

Silver economy in India, a way to healthy cities for senior citizens

Nidhi DANDONA, Professor, India

Abstract

The paper aims to identify ways in which the built environment can be intervened in Indian cities to meet needs of the senior citizens, who can lead comfortable and productive lives without having to relocate to newer locations when they are old. These changes will improve the quality of life in many urban areas and make cities more accessible for senior citizens. Firstly review the international literature on age-friendly then study the neighborhood planning in India. Then survey the senior citizens for their needs for an age friendly city based on the age-friendly parameters laid by WHO. The idea is to look at the issues of age friendly cities in the Indian context for senior citizens and to incorporate it as policies in the Master Plan level and even at Local Area level. Gurgaon city in India has been chosen as the city for pilot study. Finally analyse the social and open spaces in the given city also look at the buildings in order to study all the parameters. The outcome of the paper will be make a series of practical recommendations at policy level and to address the issue of age friendly cities in India in a holistic way.

Keywords

Age friendly cities, senior citizens, older/senior population , healthy cities, Ageing, local area plan

1. INTRODUCTION

By 2050, the global population above 60 years of age is expected to reach 2.1 billion. The ageing population will have major implications for cities around the world. India must also prepare for these changes for its senior citizens and start developing “age-friendly cities”. Many non-governmental organizations and research institutions globally have developed frameworks describing how communities can be more ‘age-friendly’ from the World Health Organization to the United Nations’ Sustainable Development Goals and adapt them to focus on the built environment’s role in creating age-friendly communities for the healthy life of its citizens (Cities Alive-Designing for Ageing Communities, Arup 2019).

As stated in the World Health Organization (WHO) Brasilia Declaration on Ageing in 1997, ‘healthy older people are a resource for their families, their communities and the economy’ and therefore, cities must provide the structures and services to support their citizens’ well-being and productivity. Research on ageing has traditionally been concerned with health, but recently the concept of functional capacity has also been attracting growing attention. The functional ability of elderly is

crucial to how well they cope with activities of daily living, which in turn affects their quality of life. (Growing Older Report - WHO 1998, Geneva)

The motivation on working on this topic is that the issue of age-friendly cities or cities for senior citizens have not been addressed by Indian policies either at the Master Plan or at Local Area Plan level. Such inclusive changes in cities will improve the quality of life & well-being of seniors in many urban areas and promote healthy ageing and will aid in making cities more inclusive.

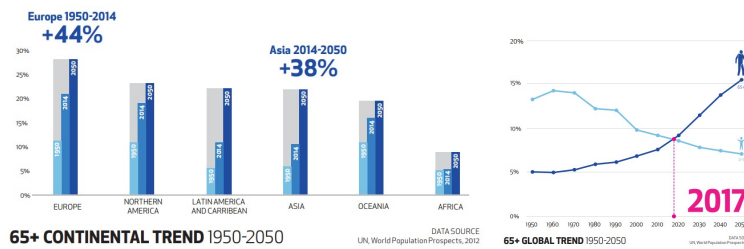


Figure 1. UN World population prospects 2012. Source: WHO Guide 2005.

2. Methodology for the Paper:

The approach of the paper is to review the international literature on age-friendly cities and communities and examining the conceptual underpinning that supported the development of the age-friendly movement. To strengthen the research, literature on neighborhood design and public spaces for senior population and current trends in planning are also examined closely.

Based on the research, the target is to evaluate and analyze a current Indian cities on age-friendly parameters followed by a survey on the existing parameters and established by age-friendly cities guide. A survey was also undertaken for Gurgaon, an Indian city as a pilot Indian city for better understanding of on ground policies and their applications. After the survey, the data is analyzed to form conclusions. Finally, the papers makes a series of practical recommendations to address the issue of age-friendly cities in India based on the parameters studied on open spaces and buildings in one city.

The approach followed for the paper is multidisciplinary that is in addition to surveys, physical spaces are also studied and assessed for their implication on physical and sociological effects on senior citizens .The hypothesis is that the age-friendly parameters can established a new way of life for senior citizens , as part of the design guidelines for Indian cities. The challenges faced as a part of the research were the lack of published information available on urban design for Indian cities. Another challenge was to get the forms filled digitally by the senior citizens in Gurgaon.

The paper aims to identify ways in which the built environment can help Indian cities continue to meet needs of the senior citizens so that they can lead comfortable and productive lives, without having to relocate to newer locations and continue to use the same places for lives, works and play. It will also explore central issues faced by senior citizens and will provide recommendations, which design professionals and decision-makers can pursue to make the built environment in their communities better for older residents

3. Overview of Literature Review :

3.1 An Age Friendly City as guided by WHO

To engage cities to become more “age-friendly,” the World Health Organization (WHO) prepared the Global Age-Friendly Cities Guide and a Companion “Checklist of Essential Features of Age-Friendly Cities” (WHO 2015). In collaboration with partners in 35 cities from developed and developing countries, WHO determined the features of age-friendly cities in eight domains of urban life: outdoor spaces and buildings; transportation; housing; social participation; respect and social inclusion; civic participation and employment; communication and information; and community support and health services. The Guide and Companion’s “Checklist of Essential Features of Age-Friendly Cities” released by WHO serve as reference for other communities to assess their age readiness and plan change. (Louise Plouffe and Alexandre Kalahe 2010).

An age-friendly city encourages active ageing by optimizing opportunities for health, participation and security in order to enhance quality of life as people age. (WHO 2017). Age-friendly cities and communities foster healthy and active ageing and, thus, enable well-being throughout life. These cities help people to remain independent for as long as possible, and provide care and protection when they its needed, respecting senior citizens autonomy and dignity. The WHO Global Network of age-friendly Cities and Communities were established in 2010 to support municipalities that wished to transform these ambitions into reality, involving older people in the process and maximizing their opportunities at the local level. The network builds on previous work by WHO, and by 2015 included more than 250 cities and communities in 28 countries. The network works on the following 8 parameters of the flower:



Figure 2. Flower of eight parameters laid by WHO for Age-friendly cites. Source :WHO Age-friendly cites Guide 2005.

Active ageing is the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age. (Active ageing: a policy framework: WHO 2002)

3.2 Silver economy

The silver economy includes all those economic activities, products and services designed to meet the needs of people over 50. This concept, derived from the so-called silver market that emerged in Japan, the country with the highest percentage of

people over 65 during the 1970s to refer to the senior market, brings together sectors as diverse as health, banking, automotive, energy, housing, telecommunications, leisure and tourism, among others. (Silver Economy EU Report -2018)

Senior citizens have high purchasing power and are mostly free of all other responsibilities. They have more free time and like to make full use of it with recreational activities. The rise of the silver economy should encourage governments across the globe to invest in the improvement of health care and the venturing into proper infrastructure for independence living and substance of the elderly.

India's population of 1.31 billion, the second largest globally, comprises 17% of the world's total (United Nations 2015). As India's population grows, its expanding share of older adults is particularly notable. Currently, the growth rate of the number of older individuals (age 60 and older) is three times higher than that of the population as a whole (Giridhar, Sathyanarayana 2014). The basic parameters to address at the policy level for Indian cities as directed by WHO are autonomy and independence, health and well-being of the senior citizens, social connectedness and social infrastructure plus security and resilience. These needs influence all aspects of a person's life as they age.

A report released by the United Nations Population Fund and Help Age India suggests that India had 90 million senior citizens in 2011, with the number expected to grow to 173 million by 2026. Of the 90 million seniors, 30 million are living alone, and 90 per cent work for livelihood. According to a report titled "Situation Analysis of the Elderly in India" by Ministry of Statistics & Programme Implementation, (Age Friendly Cities-Delhi, Help age India 2016)

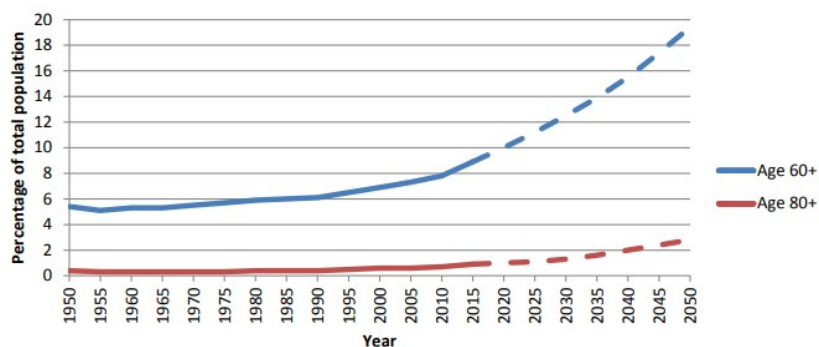


Figure 3. Number of Indians is growing rapidly as a proportion of the country's populations. Source : United Nations 2015.

Silver economy in India is a market yet to be explored. But a few governments have started exploring the opportunities like the government of Kerala. The silver economy still has many challenges to overcome today in order to become a true driver of the economy, but the economy of the future will be led by senior citizens and will have the qualities listed below, among others.

3.3 The Indian way of living & the joint family system

The Indian way of living has been a joint family system and senior citizens were a part of the family & were never left alone. They were always the head of the family until they died. The Joint family system of India has a major effect on social and value system of the community. But adapting to the change as a modern way of living,

nuclear families as way of life is popular in Indian too. The Younger population is moving to urban areas in search of jobs or moving for better opportunities abroad as a nuclear unit where old parents are left behind. Respect of senior citizens and taking care of them, as is a part of the tradition in India where there were no old age homes. It is a new typology in India, but NGO's with the support of active youth participation are mostly running them.

Dehradun, a hill town in Uttarakhand , which was a retirement destination earlier is now again becoming a senior living hotshot by the Antara group, which is advocating a new lifestyle for the rich senior citizens. Pune and Bangalore were also considered retirement's cities because of their climate and simple lifestyle but after the IT parks established in these cities they became cities for young and not for the old. Currently only some Indian cities are offering assisted living communities for seniors citizens like Dehradun, Chennai, Bhiwadi, a concept similar to the retirement villages in Europe. These isolated arrangements do not address the issues in the existing neighborhoods or gated communities in urban areas where the elderly have resided all their lives. It is also important to note that these assisted living solutions are beyond the reach for every citizen to buy another home for their old age.



Figure . Growth of senior citizens in india.
Senior living by JLL India 2015.

Source : Report on

The basic parameters to address at the policy level for Indian cities as directed by WHO are autonomy and independence, health and well-being of the senior citizens, social connectedness and social infrastructure plus security and resilience. These needs influence all aspects of a person's life as they age. The National Policy on Older Persons (1999), Government of India makes valuable suggestions. The policy proposes elder-friendly layouts of housing colonies, ease of access to shopping

complexes, community centers, parks and other services as well as multipurpose centers for elderly people. For the senior citizens, megacities clearly are unsupportive since most of the aged do not find housing unless they are wealthy enough to afford it. All these factors signal that decentralized urbanization is the sine qua non for urban growth. (2019 Jha Ramanath)

4. Rethinking the neighbourhood Unit: New design for old fabric

The Open space system in neighborhood design & building typology for senior citizens for senior citizens is a vital aspect in planning and urban design. To address the issue for this paper study of neighborhood units and their relevance for senior citizens is studied. The typical plans have blanket policy but needs specific interventions for ageing population & will need guidelines to make the neighborhood age- friendly.

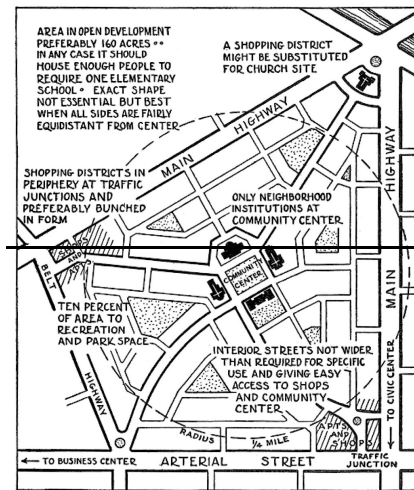


Figure 4. Clearance Perry's Neighborhood Unit Concept . Source : Perry C. 1929 Regional Survey of New York and its environs

Neighbourhoods form the urban tissue of the city both physically and socially. Hence, the neighbourhood has become the symbol and the means to preserve the socio-cultural values of an earlier less hurried way of life in our increasingly complex and fast moving urban centres. This also causes enhancement in the social-cultural bonds that would result as a direct outcome of improvement in physical conditions of a neighbourhood (Meenakshi Singhal 2011). The unprecedented growth of the city, which doesn't address issues & concern of all ages and is depend on real estate issues and economy building but has no consideration of different end users.

The basic psychological need for senior citizens are need for a community, friends and for healthcare. Identified ways in which the built environment can help cities continue to meet these needs so that older residents can lead full and productive lives. Both the obvious and less apparent strategies must be explicitly identified; they have profound implications on the lives of older people, and far too often, they are not characteristic of the built environment.

4.1 Neighborhood Design in India

After the planning of new cities like Chandigarh, Bhubaneswar and Gandhi Nagar the sector planning became very popular in new cities developed in India. Gurgaon is a

satellite town of Delhi is a different example as most of the development is done piece-mill and infrastructure added later for a few areas. Gurgaon, which is also planned as a sector development. The neighborhood in these sector are mostly self-sufficient and is mostly has all amenities and infrastructure in place.

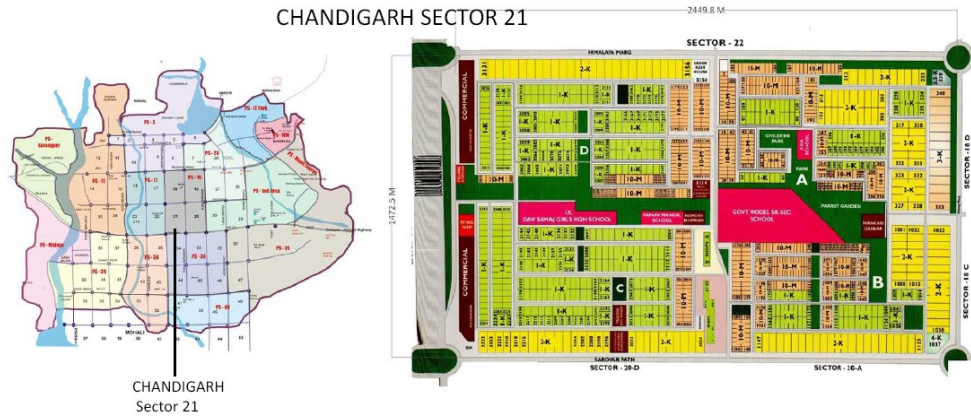


Figure 5. Plan of a typical Chandigarh sector. Source : Author.



Figure 6. Plan of a typical Gurgaon sector. Source : Author.

The pilot project chosen is in Gurgaon, Haryana India since it a suitable case for survey and studying older population. Gurgaon has many senior citizens who moved from Delhi in search of a suitable town house or a plotted accommodation after selling off their property in Delhi. Based on the recurring issues, a set of core features of an age-friendly city were identified for the Age-Friendly Cities.



Figure 7 Plan of Sushant Lok I Gurgaon. Source : Author.

5. Parameters for data collection and analysis

Out of the eight domain area the Survey targeted for age-friendly cities incorporates - the physical and built environment including outdoor public spaces and buildings:

- Pleasant & clean environment
- Importance of green spaces
- Places to rest
- Age-friendly sidewalks
- Safe pedestrian crossings
- Accessibility to the surroundings
- A secure environment
- Walkways and cycle paths
- Age-friendly buildings
- Adequate public toilets

(Checklist of Essential Features of Age-friendly Cities WHO 2007).

Survey consists of 50 senior citizen and covers the parameters stated by WHO Age-friendly check list for open spaces and buildings living in Gurgaon through a google form. Area taken up for study as a pilot project is Sushant Lok 1 in Gurgaon, Haryana in India. The area chosen has been lived in by most of the population for 20 years or more. It has proximity to all city level functions and easily accessibility metro station.



Figure 8. Neighborhood park, which acts as a recreational / social space in the middle of the plotted neighborhood at Block A Sushant Lok I, Gurgaon. Source: Author.

Analysis of survey:

| S.no. | Parameter covered under outdoor and public spaces and buildings | Major outcome of the parameter | Analysis |
|-------|--|---|--|
| 1 | Age | The age group is between 60 to 79 years | With majority from age 62, 66 & 72 |
| 2 | Where do you live in Gurgaon? | Majority of the people live in Sushant Lok 1 | 100%- Sushant Lok 1 |
| 3 | Plotted house or an apartment? | Majority of the people live in plotted houses | 80% - Plotted house 20% - Apartment |
| 4 | How long have you been living here? | The duration varies from 5 months to 22 years | Majority living here from 18 and 20 years |
| 5 | Is the city clean, with enforced regulations limiting noise levels and unpleasant or harmful odors in public places? | Majority says no | 52.6 %- No 47.4%- Yes |
| 6 | Are there well-maintained and safe green spaces, with adequate shelter, toilet facilities, and seating that can be easily accessed | Majority says no | 52.6%- No 31.6%- Yes 15.8%- Don't have toilet facilities anywhere near parks etc. some parks are clean all have seating facility |

| | | | |
|----|--|------------------|---------------------------|
| 7 | Is there outdoor seating is available, particularly in parks, transport stops and public spaces, and spaced at regular interval? | Majority says no | 52.6 %- No 47.4%- Yes |
| 8 | Are the pavements clear of any obstructions (e.g., street vendors, parked cars, trees, dog droppings, snow) and pedestrians have priority of use. | Majority says no | 73.7 %- No 26.3%- Yes |
| 9 | Are the pavements are well-maintained, smooth, level, non-slip, and wide enough to accommodate wheelchairs with low curbs that taper off to the road | Majority says no | 78.9 %- No 21.1%- Yes |
| 10 | Are the sidewalks gently sloping? | Majority says no | 78.9 %- No 21.1%- Yes |
| 11 | Are there number of safe pedestrian crossings for all people with any degree and any type of disability? | Majority says no | 84.2 %- No 15.8%- Yes |
| 12 | Do the roads have adequate non-slip, regularly spaced pedestrian crossings ensuring that it is safe for pedestrians to cross the road. | Majority says no | 73.7 %- No 26.3%- Yes |
| 13 | Are there pedestrian crossing lights allow sufficient time for elderly people to cross the road and have visual signals? | Majority says no | 68.4 %- No 31.6%- Yes |
| 14 | Are the pedestrian crossing lights allow sufficient time for elderly people to cross the road and have audio signals? | Majority says no | 89.5 %- No 10.5%- Yes |
| 15 | Is there enough time for pedestrians to cross the streets? | Majority says no | 68.4 %- No 31.6%- Yes |
| 16 | Is there strict enforcement of traffic rules and regulations, with drivers giving way to pedestrians? | Majority says no | 84.2 %- No 15.8 %- Yes |

| | | | |
|----|---|--|--|
| 17 | Are there separate cycle paths for cyclists? | Majority says no | 57.9 %- No 42.1 %- Yes |
| 18 | Public safety in all open spaces and buildings is a priority and is promoted | Majority says no | 68.4 %- No 31.6%- Yes |
| 19 | Are the services clustered or located in close proximity to where elderly people live and can be easily accessed? | Majority says no | 78.9 %- No 21.1%- Yes |
| 20 | Are there special customer service arrangements for elderly people, such as separate queues or service counters for senior citizens | Majority says no | 73.7 %- No 26.3%- Yes |
| 21 | Are the buildings accessible and have the following features: - elevators - ramps -adequate signage - railings on stairs - stairs that are not too high or steep - non-slip flooring - rest areas with comfortable chairs - sufficient numbers of public toilets? | The majority has elevators and railing on stairs | Elevators- 78.9% Ramps- 63.2% Adequate signage- 31.6% Railing on stairs- 78.9% Stairs that are not too high or steep - 63.2% Non-slip flooring - 26.3% Rest areas with comfortable chairs - 31.6% Sufficient numbers of public toilets- 15.8% |
| 22 | Are the public toilets clean, well-maintained, easily accessible for people with varying abilities, well-signed, and placed in convenient locations? | The majority says no and maybe | 42.1%-Maybe 42.1%- no 15.8%- yes |
| 23 | Name your favorite public space | The majority says Galleria Market | Galleria market- 50.1% |

| | | | |
|----|---|----------------------|---|
| | in Gurgaon. | | Cyber hub- 15.5% One horizon- 13% Ambience mall- 5.6% Tulsi Garden- 5.6% World mark- 5.6% |
| 24 | Do you think your city is a safe city for older population. | The majority says no | 73.7%- No 26.7%- Yes |

(Survey inspired by WHO Age-friendly check list – Khoddam H, Dehghan M, Sohrabi A, Modanloo M. The ac from the viewpoint of elderly. J Family Med Prim Care 2020; 9:5745-51.)

Are the buildings accessible and have all the features?

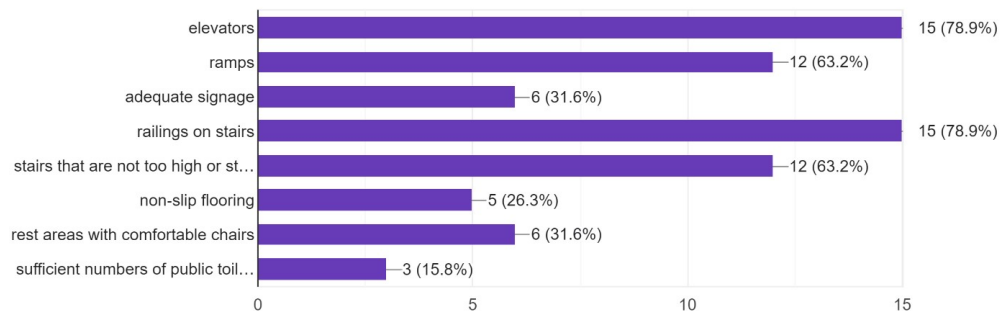


Figure. Graph showing results of Buildings accessibility features. Source : Author.

Data analysis: After the survey & some one on one interviews, the major issues which the current senior citizens are facing in Gurgaon were, proximity to walkable community spaces . The park with a jogging track came out to be the most used public /community space in the middle of the neighbourhoods. It is the centre of the social activity for both men & women. The females who are senior citizens are seen in the evenings with mostly their grandchildren who come to play in the park .The men come for a morning walk and they have their morning tea at the gazebo at one the park. (This is a group of senior citizens with only 2-3 females).

Most of the residents gave feedback that their city lacks recreational spaces, public spaces were just shopping destinations or small parks, the clubs in the vicinity are all very expensive and gated. Connecting the neighborhood and building bridges socially between different areas as most plotted developments have also become gated (which was not covered in the survey). The favourite public space is a market with cafes and shopping facility called a Galleria Market, which is at walking distance from the locality.

6. Conclusion : The need for better community planning in neighborhoods

The paper looks at the issues of age-friendly cities in the Indian context for senior citizens and to incorporate it as policies level for senior citizens . These changes will improve the quality of life in many urban areas and make cities more accessible not just for older citizens but for others as well. The Urban design of the area has to incorporate people-centric Planning and Design for the promotion of bottom-up approaches with public participation for an effective planning, which is for the citizens.

A rapidly growing body of research has focused on neighbourhood features and walking, given that walking is the most common form of exercise, particularly among older adults. The Two elements – distance to businesses and land use mix – have emerged as factors that enhance neighbourhood walkability in general population samples (Saelens & Handy, 2008) .

Also stated by UN Habitat that “ *Improving public health: a good network of public spaces can help to improve our physical and mental health by encouraging us to walk and play, making walking more attractive, reducing stress and providing a calming environment*” (UN-Habitat 2018 -SDG Indicator 11.7.1 Training Module: Public Space. Nairobi.)

The outcome of the paper has been to make a series of practical recommendations to address the issue of age-friendly cities in India in a holistic way which are mentioned below :

- A co-housing model with different generations living together and having common amenities more like common dining and recreation is a good option for the Indian scenario . This is better than residing in assisted living or retirement towns, which are mostly outside the parent city away from the facilities they were used to living with throughout their life. Retirement homes are not the answer to the Indian situation. At this age bonding, sharing and caring are the basic aspects of life & focus of life is towards a life which is holistic and stress free.
- Detailed urban design of each neighborhood need to be planned to incorporate needs for older population like- sidewalks, barrier free crossings, green spaces & accessibility to all facilities especially health care , community shopping to make them feel independent.
- The quality of green spaces which are designed well and maintained have a positive impact on people of all age groups.
- The Community building in each area as an outcome of social networking in open spaces especially for those who have developed some disability and cannot venture too far from the home .
- Healthy & sustainable Housing which is affordable and different sizes for variety to choose from with universal accessibility for older citizens. Neighborhood to be designed in a way as to make the accessibility for healthcare, public spaces, community streets, parks, social life with recreational facilities , transport facilities and community services .
- Walkability as a major recreation exercise and a much-needed infrastructure at the city level so sidewalks for ease of movement & more access to the surroundings is necessary.
- Place making or creating a public realm as a holistic approach to develop green spaces & other infrastructure.

- Planning work spaces closer for to neighborhood or mix use areas where older citizens which facilitates them to remain in work force longer
- Senior citizens can be a resource for the community because of their knowledge and experience. They can be instrumental in community building in the neighborhood



Figure 9. Jogging Track used by Senior citizens in Sushant lok I ,Gurgaon . Source : Author.

Further research and investigations into Age-friendly cities will be further studied and analysed as part of my Ph.D. with similar parameters and wider range of case studies.

References:

- Adlakha, D., Chandra, M., Krishna, M., Smith, L., & Tully, M. A., 2021. Designing Age-Friendly Communities: Exploring Qualitative Perspectives on Urban Green Spaces and Ageing in Two Indian Megacities. *International journal of environmental research and public health*, 18(4), 1491. <https://doi.org/10.3390/ijerph18041491>
- Agarwal, A., Lubet, A., Mitgang, E., Mohanty, S. and E. Bloom, D., 2016. *Population Aging in India: Facts, Issues, and Options*. Institute for the Study of Labor (IZA). Germany: Program on the global demography of aging at Harvard university
- ARUP, 2019. *Cities Alive: Designing for Ageing Communities*. [ebook] London: Arup's Foresight, Research and Innovation. Available at: <https://foresight.arup.com/publications/ageing-communities/>
- Buffel, T. (Ed)., 2015 *Researching Age-Friendly Communities. Stories from Older People as Co-Investigators*. Manchester: The University of Manchester Library.
- Buffel, T., Handler, S. and Phillipson, C., 2018. *Age-Friendly Cities and Communities: A Global Perspective (Ageing in a Global Context)*. India: Policy Press.
- European Union, 2018. *The Silver Economy*. [online] United Kingdom: Technopolis Group, Oxford Economics. Available at: <https://www.mayoractual.com/media/mayoractuals/files/2018/09/11/Silver-Economy.pdf>
- Ewing, R., & Handy, S.L. 2009. Measuring the Unmeasurable: Urban Design Qualities Related to Walkability. *Journal of Urban Design*, 14, 65-84, DOI: 10.1080/13574800802451155

- Frank, K., 2021. *Seniors Housing Annual Review 2021*. [ebook] London: Knight Frank LLP. Available at: <https://content.knightfrank.com/research/1854/documents/en/seniors-housing-annual-performance-review-2021-8481.pdf>
- Government of India, Department of Social Justice and Empowerment and Ministry of Social Justice and Empowerment, 2021. Atal Vayo Abhyuday Yojana (AVYAY) [Formerly National Action Plan for Senior Citizens (NAPSrC)]. [ebook] New Delhi: Ministry of Social Justice and Empowerment. Available at: <https://grants-msje.gov.in/display-napsrc-avyay>
- HelpAge India. 2022. *HelpAge Research Reports*. [online] Available at: <https://www.helpageindia.org/aboutus/publications/helpage-research-reports/>
- Indian Institute of Technology Kharagpur. IIT, 2014. *Improving Quality of Life of Senior Citizens in Residential Neighbourhoods in the Indian Context*. [ebook] Mhrd, Govt.of India. Available at: <http://www.facweb.iitkgp.ac.in/~foc/pdf/Module-9-SB.pdf>
- IMPRI Impact and Policy Research Institute, 2021. #CityConversations | E37 | Dr Ajith Kaliyath | Addressing Equity through Planning & Placemaking HQ V. [video] Available at: <https://www.youtube.com/watch?v=h1KNzG74ouM>
- Jha, R., 2019. Senior citizens, cities and city planning. [Blog] *India matters*, Available at: <https://www.orfonline.org/expert-speak/senior-citizens-cities-and-city-planning-51124/>
- Moogoor, A., n.d. *Retirement Living in India: A Case Study*. [ebook] Singapore University of Technology and Design. Available at: https://lkycic.sutd.edu.sg/wp-content/uploads/2019/03/Retirement-Community-Living-in-India_a-case-study.pdf
- OECD, 2015. *Ageing in Cities*. [ebook] Paris: OECD. Available at: <https://www.oecd.org/cfe/regionaldevelopment/Policy-Brief-Ageing-in-Cities.pdf>
- Rémillard-Boilard, S., Buffel, T., & Phillipson, C., 2020. Developing Age-Friendly Cities and Communities: Eleven Case Studies from around the World. *International journal of environmental research and public health*, 18(1), 133. <https://doi.org/10.3390/ijerph18010133>
- Shankardass, M., 2011. Policy Initiatives on Population Ageing in Select Asian Countries and Their Relevance to the Indian Context. *Building knowledge base on Population Ageing in India, United Nations Population Fund (UNFPA)*, [online] Available at: <http://www.isec.ac.in/BKPAI%20Working%20paper%206.pdf>
- Steels, S., 2015. Key characteristics of age-friendly cities and communities: A review. *Cities*, 47, pp.45-52.
- Shankardass, M., 2011. Policy Initiatives on Population Ageing in Select Asian Countries and Their Relevance to the Indian Context. *Building knowledge base on Population Ageing in India, United Nations Population Fund (UNFPA)*, [online] Available at: <http://www.isec.ac.in/BKPAI%20Working%20paper%206.pdf>
- Takano, T., Nakamura, K., & Watanabe, M., 2002. Urban residential environments and senior citizens' longevity in megacity areas: the importance of walkable green spaces. *Journal of epidemiology and community health*, 56(12), 913–918. <https://doi.org/10.1136/jech.56.12.913>
- Technopolis Group and Oxford economics, 2018. *The Silver Economy – Executive Summary*. [ebook] Luxembourg: European Union. Available at:

http://publications.europa.eu/resource/cellar/2dca9276-3ec5-11e8-b5fe-01aa75ed71a1.0002.01/DOC_1

- World Health Organisation, 2015. World report on ageing and health. [ebook] World Health Organization. Available at: <https://www.who.int/publications/i/item/9789241565042>
- World Health Organization Ageing and Health Programme, 1998. *Growing Older - Staying Well Ageing and physical activity in everyday life*. 1st ed. [ebook] Geneva: WHO. Available at: https://apps.who.int/iris/bitstream/handle/10665/65230/WHO_HPR_AHE_98.1.pdf?sequence=1&isAllowed=y
- UN-Habitat., 2018. SDG Indicator 11.7.1 Training Module: Public Space. United Nations Human Settlement Programme (UN-Habitat), Nairobi ,Available at: https://unhabitat.org/sites/default/files/2020/07/indicator_11.7.1_training_module_public_space.pdf
- Vidyarthi, S., 2010. Reimagining the Neighborhood unit for India. In: P. Healy and R. Upton, ed., *Crossing Borders*, 1st ed. [online] Routledge, pp.73-93. Available at: https://www.researchgate.net/publication/285737544_Reimagining_the_Neighborhood_unit_for_India
- World Health Organisation, 2018. *The Global Network for Age-friendly Cities and Communities Looking back over the last decade, looking forward to the next*. [ebook] Geneva, Switzerland: WHO. Available at: <https://www.who.int/publications/i/item/WHO-FWC-ALC-18.4>
- World Health Organization, 2007. *Global Age-friendly Cities: A Guide*. [ebook] France: World Health Organization. Available at: <https://www.jcafc.hk/uploads/docs/Global-Age-friendly-Cities-A-Guide-1.pdf>
- World Health Organization, 2018. *Regional Framework on Healthy Ageing (2018–2022)*. [ebook] New Delhi: World Health Organization, Regional Office for South-East Asia. Available at: <https://apps.who.int/iris/bitstream/handle/10665/311067/9789290226154-eng.pdf?sequence=1&isAllowed=y>
- World Health Organisation, 2022. *Developing age-friendly cities and communities: Case studies from around the world - Age-Friendly World*. [online] Age-Friendly World. Available at: <https://extranet.who.int/agefriendlyworld/resources/age-friendly-case-studies/>