven men, in a structured interview as part of a field survey. The on-field survey was conducted in Kapaleeshwarar Temple Precinct.

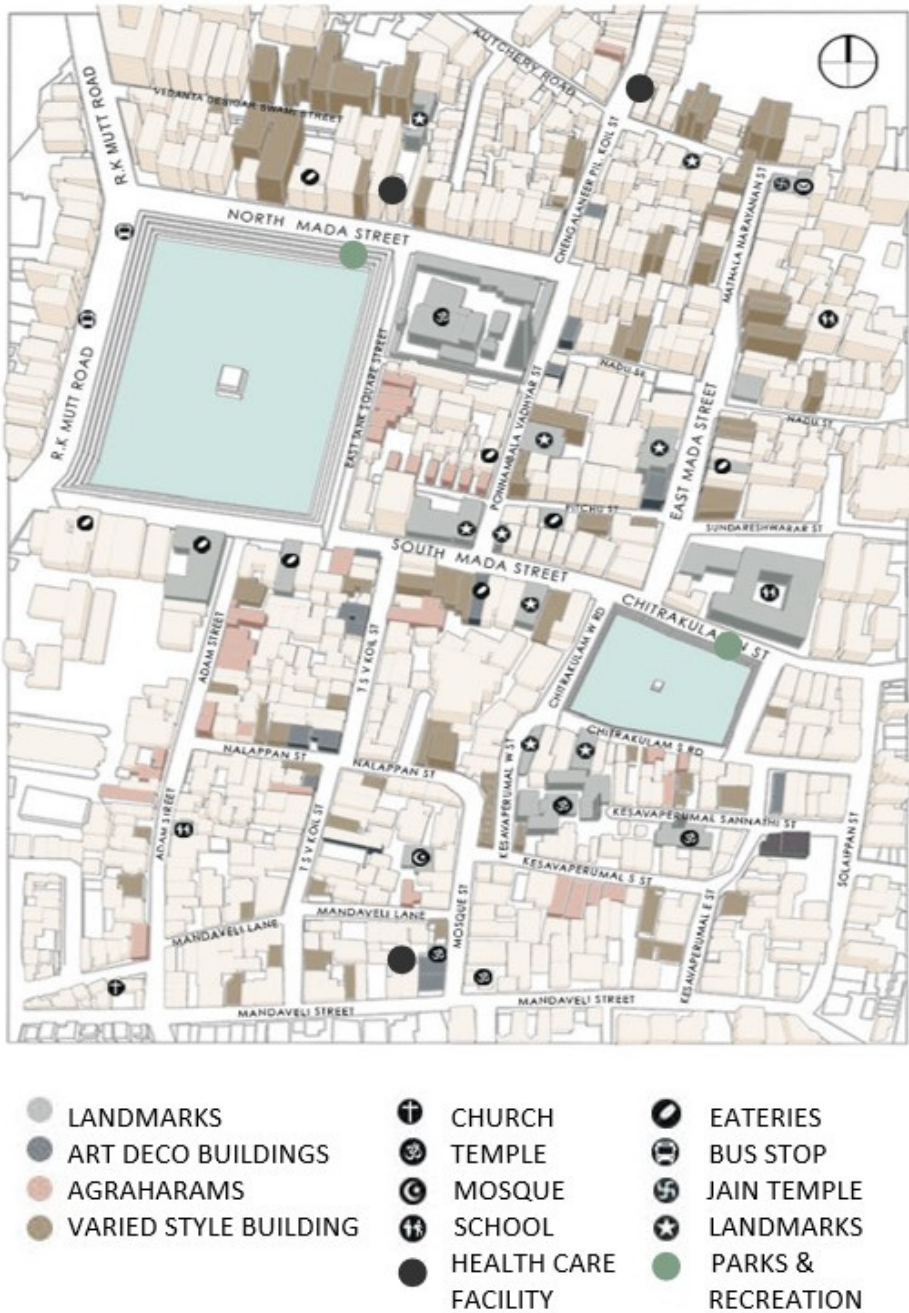
## 3. Findings

### 3.1 Spatial analysis of neighbourhood

#### 3.1.1 Density and built use

The building use and the density of residences indicate that the neighborhood is predominantly walkable. The religious structure has become an important recreational facility for older adults. The community facilities indicate that the neighborhood can facilitate aging in place because of the presence of the built environment—appropriate healthcare facilities within walking distance, which becomes easier to access. Public transportation is accessible, with bus stops and sub-urban railway stations closer to the residences and the central religious hub.

**Figure 6.** Built use Of Mylapore

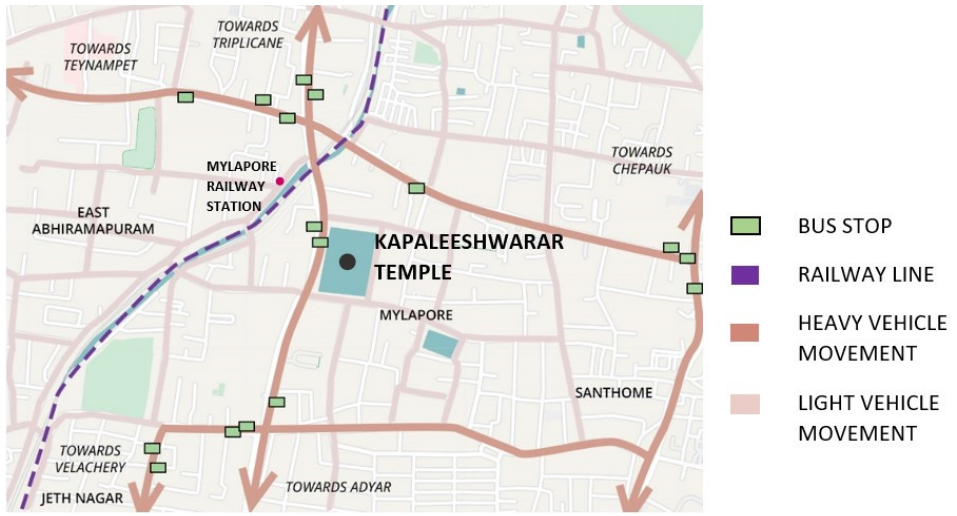


Source: Adapted from Houses of Mylapore. thinkMATTER. <https://thinkmatter.in/2017/06/02/housesofmylapore/>

### 3.1.2 Street connectivity

Mylapore North Mada Street is the major commercial street comprising eateries, vendor shops, health care facilities, residences, and the temple tank. The East Mada and the South Mada Streets are also composed of commercial activity on the lower levels and residences on the upper levels. R.K. Mutt Road has several houses, commercial establishments, and a few premises with heritage value that connect Raja Annamalai Puram and Mylapore.

Figure 7. Hierarchy of road



Source: author

Streets are well connected and are present in such a way that access to public transportation becomes easier. Since most streets are narrower, there is constant conflict between two-wheelers and pedestrians. However, in highly commercial and religious streets, they become predominantly pedestrians with appropriate parking facilities provided for vehicles.

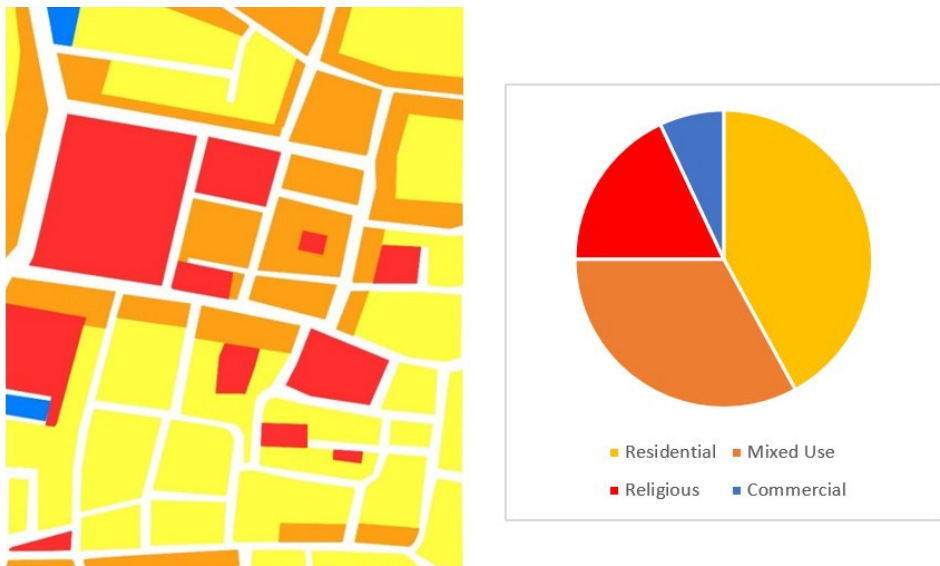
**Table 1.** Street connectivity of Mylapore

Street Name	Street Type	Street Width
R.K Mutt Road	Urban Arterial Street	Varies from 18m to 24m
North Mada Street	Urban Sub Arterial Street	Varies from 9m to 18m
East Mada Street	Urban Sub Arterial Street	Varies from 12m to 15m
South Mada Street	Urban Sub Arterial Street	Varies from 12m to 15m
Kutcheri Road	Urban Local Street	Varies from 8m to 12m
Madaveli Road	Urban Local Street	Varies from 6m to 10m

Source: author

### 3.1.3 Mix of land use

The land use of the neighborhood of Mylapore is predominantly mixed, with residential and commercial activity along with the presence of the Kapaleeshwarar Temple. This indicates that the neighborhood is vibrant and alive as it is not monofunctional, and the Mix of uses contributes to the older adults feeling a sense of place and community. The neighborhood does not become desolate or isolated for specific intervals and predominantly remains active.

**Figure 8.** Land use of Mylapore

Source: author

### 3.2 Assessing the neighborhood environment

National Policy on Older Persons defines older adults or seniors as above 60. The World Health Organization (WHO, 2015) defines elderly individuals as those aged 60 years and over, marking the beginning of the aging process. WHO categorizes older adults based on chronological age as older adults aged 65-74, old adults 75-84, and very old adults above 85 (United Nations, 2015). Aging in place studies have typically included older adults above the age of 50, focusing on people above the age of 80 (Ratnayake, 2022). The attributes considered to assess the neighborhood for which the older adults are asked to rate are classified as follows:

- neighborhood walkability,
- accessibility of public spaces,
- wayfinding to public spaces,
- access to public transportation,
- engagement in socio-cultural activity,
- availability of social and health services,
- safety and security.

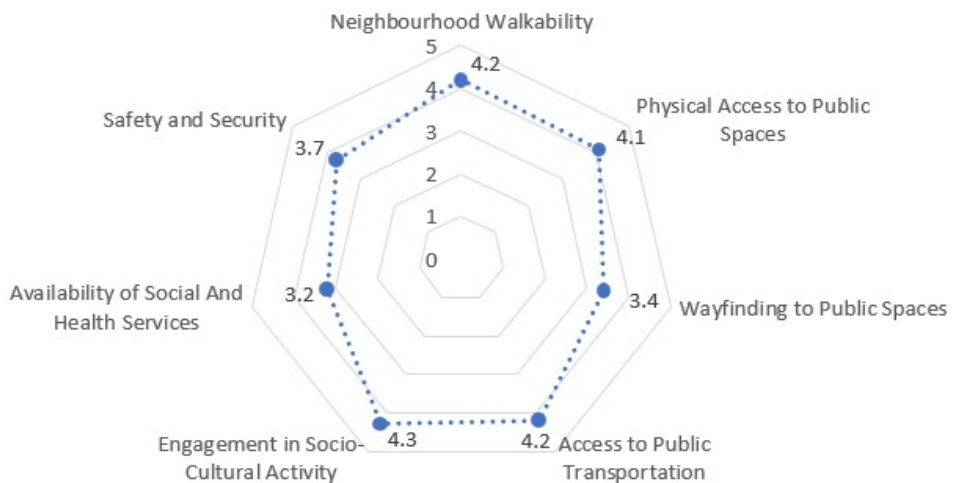
The table below indicates the older adults categorized into the age group of 55-64. The older adults in Mylapore are categorized by their gender, occupation, and preferred time period to step out of their homes and into public spaces.

**Table 2.** Neighborhood environment rating for the age group of 55-64 (n=33)

Nº	PARAMETERS CONSIDERED	AVERAGE NEIGHBOURHOOD ENVIRONMENT RATING (on Likert scale)
1.	Neighbourhood walkability	4.2
2.	Physical access to public spaces (barrier free environment)	4.1
3.	Wayfinding to public spaces	3.4
4.	Access to public transportation	4.2
5.	Engagement in socio-cultural activity	4.3
6.	Availability of social and health services	3.2
7.	Safety and security	3.7

Source: Author

**Figure 9.** Neighbourhood environment rating based on age group 55-64



Source: author

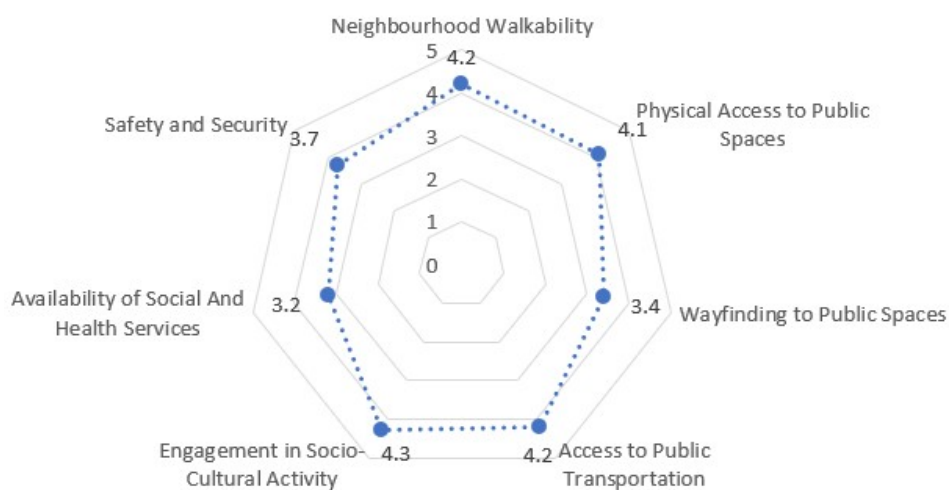
The table below indicates that older adults in Mylapore are categorized into the age group of 65-74 by gender, occupation, and preferred time period to step out of their homes and into public spaces.

**Table 3.** Neighbourhood environment rating for the age group of 65-74 (n=16)

Nº	PARAMETERS CONSIDERED	AVERAGE NEIGHBOURHOOD ENVIRONMENT RATING (on Likert scale)
1.	Neighbourhood walkability	3.3
2.	Physical access to public spaces (barrier-free environment)	3.1
3.	Wayfinding to public spaces	2.3
4.	Access to public transportation	3.6
5.	Engagement in socio-cultural activity	3.9
6.	Availability of social and health services	3.3
7.	Safety and security	3.2

Source: Author

**Figure 10.** Neighbourhood environment rating based on age group 65-74



Source: author

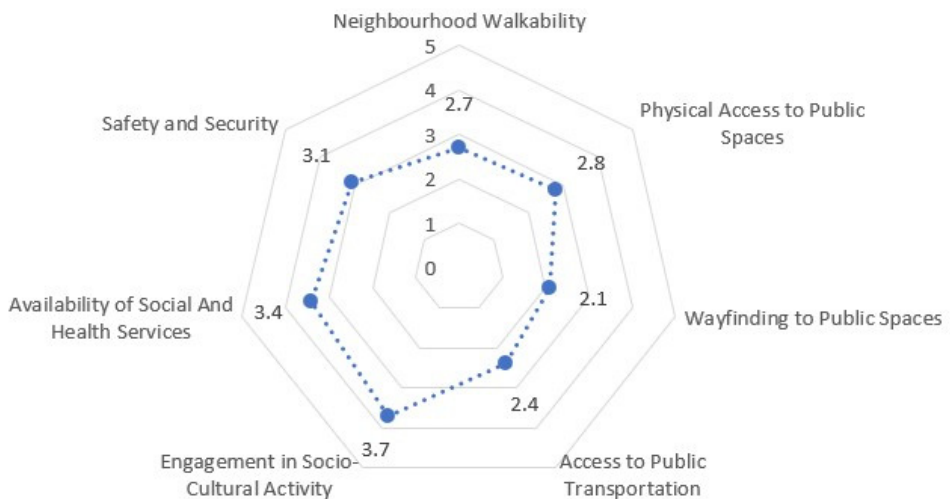
The table below indicates that older adults in Mylapore are categorized into the age group of 65-74 by gender, occupation, and preferred time period to step out of their homes and into public spaces.

**Table 4.** Neighbourhood environment rating for the age group of 75-84 (n=9)

Nº	PARAMETERS CONSIDERED	AVERAGE NEIGHBOURHOOD ENVIRONMENT RATING (on Likert scale)
1.	Neighbourhood walkability	2.7
2.	Physical access to public spaces (barrier-free environment)	2.8
3.	Wayfinding to public spaces	2.1
4.	Access to public transportation	2.4
5.	Engagement in socio-cultural activity	3.7
6.	Availability of social and health services	3.4
7.	Safety and security	3.1

Source: Author

**Figure 11.** Neighbourhood environment rating based on age group 75-84



Source: author



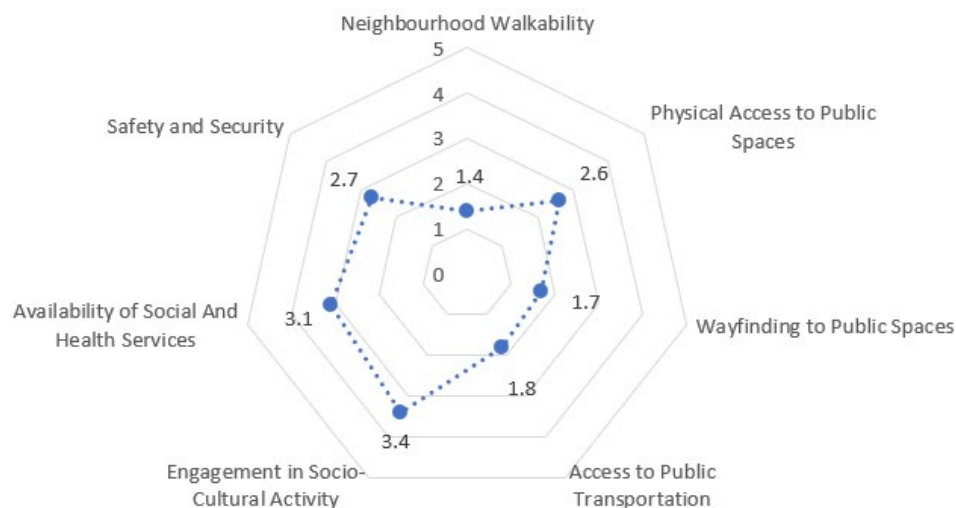
The table indicates that older adults are categorized into the age group of 85+. Older adults in Mylapore are categorized by their gender, occupation, and preferred time period to step out of their homes to public spaces.

**Table 5.** Neighbourhood environment rating for the age group of 85+ (n=4)

Nº	PARAMETERS CONSIDERED	AVERAGE NEIGHBOURHOOD ENVIRONMENT RATING (on Likert scale)
1.	Neighbourhood walkability	1.4
2.	Physical access to public spaces (barrier free environment)	2.6
3.	Wayfinding to public spaces	1.7
4.	Access to public transportation	1.8
5.	Engagement in socio-cultural activity	3.4
6.	Availability of social and health services	3.1
7.	Safety and security	2.7

Source: Author

**Figure 12:** Neighbourhood environment rating based on age group 85+

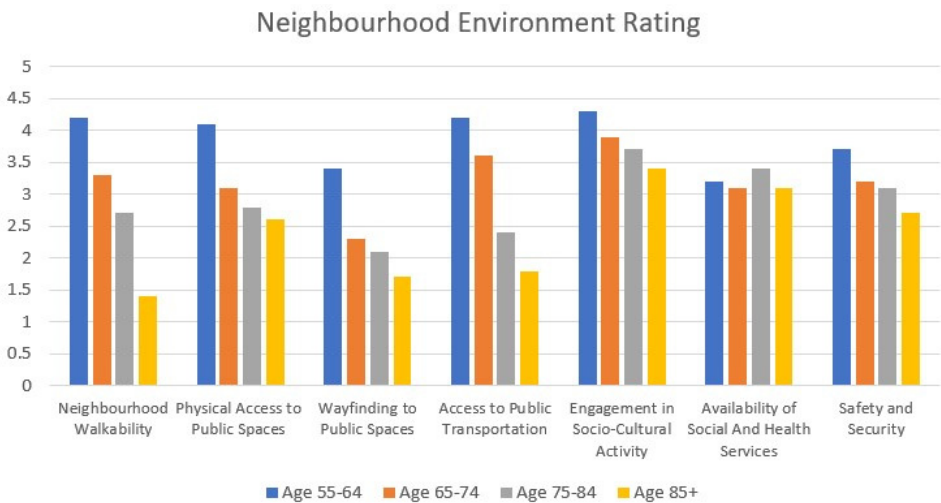


Source: author

## 4. Result

The comprehensive graph Figure 13 shows the neighborhood environment rating based on the age group. The above graph represents how parameters like neighborhood walkability, access to public transportation, and wayfinding in public spaces have ratings that are definitely decreasing across age groups. Other parameters like engagement in socio-cultural activity and health and social services availability remain relatively constant. According to the graph, the rating decreases as the age of each parameter decreases.

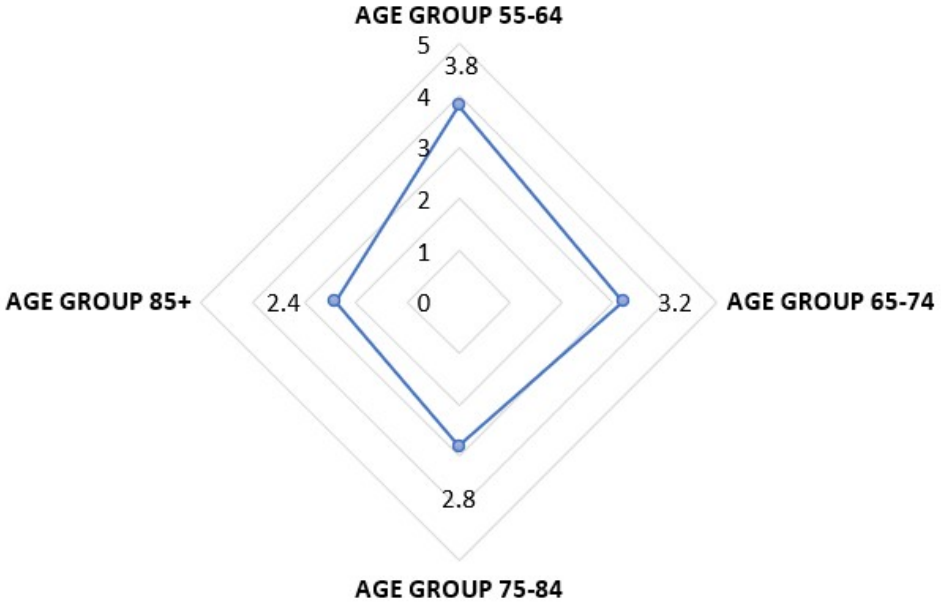
**Figure 13.** Neighbourhood environment rating as perceived by the older adults in Mylapore based on each parameter categorized by age group.



Source: author

The average of each parameter is taken and compared based on the age group. Neighborhood environment assessment shows that as the age group increases, the satisfaction of the older adults to age in place in Mylapore actively decreases according to the relative parameter, as shown in Fig-14. Since the deterioration of health follows aging, the physical environment must try to cater to the needs of older adults as well so they can actively age in place. While there is satisfaction with the social environment, the physical environment must also be necessary.

**Figure 14.** Average neighborhood environment rating as perceived by the older adults in Mylapore for each age group.



Source: author

### 5.1 Discussion

The older adults have a sense of belonging to the neighborhood as they have been there their entire life. Since the neighborhood has a rich cultural context, the presence of Kapaleeshwarar temple has created a strong sense of community bond among the people who come together to worship: community facilities and solid social inclusiveness in the neighborhood help in aging in place.

Physical infrastructures should be present in a manner that could facilitate the needs of older adults. People feel that there are signages that are small in font size and not readable for them, making it difficult for them to orient themselves. They cannot access specific environments as health starts to deteriorate, so better barrier-free environments must be provided. The footpaths are not continuous, and there is a conflict between vehicles and pedestrians. The people go to worship predominantly from 4 PM -8 PM as it would not be that hot. Since there is not enough shade in the morning, they cannot access these public spaces, so the presence of trees as natural shades must be considered, according to the older adults in Mylapore. There is a preference for other community facilities where they can interact with the younger generation and other older adults to share their thoughts. The preference to do volunteer activity to keep themselves busy

was also preferred based on their capabilities. There are aspirations to learn new things. There is a preference for work-from-home opportunities despite the caregivers feeling that the older adults have worked enough.

There are specific limitations and gaps wherein the location of their residences and the proximity to the public space influence the neighborhood environment rating. The family structure of people would also influence certain aspects of their decision to age in place.

## 5.2 Conclusion

The traditional neighborhoods are historically present with a solid cultural sense, so the older adults have a viable social environment. However, as aging progresses, access to the built environment becomes difficult. The physical infrastructure must facilitate the needs of its older users as well. From the findings, it is to be noted that the social facilities in the traditional neighborhood are adequately equipped to facilitate aging in place, but the physical infrastructure needs improvement. Understanding the parameters for active aging in place at the neighborhood level will help design age-friendly cities. With strong cultural bonds and traditional values in Indian cities, appropriate policies and planning can be implemented to facilitate aging and ensure the well-being of older adults. Since other countries have taken measures and context-specific initiatives to facilitate aging in place, it is crucial for cities in India, with its growing population specific to older adults, to take relevant measures. In the case of Mylapore, the physical infrastructure can be improved, which would further support the social infrastructure present in the neighborhood wherein aging in place can occur. The street furniture is to be aligned, and the footpaths need to be continuous so that they can move with ease. Legible signs can be incorporated in appropriate places so that people can orient themselves. A barrier-free environment should be created to make access to public spaces easy so people can move independently.

## References

- Adlakha, D. K. (2020). Neighbourhood supports for active ageing in urban India. *Psychology & Developing Societies*, 32(2), 254–277.
- Alexander, C. (2018). *A pattern language. Towns, buildings, construction*. Oxford University Press.
- Alidoust, S. B. (2017). The spatial dimensions of neighbourhood. How older people define it? *Journal of Urban Design*, 22(5), 547-567.
- Aroogh, M. D. (2020). Social participation of older adults. A concept analysis. *PubMed*, 8(1), 55–72.

- Bedimo-Rung, A. L. (2005). The significance of parks to physical activity and public health. *American Journal of Preventive Medicine*, 28(2), 159–168.
- Bowling, A. S.-T. (2007). Quality of life among older people with poor functioning. The influence of perceived control over life. *Age And Ageing*, 36(3), 310–315.
- Buffel, T. &. (2016). Can global cities be 'age-friendly cities'? Urban development and ageing populations. *Cities*, 55, 94–100.
- Callahan, J. J. (1993). *Aging in place*. Routledge.
- Council for Scientific and Industrial Research (1967). A guide to special housing for aged people, *Research Report 245*, National Building Research.
- Carr, K. W. (2013). Universal design. A step toward successful aging. *Journal of Aging Research*, 1–8.
- Chao, T. Y. (2017). *Planning for greying cities. Age-friendly city planning and design research and practice*. Routledge.
- Forsyth, A. M. (2019). Improving housing and neighborhoods for the vulnerable. Older people, small households, urban design, and planning. *Urban Design International*, 24(3), 171–186.
- Frye, A. (2014). Growing old in the city. *Journal of Urban Design*, 19(3), 269–274.
- Keeling. (1999). Ageing in (a New Zealand) place. Ethnography, policy and practice. *Social Policy Journal of New Zealand*, 95–114.
- Kiyota, E. (2009). *People-nature interactions. The therapeutic role of nature in elderly residents' everyday experience in a long-term care facility*. University of Wisconsin Milwaukee.
- Lee, Y. J. (2019). Socially integrative planning characteristics of elderly housing in "Share Kanazawa" community village of Japan. *KIEAE Journal*, 19(2), 5–15.
- Levasseur, M. G. (2015). Importance of proximity to reSources, social support, transportation and neighborhood security for mobility and social participation in older adults. *BMC Public Health*, 15(1).
- Lewis, C. &. (2020, September). Aging in place and the places of aging. A longitudinal study. *Journal of Aging Studies*, 54, 100870.
- Lynch, K. (1960). *The image of the city*, MIT Press.
- Marquet, O. &.-G. (2015). Neighbourhood vitality and physical activity among the elderly. The role of walkable environments on active ageing in Barcelona, Spain. *Social Science & Medicine*, 135, 24–30.
- Martinez, L. E. (2020). More than just a room. A scoping review of the impact of homesharing for older adults. *Innovation in Ageing*, 4(2).
- Matter. (2020, December 14). Houses of Mylapore. thinkMATTER. <https://thinkmatter.in/2017/06/02/housesofmylapore/>
- NSO. (2021). *Elderly in India*. New Delhi. National Statistical Office, Ministry of Statistics & Programme Implementation, Government of India.
- Ratnayake, M. L. (2022). Aging in place. Are we prepared? *Public Health*, 8(3), 28–31.

- Sommerlad, A. K. (2023). Social participation and risk of developing dementia. *Nat Aging* 3, 532–545.
- UN. (2015). *World Population Ageing*. Department of Economic and Social Affairs, Population Division.
- Van Dijk, H. M. (2014). The ideal neighbourhood for ageing in place as perceived by frail and non-frail community-dwelling older people. *Ageing & Society*, 35(8), 1771–1795.
- Van Melik, R. &. (2017). Older people's self-selected spaces of encounter in urban aging environments in the Netherlands. *City & Community*, 16(3), 284–303.
- Wahl, H. W., & Weisman, G. D. (2003). Environmental gerontology at the beginning of the new millennium. Reflections on its historical, empirical, and theoretical development. *The Gerontologist*, 43(5), 616–627.
- Wang, S. Y. (2022). Older people's usage pattern, satisfaction with community facility and well-being in urban old districts. *International Journal of Environmental Research and Public Health*, 19(16), 10297.
- WHO. (2015). *Measuring the Age-friendly cities. A guide to using core indicators*. WHO.
- Wiles, J. A. (2009). Older people and their social spaces. A study of well-being and attachment to place in Aotearoa New Zealand. *Social Science & Medicine*, 68(4), 664–671.
- Wiles, J. L. (2011). The meaning of "Aging in place" to older people. *Gerontologist*, 52(3), 357–366.
- Woolrych, R. D. (2020). Ageing in urban neighbourhoods. Exploring place insideness amongst older adults in India, Brazil and the United Kingdom. *Psychology & Developing Societies*, 32(2), 201–223.
- Yi, H. N. (2022). Effects of neighbourhood features on healthy aging in place. The composition and context of urban parks and traditional local coffeeshops in Singapore. *BMC Geriatrics*, 22(1).