

**UNDERSTANDING THE ROLE OF ARCHITECTURAL DESIGN IN ENHANCING  
PLACE ATTACHMENT FOR SENIOR CITIZEN -  
[ CASE OF SENIOR LIVING COMMUNITIES IN AHMEDABAD ]**

**Bachelor of Architecture  
Research Thesis dissertation  
JUNE 2023**

Submitted By

**YASHVI PATEL**

**18BAR080**



**Institute of Architecture and planning  
Nirma University  
Ahmedabad 382481**



---

**ORIGINALITY REPORT**

---

**11** %

SIMILARITY INDEX

**8** %

INTERNET SOURCES

**3** %

PUBLICATIONS

**5** %STUDENT PAPERS

---

**PRIMARY SOURCES**

---

**1****researcharchive.vuw.ac.nz**

Internet Source

**3** %**2****Submitted to Institute of Technology, Nirma University**

Student Paper

**2** %**3****www.commonfloor.com**

Internet Source

**1** %**4****Submitted to University of the West Indies**

Student Paper

**1** %**5****www.ijstr.org**

Internet Source

**<1** %**6****Submitted to Manuel S. Enverga University**

Student Paper

**<1** %**7****Submitted to University of Sheffield**

Student Paper

**<1** %**8****digitalcommons.wustl.edu**

Internet Source

**<1** %**9****www.researchgate.net**

Internet Source

**<1** %**10****"The Palgrave Handbook of Learning for Transformation", Springer Science and Business Media LLC, 2022**

Publication

**<1** %**11****Submitted to Technological Institute of the Philippines**

Student Paper

**<1** %**mro.massey.ac.nz**

---

---

## **APPROVAL**

The following study is hereby approved as a creditable work on the subject carried out and presented in the manner, sufficiently satisfactory to warrant its acceptance as a pre-requisite towards the degree of Bachelor of Architecture for which it has been submitted.

It is to be understood that by this approval, the undersigned does not endorse or approve the statements made, opinions expressed or conclusion drawn therein, but approves the study only for the purpose for which it has been submitted and satisfies him/her to the requirements laid down in the academic program.

**Thesis Title : Understanding the role of architectural design in enhancing place attachment for senior citizen - case of senior living communities in ahmedabad**

**Student Name : Yashvi Patel**

**Roll Number : 18BAR080**

**Date : 30th June, 2023**

**Prof. Pooja Raval ( Assistant Professor )**

**Guide & Designation**

Institute of Architecture & Planning, Nirma University, Ahmedabad

Prof. Shweta Suhane

Prof. Purvi Jadav

Prof. Nishant Kansagara

Prof. Pratima Singh

Thesis Committee,

Institute of Architecture & Planning, Nirma University, Ahmedabad

Prof. Utpal Sharma

Director,

Institute of Architecture & Planning, Nirma University, Ahmedabad

---

## DECLARATION

I, **Yashvi patel, 18BAR080** give an undertaking that this research thesis entitled **“Understanding the role of architectural design in enhancing place attachment for senior citizen - case of senior living communities in ahmedabad”** submitted by me, towards partial fulfillment for the Degree of Bachelor of Architecture at Institute of Architecture and Planning, Nirma University, Ahmedabad, contains no material that has been submitted or awarded for any degree or diploma in any university/school/institution to the best of my knowledge.

It is a primary work carried out by me and I give assurance that no attempt of plagiarism has been made. It contains no material that is previously published or written, except where reference has been made. I understand that in the event of any similarity found subsequently with any published work or any dissertation work elsewhere; I would be responsible.

This research thesis includes findings based on literature review, study of existing scientific papers, other research works, expert interviews, documentation, surveys, discussions and my own interpretations.

Date: **30th June, 2023**

Name : **Yashvi Patel**

Roll number : **18BAR080**

**Institute of Architecture and Planning,**

**Nirma University, Ahmedabad**



---

## ACKNOWLEDGEMENT

From the initial concept to the final compilation of this research thesis, various people have generously supported and assisted me, including my instructors, relatives and friends, and the employees and residents of Shantiniketan Senior Living and Jeevan Sandhya Old Age Home.

I would want to offer my heartfelt gratitude and appreciation to everyone who helped make this research on the impact of architectural design in improving place attachment for senior adults in senior living homes in Ahmedabad a success.

First and foremost, I want to express my heartfelt gratitude to my thesis advisor, Pooja Raval, for their advice, support, and invaluable insights during the study process. Her knowledge and support were crucial in determining the direction and quality of this research.

Finally, I would like to express my heartfelt gratitude to the great institution IAPNU (Institute of Architecture and Planning), Nirma University, its library, and all the professors and staff members who supported and helped me with their valuable suggestions throughout each stage of development.





---

## ABSTRACT

India, like many other countries worldwide, is experiencing a significant demographic shift with the aging of its population in india is expected to grow substantially in the coming years, leading to increased demands for specialized senior living environments. As the elderly face unique physical, Emotional, and social challenges, the role of architecture in enhancing their well-being and fostering a sense of placement becomes crucial. In senior living developments, design interventions can be incorporated to increase accessibility, safety, comfort, social interaction, and a sense of identity and belonging. According to research, social isolation and loneliness in senior citizens are linked to poor health and mental performance. Homes for seniors must endeavor to create an environment that promotes the senior's best physical and mental health. This systematic review examines the link between social isolation, loneliness, and health outcomes among older people. The current housing units are either physically improper, have physical and structural problems or the elderly pay a lot of amount of their income on housing. Cattan, M., White, M., Bond, J., & Learmouth, A. (2005)

Place attachment is defined as the emotional bond individuals form with their physical environment, has been recognized as a significant aspect of well-being in various contexts. The relationship between place attachment and the well-being of senior citizens in india is significant and multi-faceted. Some key aspects to define the relationship are emotional well-being, sense of identity and purpose, social support, and interaction with familiarity and comfort. It becomes essential to create supportive and age-friendly environments that foster attachment and enhance the quality of life.

This study uses a mixed-methods approach. Including literature review, case studies, and surveys to examine how to design interventions can enhance place attachment for seniors.

The case studies examine elderly housing projects, emphasizing design elements that promote accessibility, safety, comfort, social interaction, and a sense of identity and belonging.

The surveys aim to collect data from senior citizens living in selected cases to determine their level of place attachment and their perceptions of the role of design in promoting attachment. The findings will add to the existing body of knowledge about the relationship between the built environment and place attachment, particularly for senior citizens.

**Keywords:** place attachment, senior living, place identity, sense of place, senior citizens, architectural features.

---

# CONTENTS

Plagiarism Report

Approval

Declaration

Acknowledgment

## Chapter 1 : Introduction

Background of the study .....	14.
1.1 Aim .....	16.
1.2 Objectives .....	16.
1.3 Scope & Limitation .....	16.
1.4 Methodology .....	17.
1.5 Framework of the study .....	17.
1.6 Research Questions .....	17.

## Chapter 2 : Place attachment

2.1 Sense of place .....	21.
2.2 Place Identity .....	22.
2.3 Concept of place attachment .....	24.
2.4 Importance of place attachment for senior citizen .....	25.
2.5 Factors Influencing Place attachment in senior living communities.....	26.
2.6 Impact of Architectural Design on place attachment for senior citizen.....	27.
2.7 Factors that contribute to place attachment .....	28.
2.8 Measuring place attachment .....	29.
2.9 Understanding place attachment theories .....	30.

## Chapter 3 : Theoretical framework

3.1 Place attachment theory framework.....	34.
3.1.1 Framework of the PPP theory .....	35.
3.2 Understanding Place attachment through likert scale .....	36.
3.2.1 Interviewing technique .....	36.
3.3 Parameters of the analysis framework .....	37.

---

## **Chapter 4 : Case study Analysis**

4.1 Area of study .....	41.
4.2 Senior Housing societies .....	42.
4.3 Shantiniketan Senior living .....	44.
4.3.1 <i>Spatial layout</i> .....	45.
4.3.2 <i>Accessibilty and Movement</i> .....	46.
4.3.3 <i>Natural Enviromental Integration</i> .....	47.
4.3.4 <i>Social interaction spots</i> .....	48.
4.4 Understanding the spaces senior citizen are attached to the senior living .....	50.
4.5 Jeevan sandhya old age home .....	66.
4.4.1 <i>Spatial layout</i> .....	67.
4.4.2 <i>Accessibilty and Movement</i> .....	68.
4.4.3 <i>Natural Enviromental Integration</i> .....	69.
4.4.4 <i>Social interaction spots</i> .....	70.
4.6 Understanding the spaces senior citizen are attached to the senior living .....	72.

## **Chapter 5 : Conclusion & Inferences**

5.1 Shantiniketan senior living .....	90.
5.2 Jeevan sandhya old age home .....	91.
5.3 Conclusion .....	92.

## **Appendix**

Survey questions

Figure table

References



---

# **CHAPTER 1**

# **INTRODUCTION**

## **Background of the study**

1.1 Aim

1.2 Objectives

1.3 Scope & Limitation

1.4 Methodology

1.5 Framework of the study

1.6 Research questions

---

## BACKGROUND OF THE STUDY

With the ageing of its population, India, like many other countries around the world, is currently witnessing a huge demographic change. As the ageing population's physical, emotional, and social demands become more complex, the function of architectural design in improving their well-being and developing a sense of place attachment gets more vital.

According to research, senior persons frequently suffer changes in their interactions with others and housing circumstances as they age. This adjustment can result in fewer social interactions, feelings of loneliness, and a drop in general well-being. When individuals form an attachment to a specific place it is because of the combination of physical as well as social-psychological factors, and identity creates feelings of rootedness and belonging which lead to a connection with a particular environment. Senior citizens' quality of life can be greatly impacted by their level of place attachment, developing an attachment to one's living environment is beneficial for fostering feelings of security and social connectedness while promoting greater autonomy and control.

built environment and spatial form play crucial roles in placemaking and fostering attachment to a space. Placemaking refers to the process of creating environments that are meaningful, functional, and promote a sense of connection and belonging among individuals. The attributes of the built environment and spatial form contribute significantly to the success of placemaking efforts. Architects and designers may positively influence the physical and psychological well-being of elders by building age-friendly settings that are accessible, safe, comfortable, and socially engaged. Design interventions that include elements like easy navigation, plenty of natural light, well-designed common areas, and chances for social interaction can help senior adults develop a feeling of home.

Housing for senior citizens refers to residential accommodations specifically designed to cater to the unique needs and requirements of older adults. These housing options aim to provide a safe, comfortable, and supportive living environment for seniors, promoting their well-being, independence, and social engagement.

---

However, the current housing options for seniors in India sometimes fall short of addressing their specific requirements. Many existing housing units are either physically insufficient, have structural flaws, or are financially expensive for the elderly. This necessitates a careful consideration of the role of architectural design in the development of senior living communities that not only meet utilitarian needs but also foster a strong feeling of place attachment.

Architects and designers can help to the establishment of supportive and age-friendly environments by understanding the specific architectural aspects and interventions that encourage place attachment for senior adults. These environments not only improve elderly residents' physical and mental well-being, but they also foster a feeling of identity, purpose, and social connectedness.

This study intends to understand the relationship between architectural design and place attachment among older adults in India through extensive research that includes literature reviews, case studies, and surveys. In order to conduct multiple case studies on senior living communities in Ahmedabad, data will be gathered through surveys and interviews. Observations during on-site visits will be used to document the architectural design features and spatial layouts of communal spaces and personalized living areas in these case studies. In-depth insights into successful design strategies that promote place attachment for senior citizens can be found in the case studies. The findings will help architects, designers, and politicians build effective strategies that prioritize the requirements and well-being of the ageing population, resulting in the establishment of more inclusive and supportive living environments.

---

### **1.1 Aim**

To understand the design features that promote place attachment among senior citizens in their living environments.

### **1.2 Objectives**

- To understand the concept of place attachment in the living environments.
- To explore the relationship of place attachment among senior citizens in their living environments.
- To identify and analyze the cases of senior living communities in Ahmedabad.
- To evaluate the features in such communities that enhance the feeling of place attachment.

### **1.3 Scope and limitation**

Place attachment refers to the emotional bond that people develop with a specific place, which is characterised by a sense of belonging, identity, and rootedness. It includes the subjective experiences and relationships that individuals have with their physical surroundings. This study focuses on the architectural perspective of the built form within the framework of place, person, and process in relation to place attachment. The built form incorporates various elements of design, including spatial layouts, building materials, accessibility, illumination, communal spaces, and personalised living areas. The purpose of this study is to assess the effect of enhanced place attachment on the health and quality of life of senior citizens. The focus of the study is senior living communities in Ahmedabad, India. These communities offer specialised housing options and services catered to the specific requirements of senior citizens. By selecting cases in Ahmedabad, the study seeks to gain insight into the architectural design strategies employed in these senior living communities and their effect on senior citizens' place attachment. The study examines the effect of enhanced place attachment on senior citizens' overall health and quality of life. However, it acknowledges that architectural design is only one aspect of creating an environment that fosters place attachment, and that other factors, such as personal experiences, memories, and social relationships, play significant roles as well. The scope of the study is limited to the context of senior living communities in Ahmedabad, and it recognises the extensive character of place attachment in addition to architectural design.

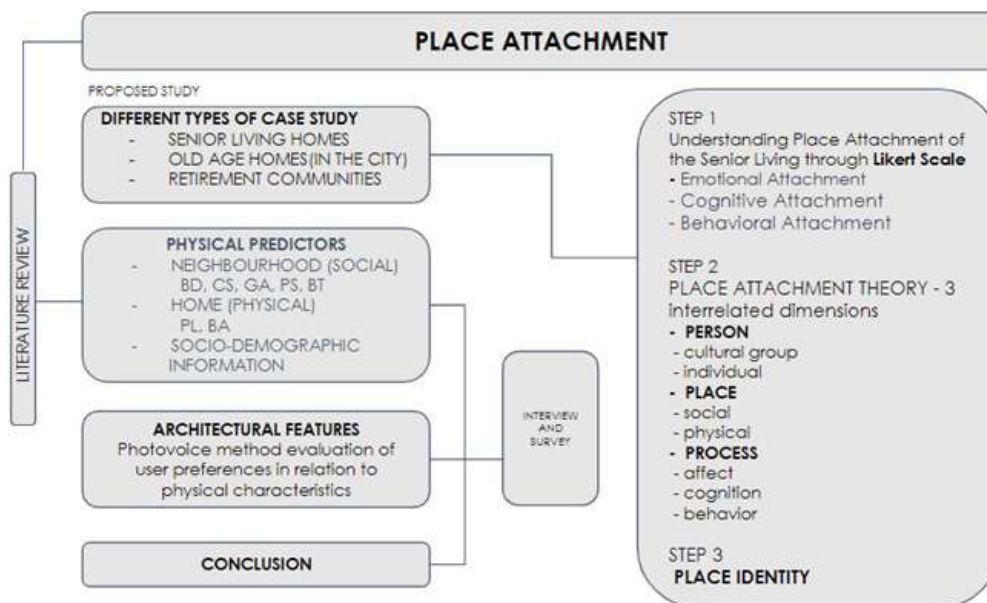


---

## 1.4 Methodology

- The research follows a survey analysis in a qualitative method which will provide a comprehensive understanding of the range of experiences and perspectives of senior citizens regarding the role of architectural design in enhancing place attachment.
- To understand the level of place attachment among the seniors from the PPP theory of place attachment using the Likert scale.
- Reviewing case studies of existing old age homes, retirement communities, and rural residential homes with old people.
- Synthesize the findings from the literature review, case studies, and survey data to provide insights on how architectural design can enhance place attachment among senior citizens in elderly housing.

## 1.5 Framework of the study (source: Author)



## 1.6 Research questions

- What is the relationship between place attachment and the well-being of senior citizens in living environments?
- How does the accessibility and inclusivity of architectural design impact the sense of belonging and attachment to a place among senior citizens?
- To what extent does the incorporation of nature and green spaces in architectural design influence senior citizen's sense of place attachment?



---

## CHAPTER 2

# LITERATURE REVIEW

- 2.1 Sense of place
- 2.2 Place Identity
- 2.3 Concept of place attachment
- 2.4 Importance of place attachment for senior citizen
- 2.5 Factors Influencing Place attachment in senior living communities
- 2.6 Impact of Architectural Design on place attachment for senior citizen
- 2.7 Factors that contribute to place attachment
- 2.8 Measuring place attachment
- 2.9 Understanding place attachment theories



---

## 2.1 SENSE OF PLACE

The subjective and emotional ties that people have with a specific environment or area are referred to as a sense of place. It includes the emotions, meanings, and attachments that people have to a place, which can influence their behavior, perceptions, and general well-being. Understanding the feeling of the place is critical in the context of architectural design, especially for elderly persons, because it plays an important role in improving their quality of life and establishing a sense of belonging and identification within their living situations. For senior citizens, a feeling of place is critical because it can have a significant impact on their physical, emotional, and social well-being. Individuals' movement and everyday activities may become more constrained as they age, making their local surroundings, such as their living community or senior living facility, much more important. A strong sense of place can give elders a sense of security, familiarity, and comfort, allowing them to feel linked to their surroundings and encourage a pleasant living experience. Architectural design is critical in creating environments that foster a strong feeling of place for senior adults. The architectural elements and features used in the built environment can have a significant impact on how elders perceive and interact with their surroundings. Accessibility, safety, comfort, aesthetics, and social contact are all important considerations in creating a feeling of place for elders.

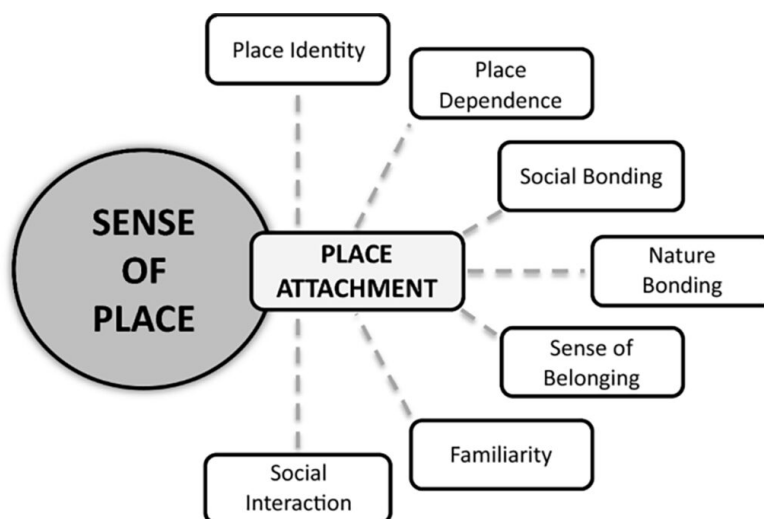


Figure 1 Sense of place with place attachment  
Source : Steele;(1981)

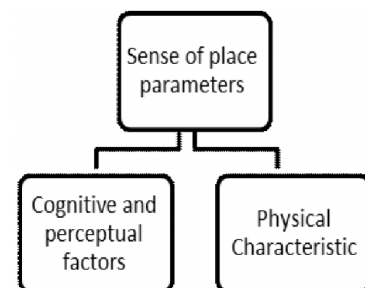


Figure 2 Sense of place parameters  
Source : Steele;(1981)

---

## 2.2 PLACE IDENTITY

The process by which individuals establish a feeling of self and belonging in relation to a given location or environment is referred to as place identity. Individuals subjective and personal attachment to a particular place impacts their identity, values, and experiences. Place identity is important in the context of architectural design for elderly adults since it improves their well-being, sense of belonging, and general quality of life. The formation of a strong place identification is critical for senior persons since it adds to their emotional and psychological well-being. Individuals may undergo changes in their responsibilities, relationships, and physical abilities as they age, which can have an impact on their sense of self and purpose. Senior living communities and retirement homes, for example, can serve as a basis for their place identity, offering a feeling of security, continuity, and meaning in their life.

Architectural design is critical in shaping senior citizen's sense of place. The physical characteristics and architectural features included into the built environment can have an impact on how elders perceive and relate to their living situations. Architectural style, spatial layout, interior design, and the incorporation of personalised and recognisable aspects are all important components in the establishment of place identity.

Spatial structure as well as function also play an important part in developing senior folks' sense of place. Space layout, circulation patterns, and accessibility elements should be developed to accommodate their everyday activities, needs, and preferences. Designing settings that encourage freedom, mobility, and personalization can empower elders and increase their sense of identity within their living environments.

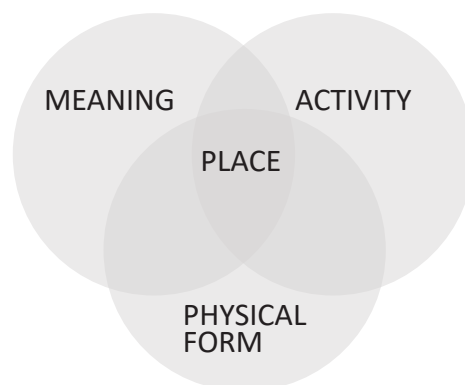


Figure 3 Components of a place  
Source :Author

---

Incorporating community and shared areas into the design can help to build place identity. Providing opportunities for social interaction, communal activities, and shared amenities helps elderly residents feel a feeling of belonging and community. These common places become an extension of their identity, contributing to a sense of connection and involvement with their surroundings.

Following that, place identity is an important part of senior citizen architectural design. Architects and designers can develop surroundings that foster a strong sense of place identification for elderly persons by considering architectural style, spatial arrangement, interior design, personalization, and the integration of community areas. Understanding seniors' specific needs, preferences, and personal histories is critical in designing environments that promote their well-being, foster a feeling of belonging, and improve their overall quality of life.

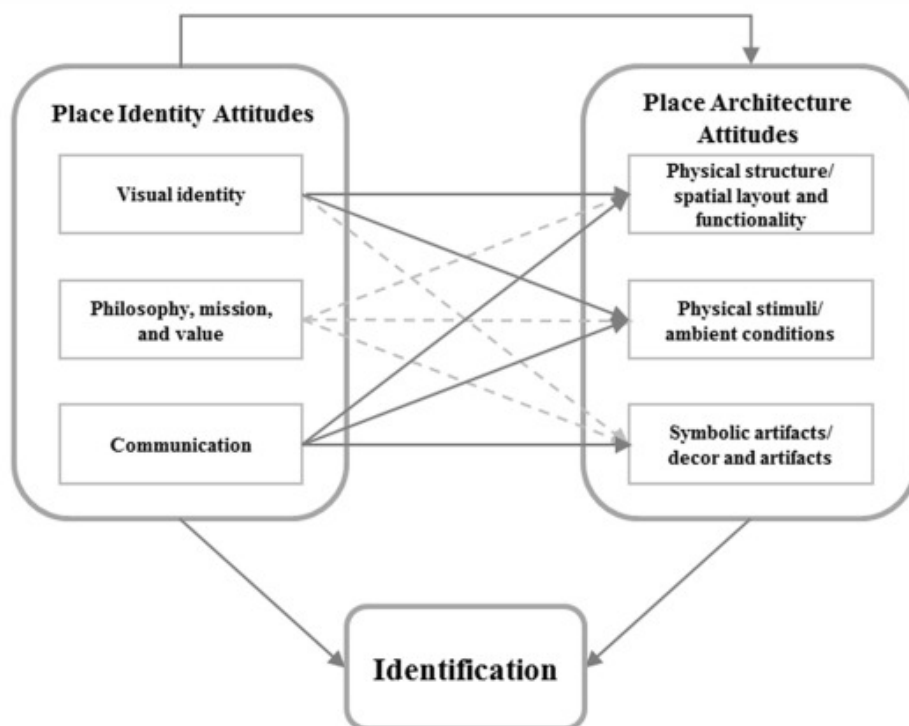


Figure 4 Factors for place identification  
Source : Foroudi Consultancy, UK

---

### 2.3 CONCEPT OF PLACE ATTACHMENT

The concept of place attachment has been defined using a number of parallel conceptions. Physical space may be a rather similar territory, it becomes a place when people add meaning to it, either through group or cultural processes (Low & Altman, 1992). As a result, a location evolves from an absolute resource for goal achievement to an integral element of each individual (Williams, Patterson, Roggenbuck, & Watson, 1992). Previously, Tuan (1974), a human geographer, described places as centers of meaning created by experiences in specific places. He also claimed that once a person grows acquainted with a space, that space transforms into a place. Thus, the place is the human meaning associated with space.

Phenomenologically, the place may be described as any environmental locus in and through which individual or group actions, experiences, intentions, and meanings are drawn together spatially (Manzo & Devine-Wright, 2013). Tuan's conception of space is purely social in nature, and he makes no attempt to explain how meaning is formed and given to the location.

The formed link has also been referred to as a sense of place, place satisfaction, and location reliance, with each having slightly different implications (Lewicka, 2010), though the precise differences are unknown.

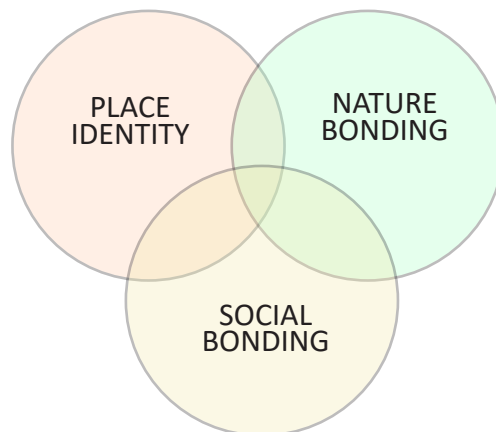


Figure 5. Factors of place attachment  
*Source : Author*

Place attachment will be employed to express such a relationship for the purposes of this study. There are several definitions of place attachment, however the unifying element is a “bond” or “link” between people and places. Place attachment, according to Hidalgo and Hernandez (2001), is a positive affective link between an individual and a certain place or thing that influences personal identity by offering comfort, familiarity, and security to the individual.



---

## 2.4 IMPORTANCE OF PLACE ATTACHMENT FOR SENIOR CITIZEN

The sense of home is composed of different scale levels, from the connection with outdoors to the quality of furniture and architectural layout of the room. It is thought to be significant for the ageing process (Milligan, 2012; Tanner, Tilse, & De Jonge, 2008). According to Relph (1976), place attachment is a fundamental human need, and there is agreement in the literature about the reciprocal relationship between the wellness of older persons and their ability to feel place attachment (Low & Altman, 1992; J. L. Wiles et al., 2009). According to Rubinstein and Parmelee (1992), the three reasons why place attachment was crucial for older people were to maintain a sense of continuous capacity and autonomy, to maintain consistency and continuity during times of transition, and to keep the past alive.

Place attachment can help with age-related adaptations by creating a sense of home and assisting the older adult in maintaining self-identity (Falk et al., 2013). More broadly, location attachment is viewed as a role in providing meaning, value, and relevance to people's lives (Giuliani, 2003). Sugihara and Evans (2000) conducted a survey of 67 older persons at a Continuing Care Retirement Community (CCRC) in the United States to explore an affinity between place attachment and design elements and discovered that it played a mediating role in the social milieu. Their research discovered that the proximity of a local gardening area, the possibility of spontaneous social contacts, and a short walking distance from the residence to the main activity center improved social interaction and participation and consequently contribute to place attachment.

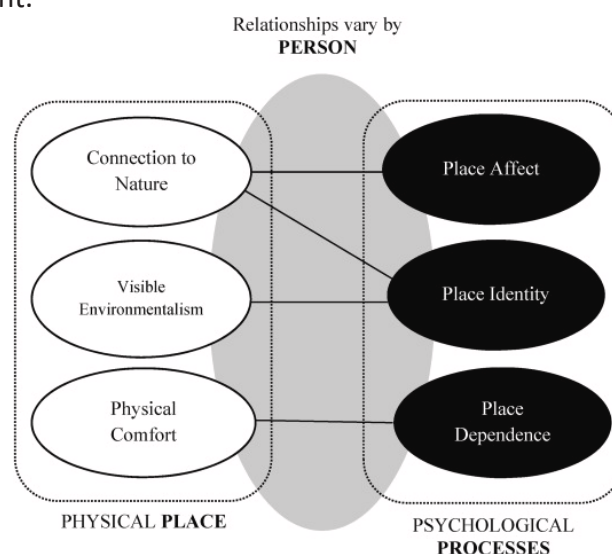


Figure 6. Psychological factors of a physical place  
Source : <https://doi.org/10.1016/j.jenvp.2021.101558>.

## 2.5 FACTORS INFLUENCING PLACE ATTACHMENT IN SENIOR LIVING COMMUNITIES

Place attachment to a space is influenced by a variety of elements that contribute to occupants' emotional connection, contentment, and sense of belonging to their living environment. The physical environment of senior living communities is important in determining place connection. Architectural design, building aesthetics, layout, and accessibility have all been shown to influence tenants' connection to their living spaces and demographic factors include attributes such as age and marital status. Different demographic groups can have diverse requirements and preferences with respect to their living environment which in turn can impact place attachment. Having family around to offer presence and support is an important aspect of the senior living community, and building meaningful relationships with one's family members while staying active in the community can foster feelings of belongingness to the place. The quality & accessibility of public facilities & infrastructure play a crucial role in determining the physical factors within senior-living communities. The physical design and spatial configuration of a built environment have a significant impact on place attachment (Knez, 2014). Individuals' interactions and movements within a space are affected by elements such as building form, spatial organisation, and room configuration (Jorgensen & Stedman, 2001).

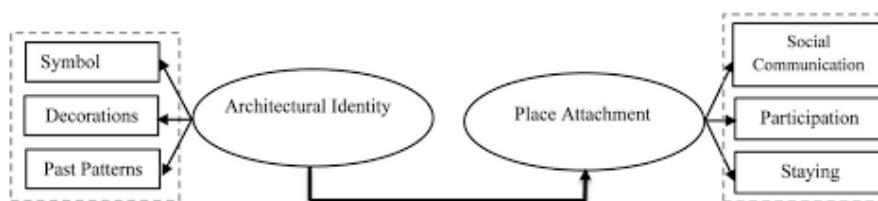


Figure 7. Embodiment of spatial experience for emotional connection  
Source : Seongnam-si 13120

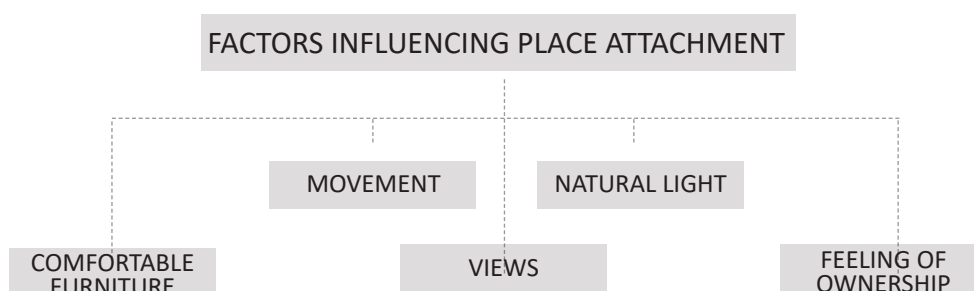


Figure 8. Factors that affect place attachment to a space  
Source : Author

---

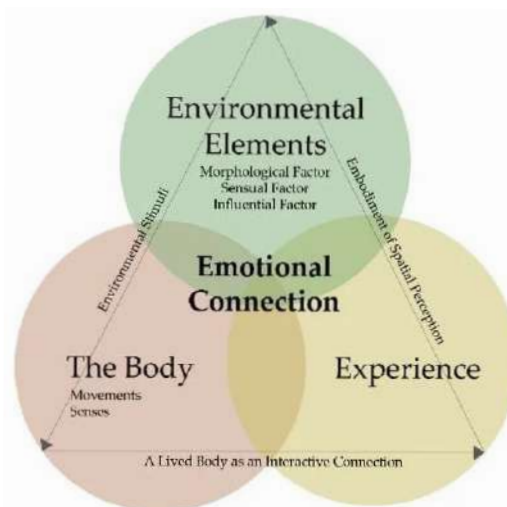
## 2.6 IMPACT OF ARCHITECTURAL DESIGN ON PLACE ATTACHMENT FOR SENIOR CITIZENS

The physical environment's architectural design contributes significantly to residents' attachment towards their surrounding living space since it can evoke emotional responses that shape individual experiences within a place (Altman & Chemers (1984)). The general satisfaction levels among seniors are increased when there are accessible spaces that prioritize comfort and safety (Moylan & O'Neill, 2013).

The significance of architectural features for promoting the welfare of senior citizens has been emphasized by Oswald Wahl and Schilling's research (2007). The study draws attention towards pivotal aspects including well-lit communal areas, exposure to natural surroundings and easy access to outdoor spaces which can positively impact elderly individuals' emotional health & contribute towards attachment for their living quarters.

As per this research's insights- incorporating age-friendly design principles including visible signages or accessibility structures like grab bars holds an equally critical position in enhancing navigational ease for aged residents while making shared community areas more approachable for them. Fostering social connections and creating a sense of belonging is crucial in senior living communities. The design of communal spaces plays an essential role in achieving this objective. Common areas like gardens, recreational facilities, and shared lounges provide opportunities for inner sociability by facilitating socially interactive engagements (Liu et al., 2014). Thus the configuration of these areas should encourage meaningful socialization while ensuring privacy and personalization are maintained (Rubin & Wilson 2019).

Figure 9. Embodiment of spatial experience for emotional connection  
Source : Seongnam-si 13120



---

## 2.7 FACTORS THAT CONTRIBUTE TO PLACE ATTACHMENT

Various aspects of the senior's living environment and their personal experiences influence the factors that contribute to place attachment. These factors play a crucial role in developing strong emotional bonds and a sense of belonging. By incorporating these elements into architectural design, it becomes possible to create senior-friendly spaces that encourage place attachment, social interaction, and overall health.

**Familiarity and Continuity:** According to Rowles (1978), senior citizens develop a strong attachment to locations where they have lived for a long time or where they have significant personal history. Familiarity with the physical environment, including the neighbourhood, layout, and landmarks, fosters a sense of continuity and attachment.

**Social Relationships and Community:** The presence of social connections and a sense of community significantly influence place attachment (Cattell, 2001). Senior citizens who have established relationships with neighbors, friends, and other members of the community feel a stronger attachment to their living environment. Opportunities for social interaction and engagement, such as communal spaces or organized activities, foster a sense of belonging.

**Access to Amenities and Services:** The availability of amenities and services tailored to the needs of senior citizens contributes to place attachment (Korpela et al., 2008). Access to healthcare facilities, recreational spaces, cultural activities, and transportation options enhances their quality of life and strengthens their attachment to the place.

**Safety and Security:** A sense of safety and security is essential for place attachment among senior citizens (Bonaiuto et al., 2006).

**Natural and Green Spaces:** The presence of natural elements and green spaces within the living environment enhances place attachment (Korpela et al., 2010). Access to gardens, parks, and outdoor areas provides opportunities for relaxation, physical activity, and connection with nature. Incorporating views of greenery and natural light into the architectural design contributes to the overall well-being and attachment of senior citizens.

---

## 2.8 MEASURING PLACE ATTACHMENT

Qualitative measures are intended to offer an understanding of the meaning of places for people. The meaning of a place is described as the intermediate link between its physical quality and the strength of an emotional bond with it. In order to understand the attachment to a locality, it is first important to identify its meaning for people (Stedman, 2003a, 2003b). Qualitative measures of place attachment can be divided into two main categories: verbal measures and pictorial measures. Verbal measures involve asking people to describe their feelings and experiences of a place. It can provide a more in-depth understanding of the meaning of places for people. Second, they can be used to capture the complexity of place attachment, which is often difficult to measure with quantitative measures, they can also be used to explore the ways in which people's attachment to a place changes over time.

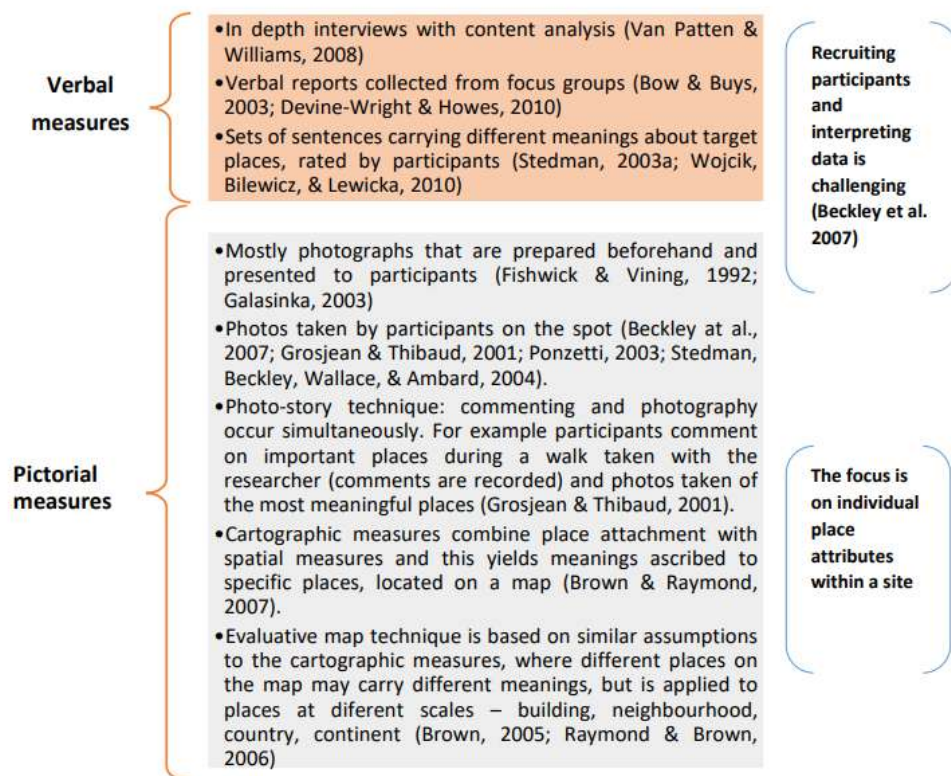


Figure 10 : Qualitative measures of place attachment  
Source : Masoumeh Shira, 2019

## 2.9 UNDERSTANDING PLACE ATTACHMENT THEORIES

Traditional place attachment research has typically employed a two-dimensional model. This is comprised of up of the emotional or social feelings connected with a location, known as place identification, as well as the functional or physical attachment to the area, which is known as place dependence (Anton & Lawrence, 2014; Brown & Raymond, 2007). Place dependence usually develops first followed by place identity. Table below lists some of the more comprehensive and significant multidimensional models of place attachment. Few of the frameworks, which can form the theoretical bases of this research, are explained in more detail.

	Authors of the frameworks	Character	Differences
1	(Shumaker & Taylor, 1983)	Place attachment is defined as a bond between a person and their residential environment.	As Clayton (2003) and Mazumdar & Mazumdar (2004) pointed out, place attachment is barely defined in this model as the focus is on residential rather than a variety of places.
2	(Low & Altman, 1992)	Place attachment is composed of places, actors and psychological processes.	The levels are inseparable unlike the Scannell & Gifford (2010a) (PPP) framework where the levels are related but still distinct.
3	(Scannell & Gifford, 2010) (PPP) framework	<b>Person:</b> cultural group and individual <b>Place:</b> social, civic attachment, physical attributes: natural environment <b>Process:</b> affect, cognition, behaviour.	The two models (3–4) are conceptually similar, but 1- the psychological process is not a separate dimension in the model of Raymond et al. 2- Scannel and Gifford's model was tested at a community scale and Raymond's et al. at a regional scale.
4	(Raymond, Brown, & Weber, 2010)	<b>Personal:</b> place identity and place dependence <b>Community:</b> Family bonding, friend bonding <b>Environment:</b> nature bonding	

Figure 11: A multidimensional framework of place attachment  
 Source : Masoumeh Shira, 2019



---

According to Shumaker and Taylor, place attachment consists of three interrelated components: place identity, place dependence, and affective bonds. Place identity refers to the incorporation of a place into an individual's self-identity and the symbolic meanings associated with it. Place dependence relates to the practical and functional aspects of attachment to a place, including reliance on its resources and amenities. Affective bonds involve the emotional and affective connections individuals form with a place based on positive experiences and memories. Shumaker and Taylor's framework provides insights into the psychological and emotional aspects of people's connection to their physical environment. It helps explain why some individuals develop stronger attachments to certain places, resulting in a sense of place identity, dependence, and emotional connection.

The Scannell & Gifford, 2010) framework of place attachment theory, known as the Personal, Social, and Physical (PPP) framework, provides a comprehensive understanding of the factors that influence place attachment. This framework expands upon the earlier work of Shumaker and Taylor by considering the interplay between personal, social, and physical factors in shaping individuals' attachment to a place. The PPP framework highlights the interrelationships between personal, social, and physical factors in influencing place attachment. It recognizes that these dimensions are interconnected and mutually influence each other. For instance, positive social interactions can strengthen personal connections and affective bonds, while a well-designed physical environment can facilitate social cohesion and enhance individuals' personal experiences within the place.

Raymond, Brown, and Weber's place attachment theory framework, proposed in 2010, focuses on the dynamic nature of place attachment and the numerous variables that contribute to individuals' attachment to a place. This concept builds on prior ideas by emphasising the interaction of cognitive, affective, and behavioural elements in the formation of place attachment. Raymond, Brown, and Weber's place attachment theory framework, proposed in 2010, focuses on the dynamic nature of place attachment and the numerous variables that contribute to individuals' attachment to a place. This concept builds on prior ideas by emphasizing the interaction of cognitive, affective, and behavioural elements in the formation of place attachment.





---

## CHAPTER 3

# THEORITICAL FRAMEWORK

3.1 Place attachment theory framework

3.2 Understanding Place attachment through likert scale

3.2.1 Interviewing technique

3.3 Paramerts of the analysis framework

---

### 3.1 PLACE ATTACHMENT THEORY

Place Attachment theory, based on the Person-Place-Process (PPP) framework, provides a comprehensive understanding of the complex relationship between individuals and their built environment. The PPP framework provides insights into how architectural design influences the development of place attachment within the context of architecture. The framework consists of three interconnected elements: the person, the place, and the ongoing processes that take place within the person-place relationship. Attachment theory can be implemented to understand the role of architectural design in creating place attachment in Ahmedabad's senior living communities. John Bowlby's attachment theory emphasizes the importance of strong emotional bonds and connections between individuals and their environment. The application of this theory to architectural design can facilitate the creation of environments that foster seniors' sense of attachment and connection. The "person" component refers to an individual's traits, experiences, and psychological factors that influence their attachment to a place. Personal values, memories, cultural context, and emotional responses are among these. When designing spaces that evoke positive emotional responses and resonate with the inhabitants, architects must consider the aforementioned elements.

The term "place" refers to the physical environment as a whole, including built structures, landscapes, and spatial characteristics. The importance of architectural design in ensuring the development of functional, aesthetically appealing, and culturally significant spaces cannot be overstated. Accessibility, comfort, safety, and the overall sensory experience is taken into account. Elements such as spatial arrangement, material selection, lighting, and views contribute to the development of an emotional connection between people and their environment.

The "process," recognizes that place attachment is not static but evolves over time through ongoing interactions and experiences. These processes cover the activities and social interactions that take place in the built environment. By creating spaces that encourage social engagement, community participation, and a sense of belonging, architecture can facilitate these processes. Common areas, shared amenities, and gathering

---

### 3.1.1 FRAMEWORK OF THE PPP THEORY

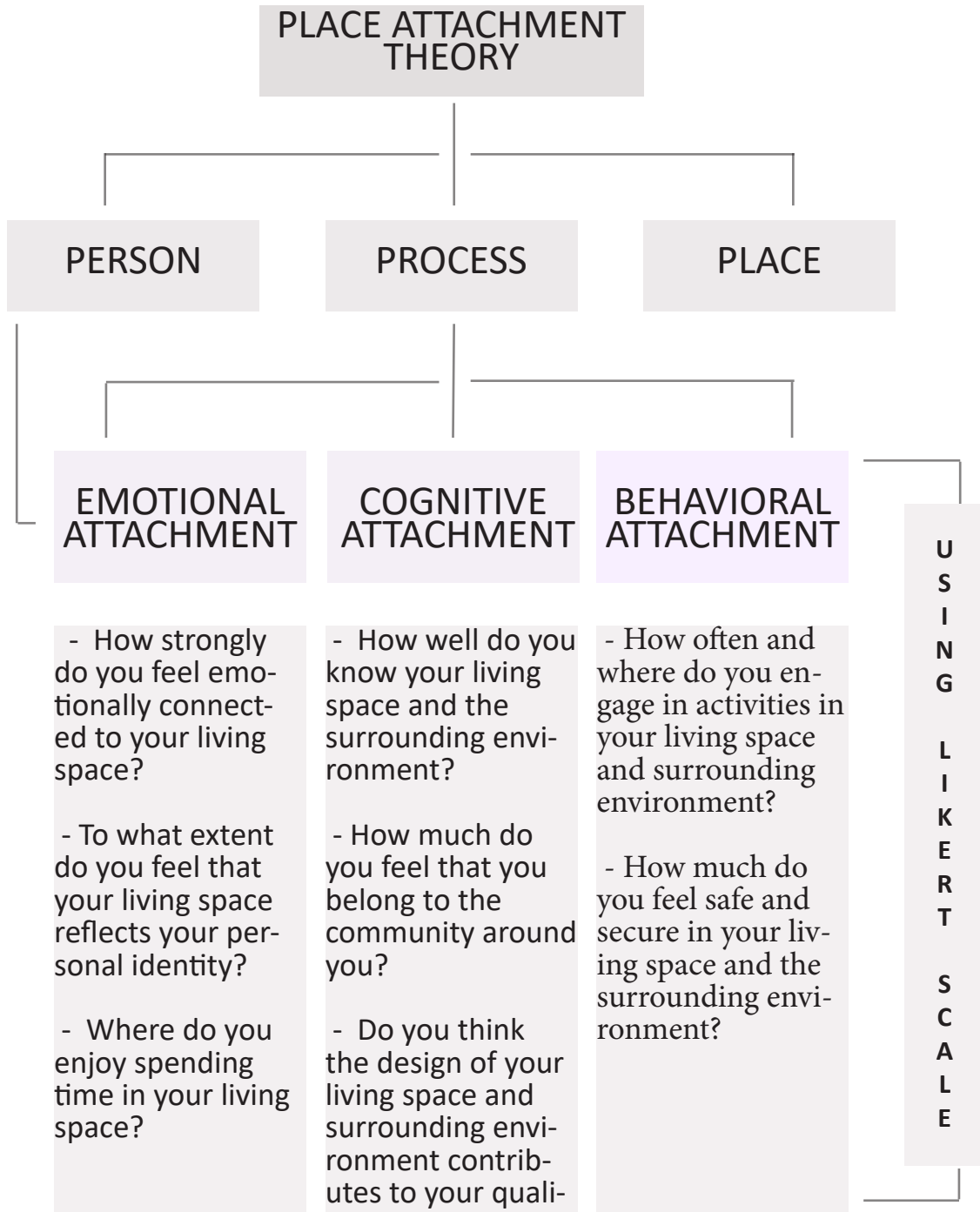


Figure 12 : Framework of the ppp theory with likert scale  
Source :Author

---

## **3.2 UNDERSTANDING PLACE ATTACHMENT THROUGH LIKERT SCALE**

The Likert scale can be a valuable tool for understanding place attachment. By measuring respondents' agreement with statements about their attachment to a place, researchers can gain insights into the factors that contribute to the strength of people's place attachments.

### **3.2.1 INTERVIEWING TECHNIQUE**

A structured interviewing technique was used to examine how architectural design influences senior citizens' sense of place. A predetermined list of questions about architectural design elements and their effect on senior citizens' place attachment was included in the structured interview. The interview questions cover subjects like the environment's comfort and safety, the design's aesthetic appeal, and the functionality of the spaces.

To understand how the residents feel about the space they live in LIKERT RATING SCALE is used.

Respondents are presented with a statement and asked to indicate their level of agreement or disagreement with that statement on a scale, typically ranging from 1 to 5  
example:

Strongly disagree - I feel no emotional attachment to this place and I do not rely on it for any specific functions.

Disagree - I have some emotional attachment to this place but I do not rely on it for any specific functions.

Neutral - I feel both an emotional attachment and a functional dependence on this place to some extent.

Agree - I have a strong emotional attachment to this place and I rely on it for specific functions.

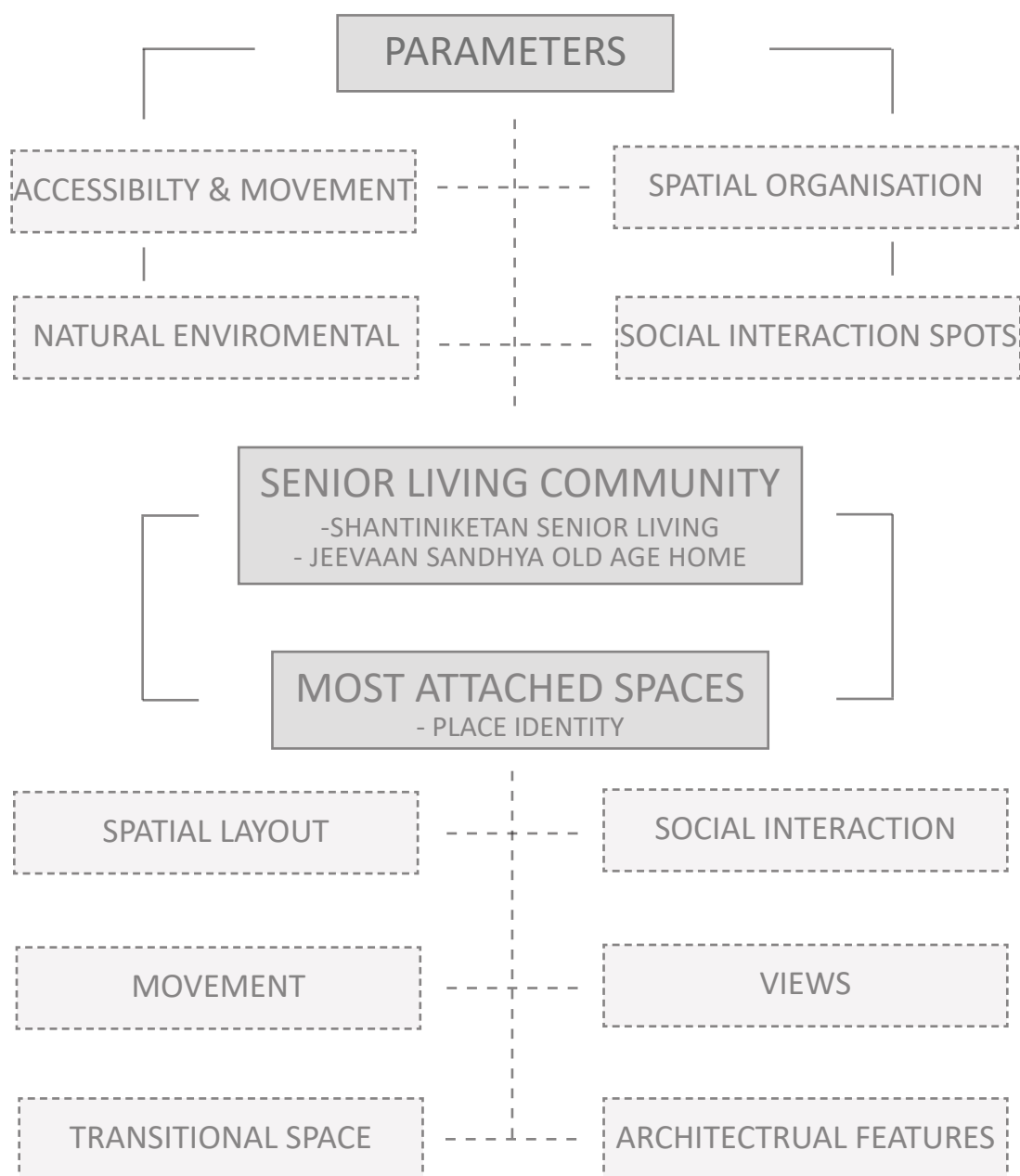
Strongly agree - I feel a deep emotional connection to this place and I rely on it for many important functions in my life.

---

### 3.3 PARAMETERS OF THE ANALYSIS FRAMEWORK

The parameters for conducting analysis have been derived, from the background study and theories, related to the topic. These parameters are important in conducting the analysis as they serve as factors for studying a particular senior living in detail, to understand the socio-cultural factors and the lifestyle of the community along with built form.

For this study, the parameters have been divided into 4 main categories spatial organisation, accesibilty and movement, natural enviromental integration , social interaction spots.





---

# CHAPTER 4

# PLACE ATTACHMENT THEORY

4.1 Area of study

4.2 Senior Housing societies

4.3 Shantiniketan Senior living

*4.3.1 Spatial layout*

*4.3.2 Accessibilty and Movement*

*4.3.3 Natural Enviromental Integration*

*4.3.4 Social interaction spots*

4.4 Understanding the spaces senior citizen are attached to the senior living

4.5 Jeevan sandhya old age home

*4.5.1 Spatial layout*

*4.5.2 Accessibilty and Movement*

*4.5.3 Natural Enviromental Integration*

*4.5.4 Social interaction spots*

4.6 Understanding the spaces senior citizen are attached to the senior living





---

## 4.1 AREA OF STUDY

In present-day Gujarat, India, senior living communities have emerged as prominent spaces for senior citizens, offering a unique environment where they can foster strong place attachments and engage with architecture tailored to their needs. Gujarat is well-known for its diversified demographics, rich heritage of culture, and historical significance. With a population of over 60 million people, Gujarat is home to a sizable number of senior citizens who play an important role in the state's social fabric. The state provides a wide range of senior living options, such as retirement communities, assisted living facilities, and old age homes, to meet the individual needs and preferences of senior citizens. Gujarat, famed for its diverse culture and architectural legacy, serves as a backdrop for investigating the interaction between elders, their attachment to places, and the physical landscapes that affect their experiences within these communities. Individuals' relationships with their environment become more crucial as they age, with a stronger attachment to familiar places and the memories associated with them. Senior living communities in Gujarat recognize its relevance and aim to develop surroundings that increase their inhabitant's well-being and sense of belonging. Two prominent examples include Shantiniketan Senior Living and Jeevan Sandhya Old Age Home, both located in Ahmedabad.



Figure 13: Map of India  
Source :Fernando Lima, 2010

---

## 4.2 SENIOR HOUSING SOCIETIES

Housing for the senior is housing adapted to the needs of an aging population. They range from independent living to the attention of 24 hours. In the homes of the senior there is an emphasis on safety, accessibility, adaptability and longevity that many conventional housing options lack. People spend more than 90% of their lives inside a building and yet know little about how the built environment affects human health (Evans and Mc Coy, 1998).



Figure 14: Components of Age friendly cities

Source : <https://www.nature.com/articles/s43587-021-00140-5>

### Types of senior housing society

**Independent Living Home:** The idea of independent living houses is one that has existed for a very long time in Indian society. Most people set up money throughout their working lives to purchase a plot of land and construct a modest house on which to settle down after retirement. The rising cost of land is a drawback of this system. Such an arrangement is not really advised given the sharp rise in real estate prices across India and the rising cost of building. Seniors have a difficult time managing the daily construction activity.

**Old Age Homes:** Old age homes or skilled nursing care centers are usually built at a close proximity to hospitals. Such old age homes have an in house medical team checking and monitoring the health issues of the inmates. Since an old body is quite prone to infections prevalent in a public hospital, these old age homes act like a private nursing care center

---

providing medical help in the comfort of a home. A large number of such nursing care centers are built with a joint collaboration between builders and hospital management teams.

Assisted Living Houses: With advancement of age, senior citizens require constant medical attention and aid. Assisted living houses are a concept which allows elderly to live with an assistant including a family member or a medical nurse or helper. Such assisted living houses are comparatively a newer concept in India but is likely to pick up in the near future. The advantage of having a medical assistance cuts out any traveling time to hospitals making such homes quite useful for people with medical issues and other disabilities.

Recognizing the physiological capability decrease in all design features.

- 1.Privacy: Older people require their own space. We must consider resident living routines, preferences, and privacy while designing senior housing.
- 2.Social interaction: Since older people need social interaction, being alone is highly bad for their physical and mental health. As a result, when taking the inhabitants into account, there should be room for social contact and resident exchanges.
- 3.Direction and logo system: The elderly require a setting that provides clear direction and a readable marking system to direct them to event areas due to identification issues and memory decline.
- 4.Safety and comfort: All designs for the elderly must offer a secure interior environment that satisfies their needs for physical and psychological comfort.
- 5.Disability design: Indoor areas for senior activities must be well-designed for accessibility.
- 6.Familiarity and continuity: Senior housing designs should incorporate regional customs and provide residents with personal decorating areas where they can display cherished mementos from their past, such as photos.
7. Light Ventilation issues : Requirement of provision of sufficient amount of light and ventilation in the elements of residential design for the elderly.

---

### 4.3 SHANTINIKETAN SENIOR LIVING



Figure 15 : Shantiniketan senior living with context

Source : Google earth

Shantiniketan Senior Living is a well-known senior living community in Adalaj, a peaceful neighbourhood in Ahmedabad, Gujarat. It benefits from its strategic location in a peaceful and attractive setting. The neighbourhood is located within beautiful green surroundings, giving inhabitants with a tranquil and revitalising environment. The location is convenient to key facilities such as hospitals, retail centres, and recreational areas, providing seniors' convenience and comfort.

Shantiniketan Senior Living is intended to address several elements of senior living, such as health, social engagement, and recreational activities. The community provides a variety of lodging alternatives, from huge apartments to cosy cottages, all adapted to individual preferences and needs. Medical help is available 24 hours a day, seven days a week, as are wellness programmes, fitness facilities, dining alternatives, and a library.

### 4.3.1 SPATIAL LAYOUT



*Figure 17: View from the courtyard*  
Source : Author



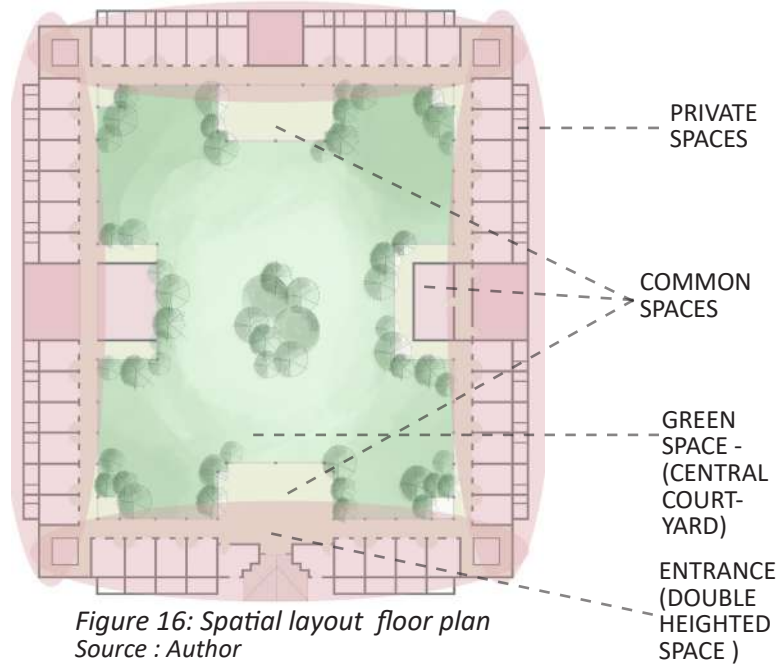
*Figure 18: Corridor and windows of the rooms*  
Source : Author



*Figure 19: View from the first floor corridor.*  
Source : Author



*Figure 20: First floor corridor showing swing niche*  
Source : Author



*Figure 16: Spatial layout floor plan*  
Source : Author

The layout of Shantiniketan Senior Living is designed to prioritize ease of access and create a welcoming and functional environment for senior citizens. The community consists of two identical floors, with each floor housing 40 individual room units. The rooms are big and well-designed with a small pantry and individual bathroom. At the entrance, a common double-height space welcomes residents and visitors, creating a sense of grandeur and warmth. The community's large corridors connect diverse sections, providing for seamless mobility and easy navigation. To ensure the safety of senior citizens, especially those with limited mobility, these corridors are well-lit and barrier free. The huge central courtyard, acts as a focal point and gathering space for residents, is a significant aspect of the layout. The activity hall and dining hall have been planned to ensure that all rooms have easy access. The property has two floors the ground floor and the first floor are identical. All the administration rooms and activity rooms with 30 private rooms are on the ground floor while there are only private rooms and semi open terraces on the first floor.



---

### 4.3.2 ACCESSIBILITY AND MOVEMENT



*Figure 22: Accessibility in the corridor*  
Source : Author



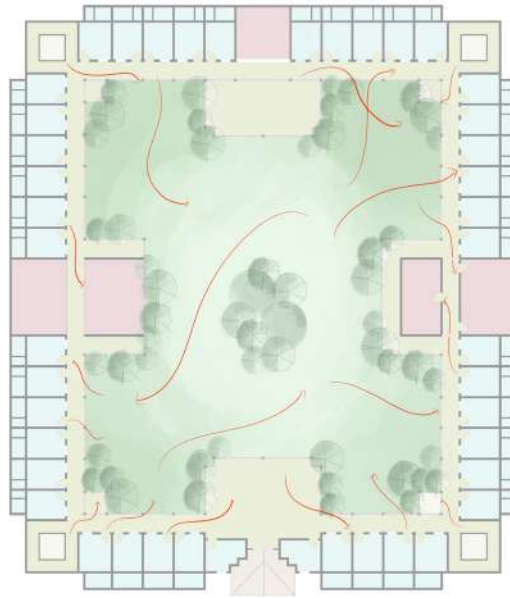
*Figure 23: Accessibility in the corridor*  
Source : Author



*Figure 24: Ramps Accessibility to rooms*  
Source : Author



*Figure 25: Corridor accessibility to the courtyard on ground floor*  
Source : Author



*Figure 21: Accessibility Floor plan*  
Source : Author

The design includes 2.5-meter-wide corridors that run throughout the community, allowing for easy and convenient access between regions. These corridors not only function as passageways, but also as transitional places that promote social interaction and a sense of community. There are specific sitting areas at the end of each hallway where inhabitants can rest, socialise, or simply enjoy the views. The arrangement of windows in the rooms facing the corridors is a prominent design feature. This promotes contact between inhabitants in their private rooms and those moving through the hallways by creating visible linkages. The interconnection of all rooms and activity areas to the hallways, which further link to a central courtyard, is a significant component of the layout. This arrangement creates transitional spaces that allow for smooth and seamless transitions between private and shared areas. Lifts and ramps are carefully placed throughout the community to ensure accessibility for people with varied mobility demands.

---

### 4.3.3 NATURAL ENVIROMENT INTEGRATION



*Figure 27: Corners of the courtyard*  
Source : Author



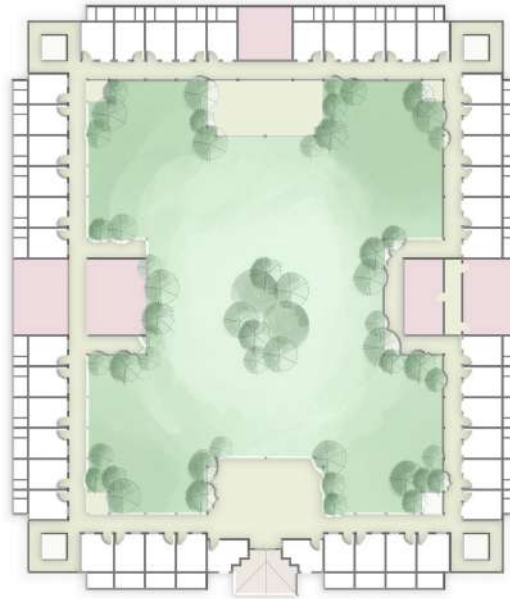
*Figure 28 : Sitting spcaes in the courtyard*  
Source : Author



*Figure 29 : Views of the huge central courtyard*  
Source : Author



*Figure 30 : View of the courtyard from the first floor*  
Source : Author

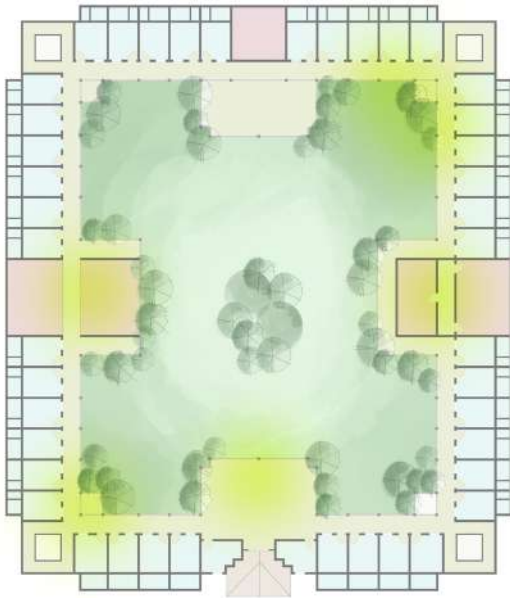


*Figure 26 : Green areas plan*  
Source : Author

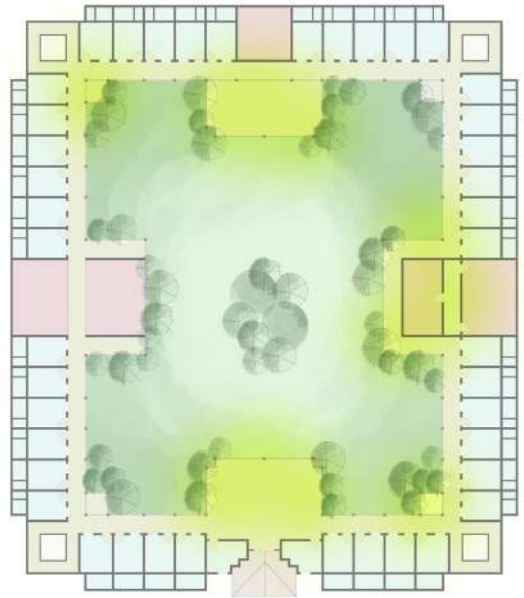
A wide green courtyard covered with stunning landscaping sits at the centre of the community, giving a calm haven for rest and socialisation. The courtyard's corners, surrounded by the surrounding scenery, offer isolated locations for reflective thinking and silence, allowing occupants to engage with the beauty of their natural surroundings. Shantiniketan Senior Living's architectural plan also prioritises the incorporation of natural light as a significant design element. The accurate positioning of windows and the use of double-height areas maximise natural light infiltration throughout the neighbourhood. The first-floor hallways that face the central courtyard, in particular, provide inhabitants with spectacular views of the natural scenery while allowing an abundance of daylight to flow into the interior areas.

---

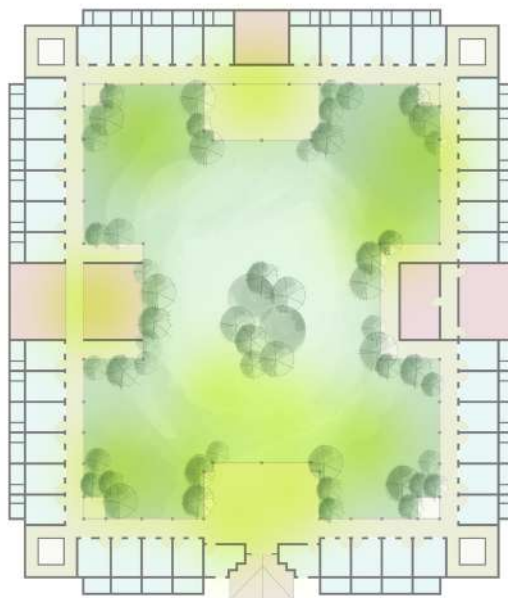
#### 4.3.4 SOCIAL INTERACTION SPOTS



*Figure 31: Plan showing Social interaction in the Morning*  
*Source : Author*



*Figure 32 :Plan showing Social interaction in the Afternoon*  
*Source : Author*



*Figure 33 :Plan showing Social interaction in the Evening*  
*Source : Author*





*Figure 34 : View of the double heighted space in the entrance*

Source : Author



*Figure 35 : People interacting in the activity hall*

Source : Author



*Figure 36 : image showing the span of windows in the room*

Source : Author



*Figure 37 : corner sitting niche in the ground floor corridor*

Source : Author

Residents begin their days with physical activity in the spacious courtyard, taking advantage of the extensive space and fresh air to engage in physical activity that supports their well-being. Residents go to the canteen hall for breakfast after the morning exercise. The hall is cleverly planned with huge windows that let in enough of natural light. This provides a happy and upbeat environment and improves the dining experience, making residents feel content and joyous as they savour their meals. Throughout the day, the hallways transform into dynamic locations where people constantly cross paths, mingle.

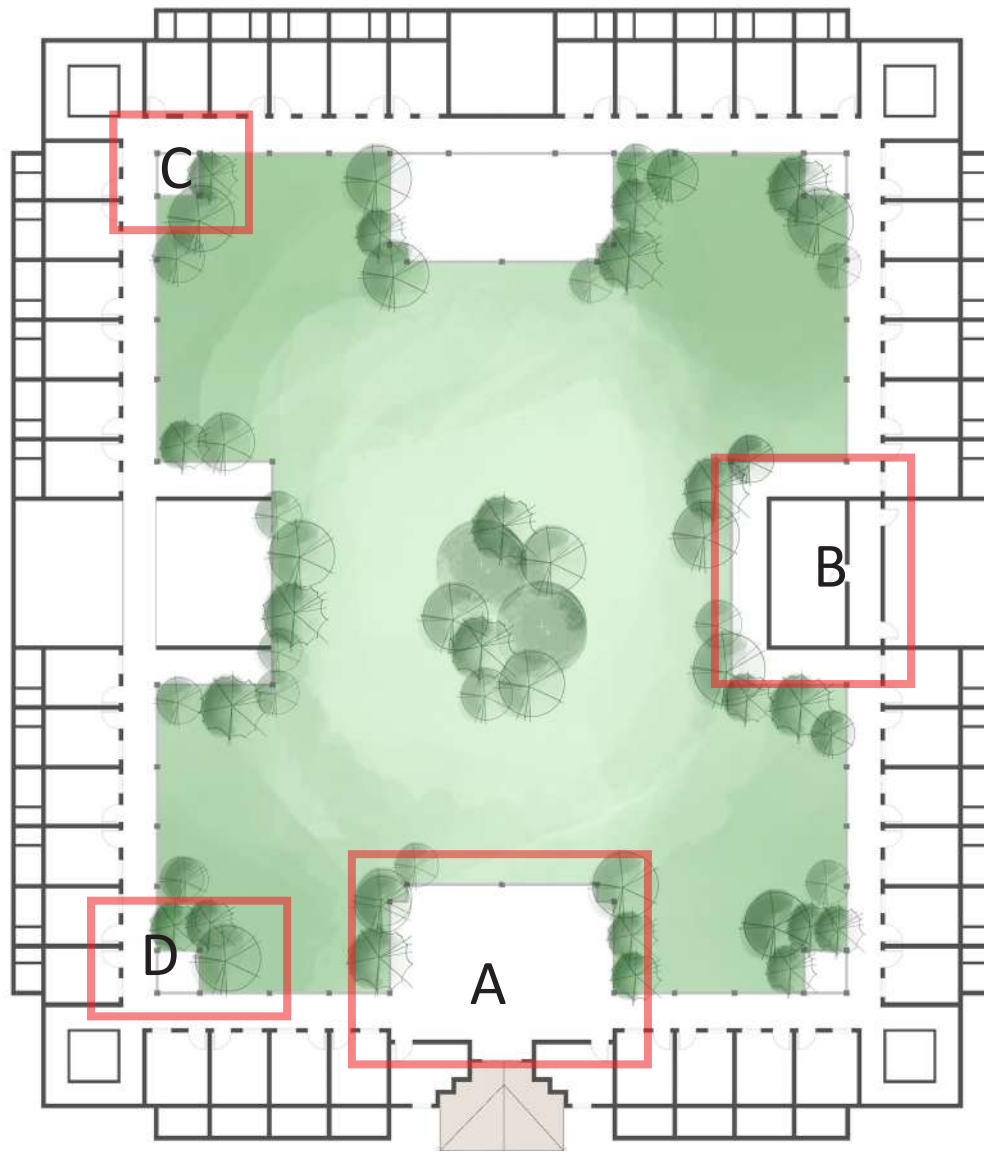
When the weather grows hot in the afternoon, inhabitants withdraw to their private quarters for relaxation and personal time. The rooms are thoughtfully constructed to provide views of the courtyard, giving a sense of connection with nature and enabling plenty of natural light to create a pleasant and comfortable setting. Some residents also go to the library or the Activity Hall to play indoor games and entertain themselves.

As the evening sets in, the senior living community becomes busy with activity. Residents gather in numerous sitting spots throughout the community to enjoy the great weather and breathtaking views at sunset. The courtyard transforms into a lively core where residents unwind, socialise, and enjoy the relaxing ambience. Music fills the air, producing a soothing environment that encourages relaxation and contentment. Shaded sitting areas in the corners become especially appealing, providing a calm spot for people to unwind and take in the beauty of their surroundings. Residents on the first floor have the added bonus of swing benches in the sitting spaces next to their rooms. These quiet and tranquil locations provide a cosy refuge where residents can enjoy themselves.

---

#### 4.4 UNDERSTANDING THE SPACES SENIOR CITIZEN ARE ATTACHED TO THE SENIOR LIVING

In the plan below the marked spaces are the most repeated by the residents of the senior living. Further more the spaces are understood in details to find out the architectural features which add on to the space and their attachment with the space.

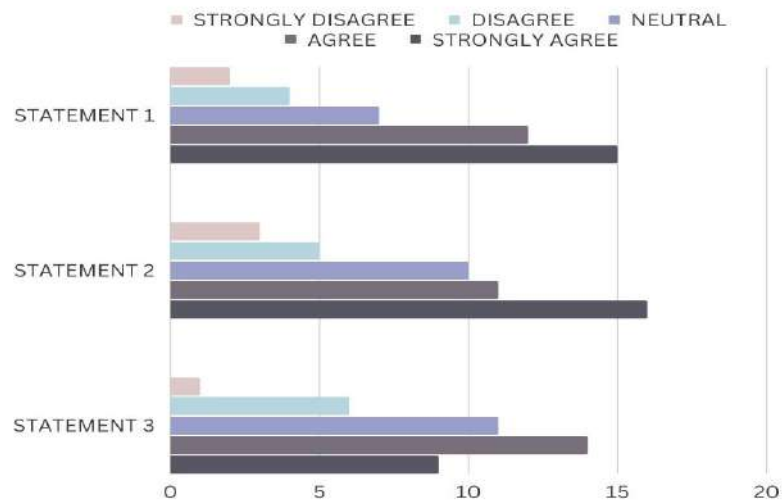


*Figure 38: Floor plan showing the identified place attachments spaces*  
*Source : Author*

---

## EMOTIONAL ATTACHMENT

Emotional Attachment					
Likert Scale Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
How strongly do you feel emotionally connected to your living space?	2	4	7	12	15
To what extent do you feel that your living space reflects your personal identity?	3	5	10	11	12
How much do you enjoy spending time in your living space?	1	6	11	14	9

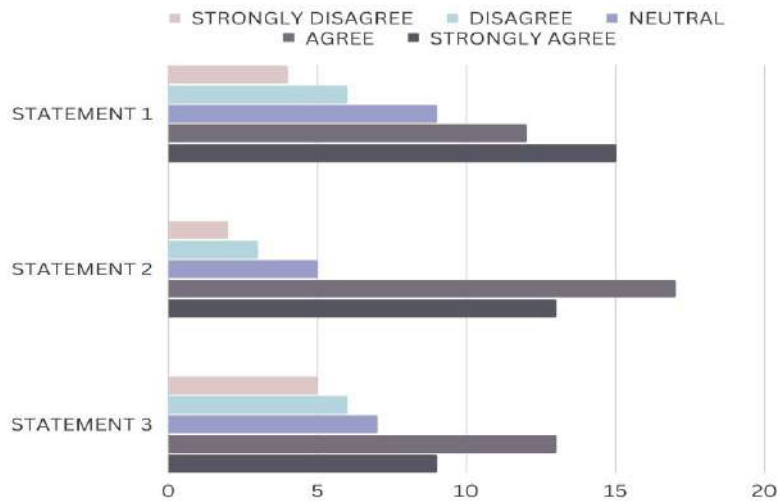


*Figure 39 : Likert scale graph*  
Source : Author

The responses provided indicate that the participants have a strong emotional relationship with their living space and regard it as a source of comfort, self-expression, and enjoyment. These findings highlight the significance of the courtyard and sitting corners as fundamental components of their living environment, which contribute to the good experiences and emotional attachment of the participants. The courtyard is most likely a central gathering spot, offering visually pleasing environment for rest, social interaction, and connection with nature. The swinging seating niches are likely to provide comfortable seating options that foster a sense of leisure and provide a cosy location for people to unwind and appreciate the environment.

## COGNITIVE ATTACHMENT

Cognitive Attachment					
Likert Scale Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
How well do you know your living space and the surrounding environment?	4	6	9	12	15
How much do you feel that you belong to the community around you?	2	3	5	17	13
How much do you think the design of your living space and surrounding environment contributes to your quality of life?	5	6	7	13	9

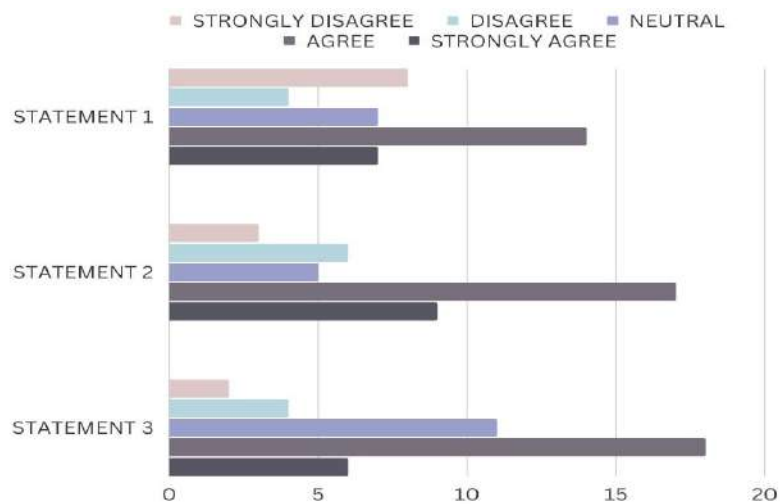


*Figure 40 : Likert scale graph*  
Source : Author

The high ratings for a sense of belonging to the community given by the participants show that they feel connected and integrated within the social fabric of their living community. This indicates that the residents have positive social interactions, a supportive atmosphere, and a sense of belonging. has a thorough understanding of the layout, amenities, and features of their respective rooms, as well as a good grasp of the surrounding area. Participants like characteristics such as windows facing the corridor, which offer a sense of connection to the centre courtyard. Their individual rooms, which are designed to make them feel safe, add to their overall sense of well-being.

## BEHAVIORAL ATTACHMENT

Behavioral Attachment					
Likert Scale Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
How often do you engage in activities in your living space and surrounding environment?	8	4	7	14	7
How much do you feel that your living space and surrounding environment are convenient and accessible for your daily activities?	3	6	5	17	9
How much do you feel safe and secure in your living space and surrounding environment?	2	4	11	18	6



*Figure 41: Likert scale graph*

Residents feel a strong sense of behavioral attachment to the home. They are more likely to engage in activities in their living space and surrounding environment, and they feel that their living space and surrounding environment are convenient and accessible for their daily activities. They also feel safe and secure in their living space and surrounding environment. The home also has a variety of common areas, such as a library, a game room, and a dining room. These areas provide residents with opportunities to participate in activities that interest them, such as reading, playing games, or simply spending time with friends.

---

#### 4.4.1 IDENTIFIED SPACE A

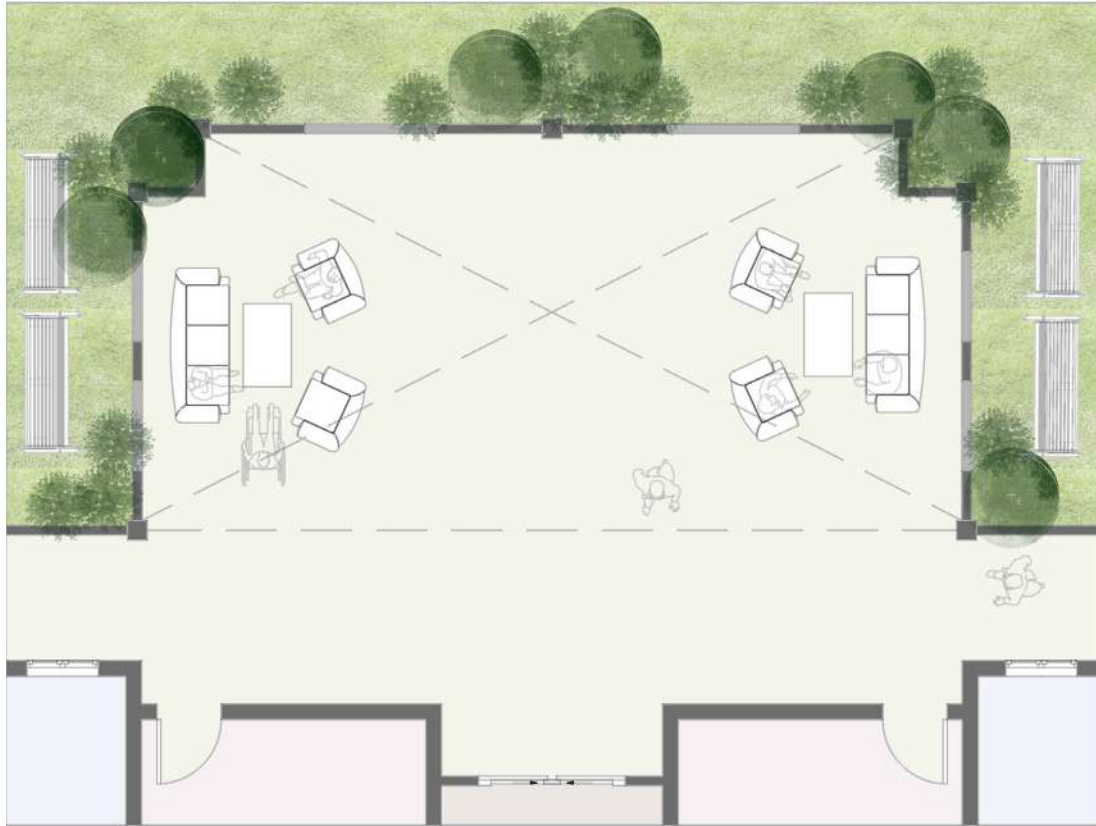


Figure 42 : Plan representing Identified space  
Source : Author

The above plan is the entrance of Senior Living which features a double-height space, revered by 12 individuals for its strong place attachment. This versatile area remains active throughout the day, serving different purposes. Residents read magazines and newspapers while their rooms are cleaned in the morning. Some individuals spend time in their rooms after lunch to rest, while others remain in the area to use their phones or read. Evenings find it transformed into a gathering place with views of the courtyard. This architectural design integrates interior and exterior elements harmoniously, nurturing a sense of community and well-being among the residents.



Figure 43 : Sitting space  
Source : Author



Figure 44 : view from the space  
Source : Author



Figure 45 : double heighted space  
Source : Author

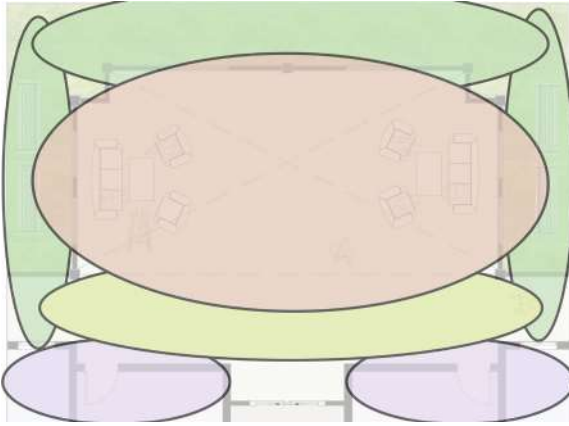


Figure 46 : photos of the space  
Source : Author

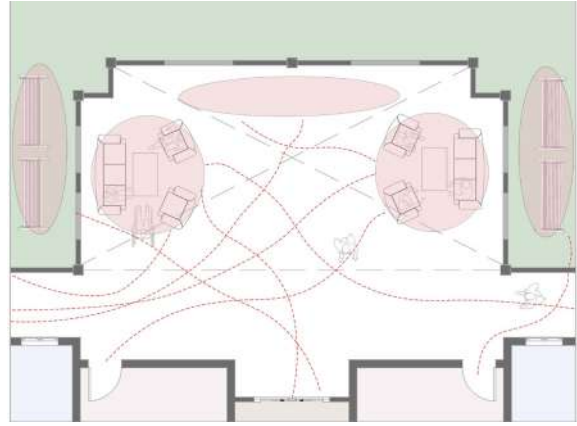


---

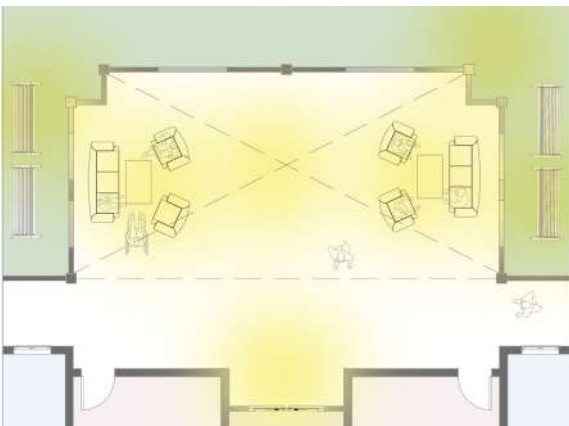
## ANALYSIS OF THE SPACE



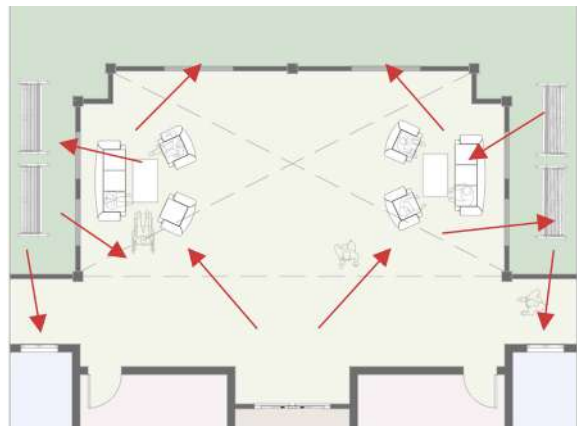
*Figure 47 : plan representing Space layout*  
Source : Author



*Figure 48 : plan representing major Movements*  
Source : Author



*Figure 49 : plan representing Social interaction*  
Source : Author



*Figure 50 : plan representing the views*  
Source : Author

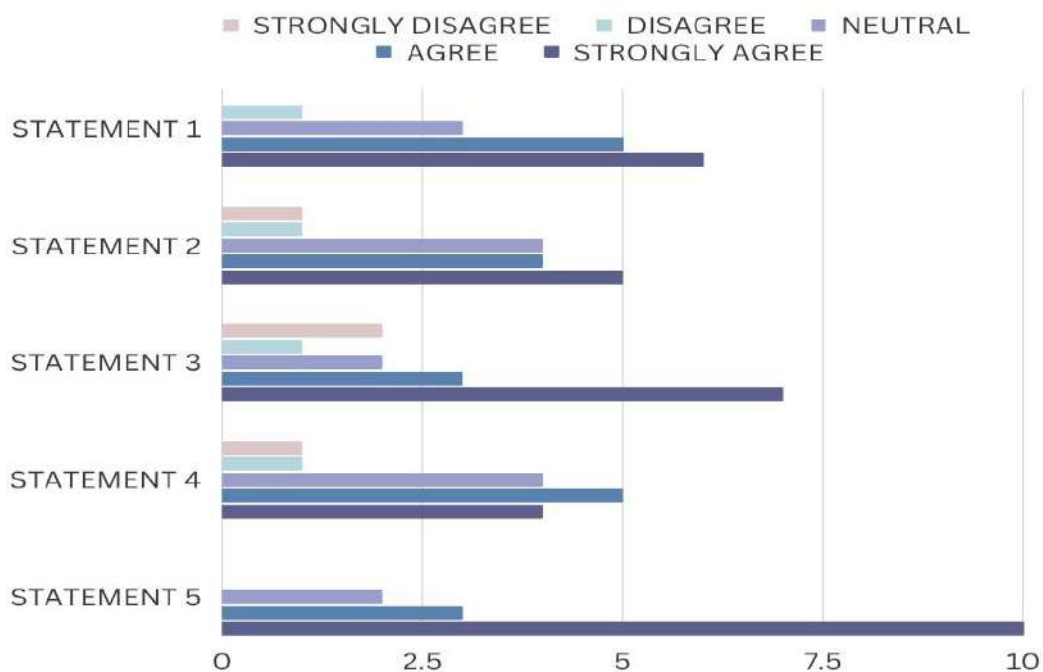
The general sitting area is spacious and comfortable, offering many seating opportunities. The semi-open spaces surrounding the sitting area provide ample light and ventilation, as well as views of the courtyard and other elements of the structure. The movement and access to the room are also well-designed. The passageway is large enough for wheelchairs and walkers, and there are no steps or other obstacles. This makes it simple for residents, especially those with restricted mobility, to get around. The common sitting area is also available to all residents, regardless of physical ability. The social interaction of the space is also enhanced by the design. The common sitting area is large enough to support a range of activities such as group meetings, games, and social events.

---

## UNDERSTANDING HOW DO THE SENIOR CITIZEN RESIDENTS FEEL ABOUT THE SPACE

5 Likert statements to understand how senior citizens feel about an identified space:

- I feel very comfortable in the identified space.
- I feel very safe and secure in the identified space.
- I feel very connected to the identified space.
- I find the identified space to be very aesthetically pleasing.
- The identified space meets my needs and preferences very well.



*Figure 51 : Likert scale graph*  
*Source : Author*

Few statements of the participants from the survey on how they feel about they space.

Here are some specific examples of how the residents feel about the space:

“I love the way the light streams in through the windows in the morning. It makes me feel so relaxed and peaceful.” - Girdhrai Ashok

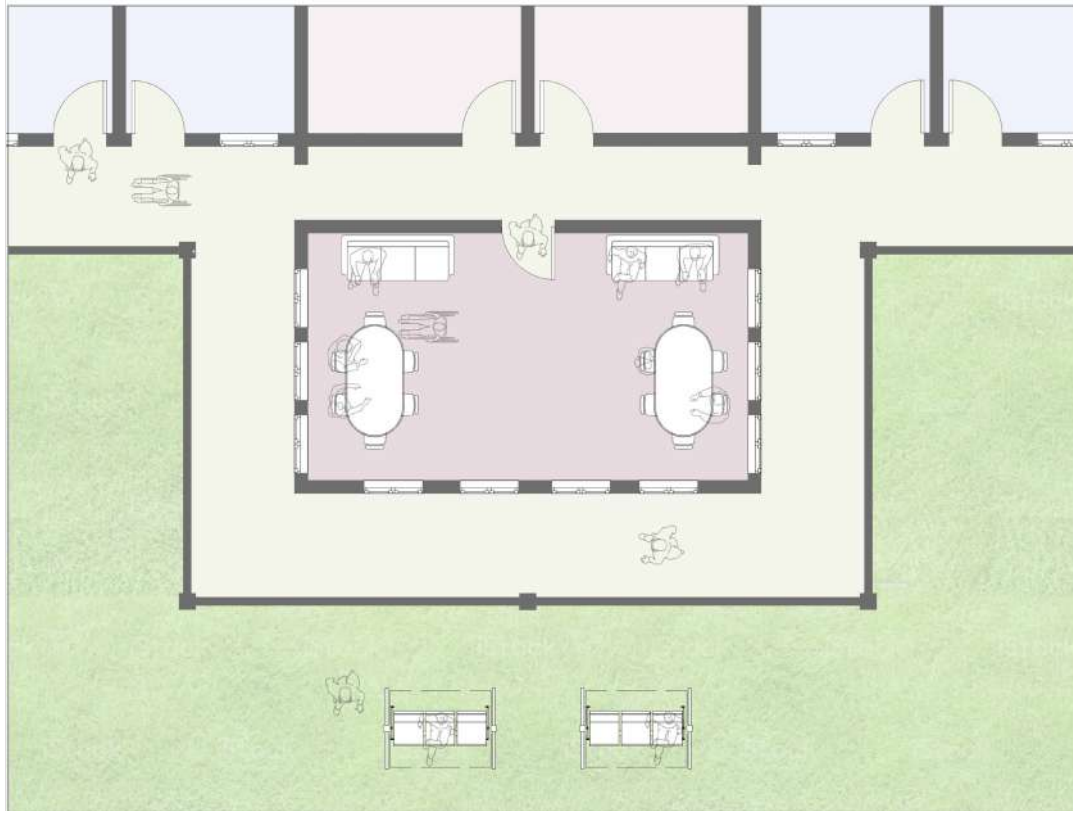
“I love that I can always find someone to talk to in the double-height space. It’s a great place to meet new people and make friends.” - Natvarlal Bhai

“I love the way the space looks at night with the lights from the courtyard shining in. It’s so beautiful and peaceful.” - Jagruti ben



---

#### 4.4.2 IDENTIFIED SPACE B



*Figure 52 : Plan representing Identified space*

*Source : Author*

The above plan shows a space with an activity room, a library, and a small gym for the senior citizen to provide a variety of space for residents to socialise, relax, and exercise. When the harsh sunshine strikes the courtyard in the afternoon, the activity room comes to life. Residents gather in this area to play games, read, or simply enjoy each other's company. The library, which is adjacent to the activity area, provides a calm and tranquil place in which people can indulge in reading materials such as books, magazines, and newspapers. This room's architectural design encourages peace and concentration while also providing a location for intellectual enjoyment and quiet contemplation. Residents take advantage of the small gym next to the library.



*Figure 53 : photos of the space*  
*Source : Author*



*Figure 54 : photos of the space*  
*Source : Author*



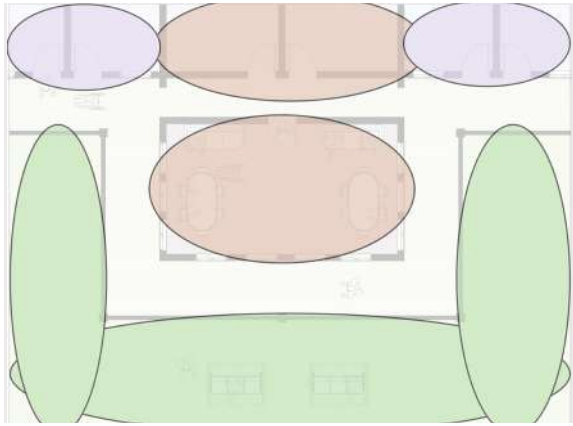
*Figure 55 : photos of the space*  
*Source : Author*



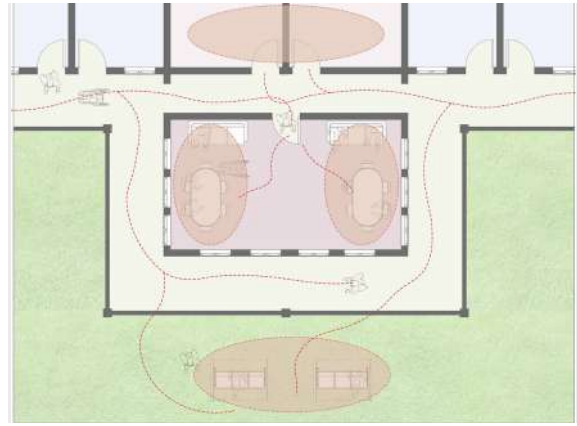
*Figure 56 : photos of the space*  
*Source : Author*

---

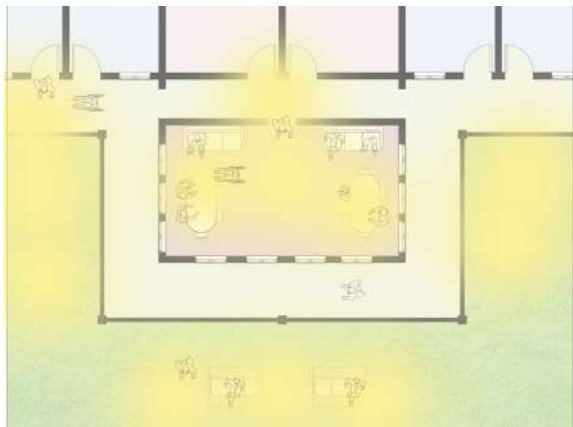
## ANALYSIS OF THE SPACE



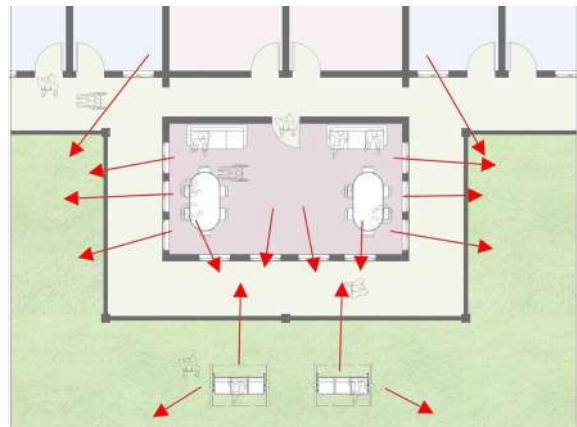
*Figure 57: plan representing Space layout*  
Source : Author



*Figure 58: plan representing major Movements*  
Source : Author



*Figure 59: plan representing Social interaction*  
Source : Author



*Figure 60: plan representing the views*  
Source : Author

The layout of the activity room, library, and tiny gym is intended to encourage social interaction and physical activity. The corridor that passes through the area serves as a buffer between the various zones, allowing residents to move freely between them without feeling vulnerable. The activity room's wide windows provide natural light and views of the surrounding greenery, which can contribute to a sense of calm and well-being. The space's accessibility and movement are also designed to be simple and convenient. The corridor is sufficiently broad for wheelchairs and walkers, and there are no steps or other obstacles. This makes it simple for residents to access and move about the room. The variety of activities provided enhances the social interaction in the space. In addition to books, games, and puzzles, the library also contains cardio and strength-training apparatus. This allows residents to discover activities in which they have an interest and can participate with others.

---

## UNDERSTANDING HOW DO THE SENIOR CITIZEN RESIDENTS FEEL ABOUT THE SPACE

5 Likert statements to understand how senior citizens feel about an identified space:

- I feel very comfortable in the identified space.
- I feel very safe and secure in the identified space.
- I feel very connected to the identified space.
- I find the identified space to be very aesthetically pleasing.
- The identified space meets my needs and preferences very well.

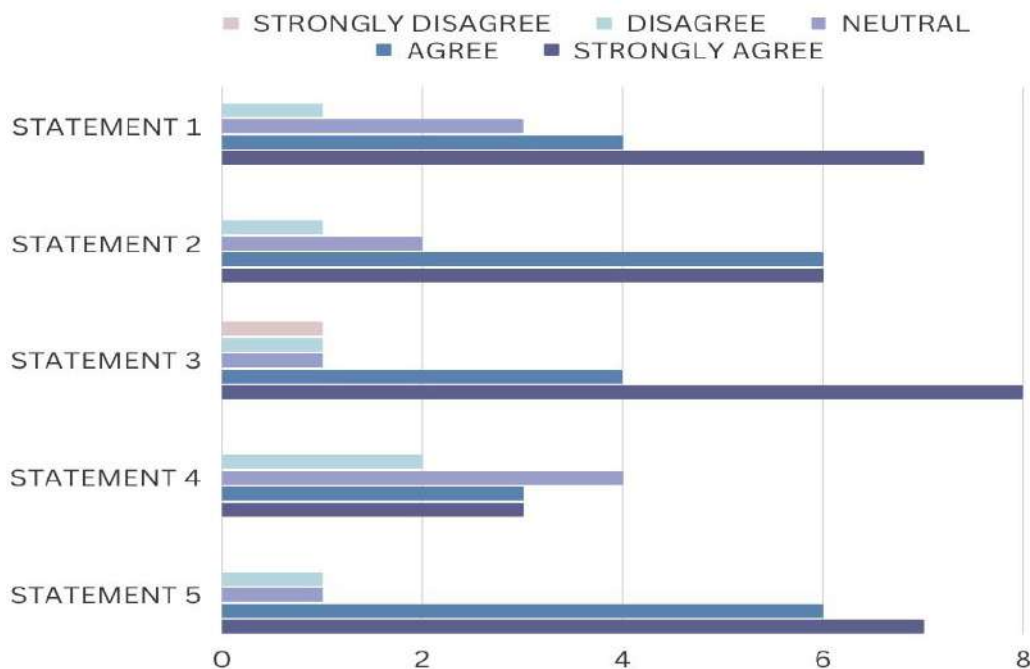


Figure 61 : Likert scale graph  
Source : Author

Few statements of the participants from the survey on how they feel about they space.

“I love the way the activity room is always so lively and inviting. It’s a great place to meet up with friends and have some fun.” - Indira Ben

“I love the way the library is so quiet and peaceful. It’s the perfect place to relax and read a book.” - Jaya Ben

“I love the way the gym is so well-equipped. It’s a great place to stay active and healthy.” - Anand Bhai

---

#### 4.4.3 IDENTIFIED SPACE C



*Figure 62 : Plan representing Identified space*  
*Source : Author*

The above plan shows a space which includes a semi-open common sitting space niche which acts as a small, sheltered space that is connected to the green space adjacent to it. The niche is quiet and breezy due to the presence of trees. Throughout the day, residents use the niche to sit, read, or simply relax. The seating is comprised of soft, comfortable materials, and residents have access to tables and chairs. In addition, there is a small fountain in the courtyard that provides a soothing sound. The niche is shaded from the sun and provides a sense of isolation, making it an inviting place for residents to socialise and unwind.



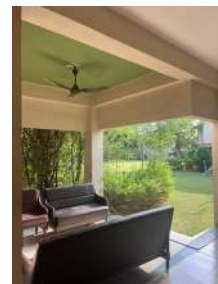
*Figure 63 : photos of the space*  
*Source : Author*



*Figure 64 : photos of the space*  
*Source : Author*



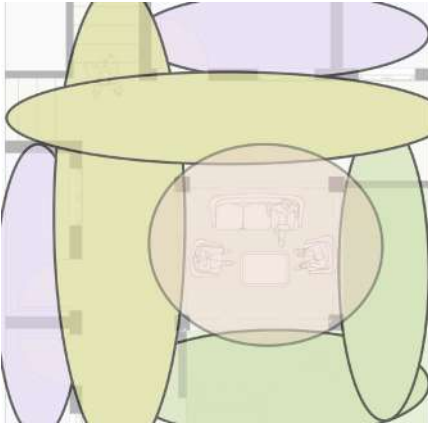
*Figure 65 : photos of the space*  
*Source : Author*



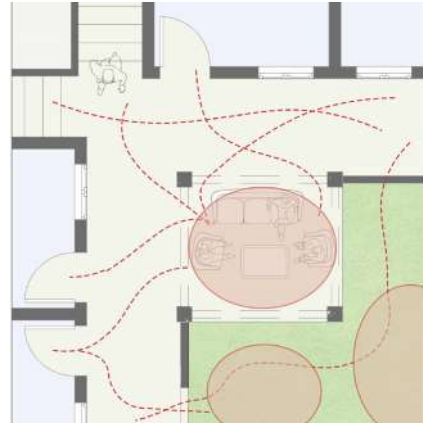
*Figure 66 : photos of the space*  
*Source : Author*

---

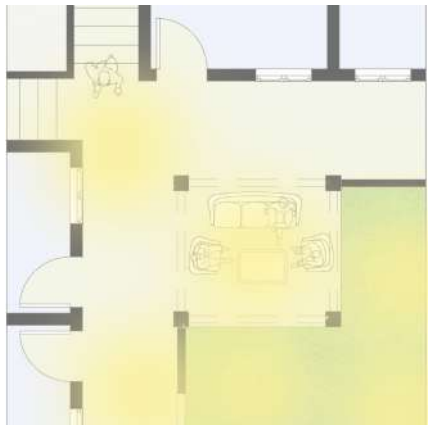
## ANALYSIS OF THE SPACE



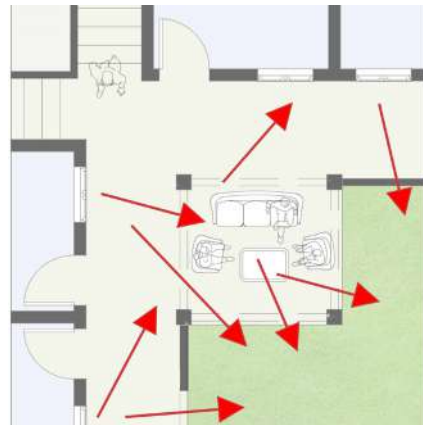
*Figure 67 : plan representing Space layout*  
Source : Author



*Figure 68 : plan representing major Movements*  
Source : Author



*Figure 69 : plan representing Social interaction*  
Source : Author



*Figure 70 : plan representing the views*  
Source : Author

The spatial layout of the space is designed to promote social interaction and movement. The corridor functions as a buffer between the rooms and the space, giving a sense of privacy and safety. The space is also linked to the ground-floor courtyard, giving people access to the outside. The space has been designed so that it is easy and handy for residents to move around and get in and out of it. The corridor is wide and well-lit, which makes it easy for people to get around. The room can also be reached by wheelchairs and other devices that help people move around. Having comfortable chairs and tables in the room makes it easier for people to talk to each other. Seating is set up in groups, which makes it easier for people to talk to each other.

---

## UNDERSTANDING HOW DO THE SENIOR CITIZEN RESIDENTS FEEL ABOUT THE SPACE

5 Likert statements to understand how senior citizens feel about an identified space:

- I feel very comfortable in the identified space.
- I feel very safe and secure in the identified space.
- I feel very connected to the identified space.
- I find the identified space to be very aesthetically pleasing.
- The identified space meets my needs and preferences very well.

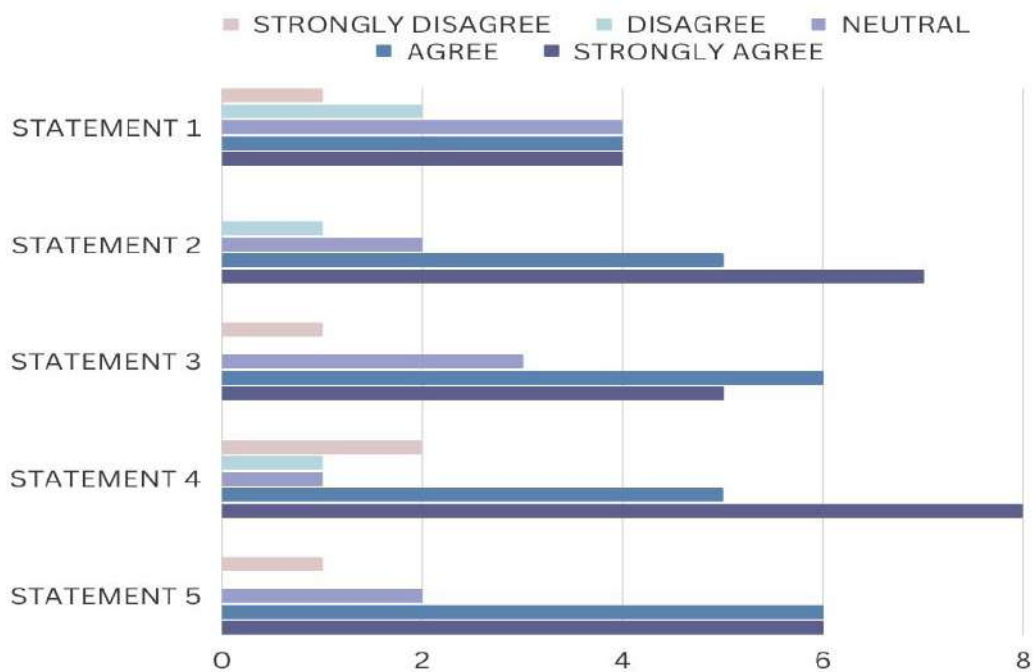


Figure 71 : Likert scale graph  
Source : Author

Few statements of the participants from the survey on how they feel about they space.

"I love the way the niche is so quiet and peaceful. It's the perfect place to relax and read a book." - Urmila Ben

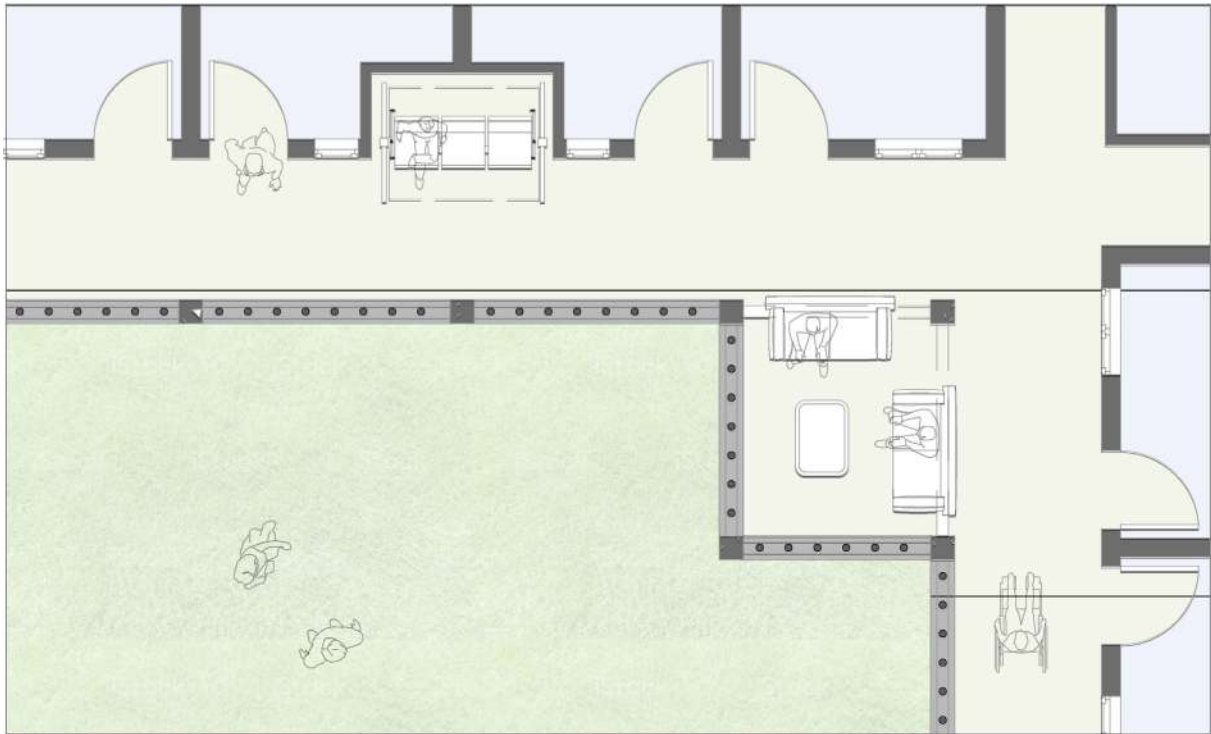
"I love the way the niche is so sheltered from the sun. It's the perfect place to sit and enjoy the breeze." - Suman Ben

"I love the way the niche is so connected to the green space. It's the perfect place to take a break and enjoy the outdoors." - Indira Ben



---

#### 4.4.4 IDENTIFIED SPACE D



*Figure 72 : Plan representing Identified space*  
*Source : Author*

The above plan demonstrates a room that is situated on the first floor of the building and can be reached from the corridor. It is a semi-open space, with a large window that provides views of the courtyard on the ground floor. Residents love to congregate and have friendly conversations with their neighbours in this area. During the evenings bingo and other card games are two of the activities that senior citizens like to do in this space. The views of the courtyard provide a sense of peace and tranquility.



*Figure 73 : photos of the space*  
*Source : Author*



*Figure 74 : photos of the space*  
*Source : Author*



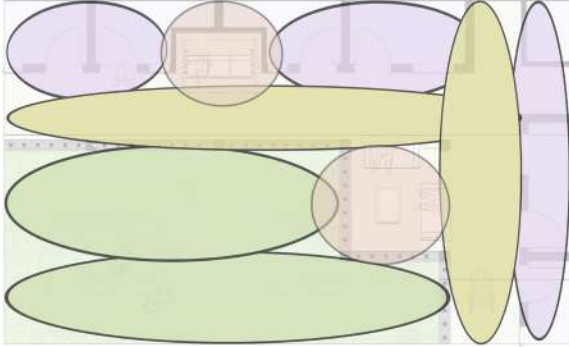
*Figure 75 : photos of the space*  
*Source : Author*



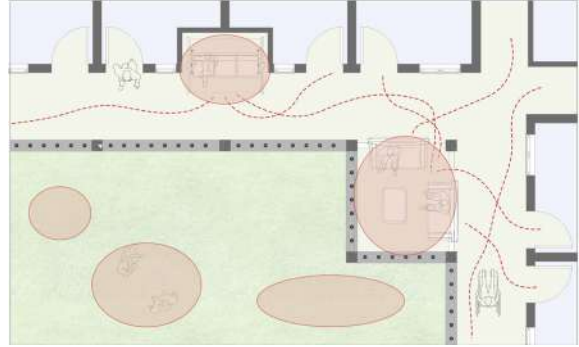
*Figure 76 : photos of the space*  
*Source : Author*

---

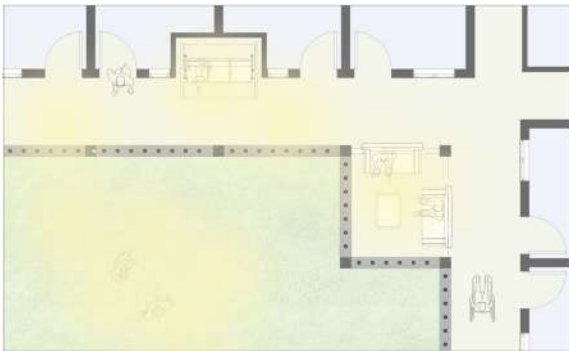
## ANALYSIS OF THE SPACE



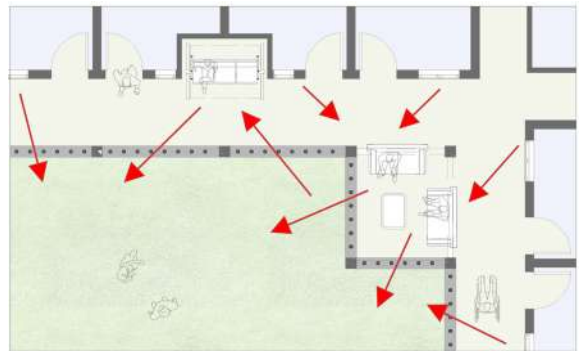
*Figure 77 : plan representing Space layout*  
Source : Author



*Figure 78 : plan representing major Movements*  
Source : Author



*Figure 79 : plan representing Social interaction*  
Source : Author



*Figure 80 : plan representing the views*  
Source : Author

The spatial layout of the space is designed on the first floor with a large corridor that acts as a transition between the rooms and the semi-open sitting space. The swing sitting niche provides a buffer between the rooms and the corridor, and it also serves as a place for people to gather and socialize. The corridor is wide and well-lit, making it easy for people to move around and interact with each other. The social interaction in the space is enhanced by the variety of seating options and the views of the courtyard. The swing sitting niche is a popular spot for people to gather and socialize. The transitional sitting areas between the rooms are also popular spots for people to relax and chat. The seating areas on the first floor offer a variety of views of the courtyard, which encourages people to spend time in this space and interact with each other.

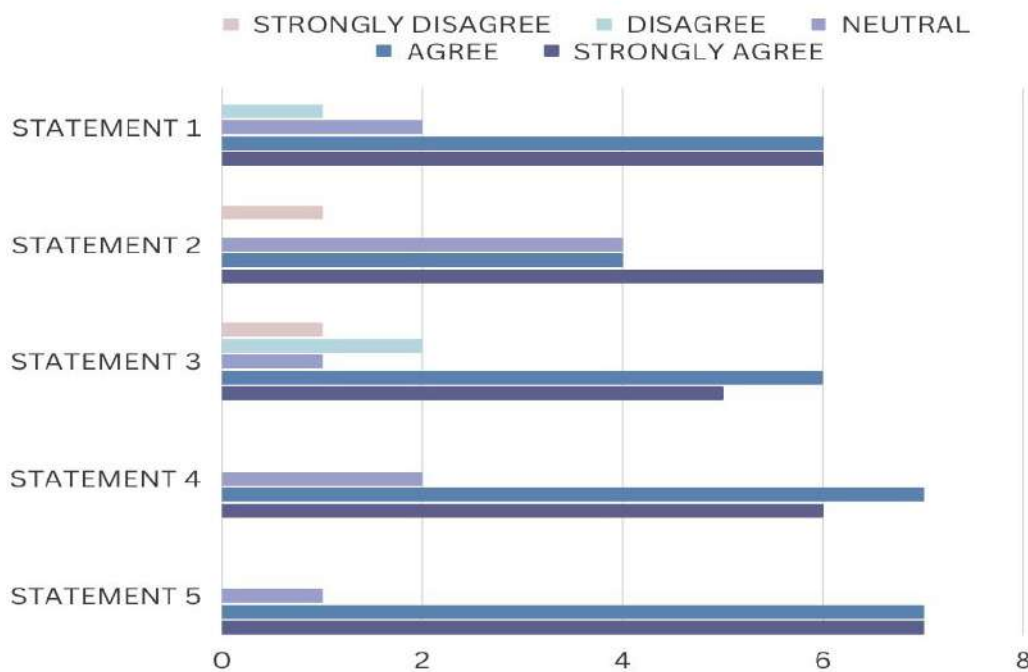


---

## UNDERSTANDING HOW DO THE SENIOR CITIZEN RESIDENTS FEEL ABOUT THE SPACE

5 Likert statements to understand how senior citizens feel about an identified space:

- I feel very comfortable in the identified space.
- I feel very safe and secure in the identified space.
- I feel very connected to the identified space.
- I find the identified space to be very aesthetically pleasing.
- The identified space meets my needs and preferences very well.



*Figure 81 : Likert scale graph*  
*Source : Author*

Few statements of the participants from the survey on how they feel about they space.

"I love the way the corridor is so wide and well-lit. It's so easy to move around and interact with people." - Asha Ben

"I love the way the swing sitting niche is so inviting. It's the perfect place to gather with friends and family." - Hiren Bhai

"I love the way the courtyard views are so beautiful. It's so relaxing to sit and enjoy the outdoors." - Indira Ben

---

#### 4.5 JEEVAN SANDHYA OLD AGE HOME



*Figure 82 : Jeevan sandhya old age home with context*  
*Source : Google earth*

Jeevan Sandhya Old Age Home, located near Ankur Char Rasta in Ahmedabad, is envisioned as a nurturing and inclusive space for senior citizens. The location benefits from its proximity to the main road network, ensuring easy access to public transportation for residents, staff, and visitors. The readily accessible entry makes it easy for people to get in and out of the building. The area around Ankur Char Rasta is an enjoyable spot for social interaction due to the various cross junctions corners. The area is characterized by a mix of residential and commercial establishments, offering opportunities for interactions with the local community and access to nearby amenities. The strategic location provides convenience and accessibility to public transportation and nearby amenities. The balance between open space and built density makes for a peaceful atmosphere with plenty of open space and privacy and comfort for the people who live there. The design gives priority to accessibility by including features that make it easy to move around and make sure that important amenities are available. These places give people a chance to relax, socialise, and interact with nature, which makes them feel more at peace and improves their quality of life.

---

#### 4.5.1 SPATIAL LAYOUT



*Figure 84 : Entrance of the property*  
Source : Author



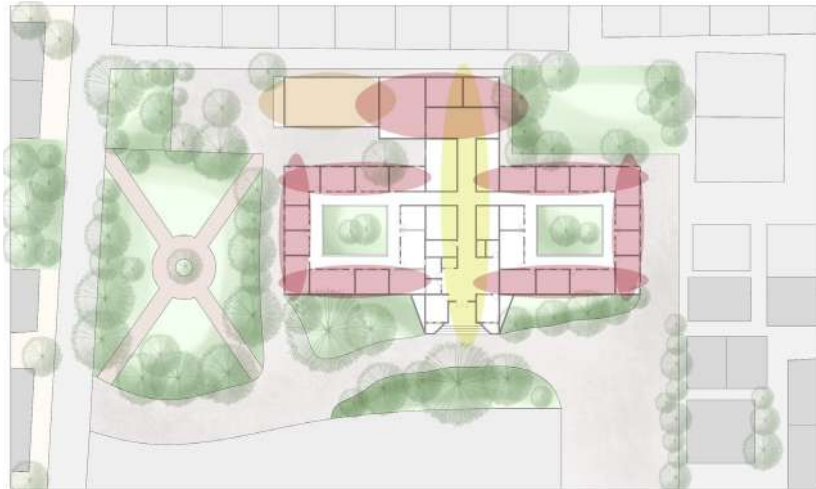
*Figure 85 : Common hall of the building*  
Source : Author



*Figure 86 : Accessibility to the building*  
Source : Author



*Figure 87 : huge common garden*  
Source : Author



*Figure 83 : Spatial layout floor plan*  
Source : Author

The magnificent entrance leads to a large common hall used for gatherings. An administrative office is adjacent to the common hall. A staircase leads to additional living areas on the first level from the common hall. Residents can choose either floor based on their mobility and desire. To foster community and socialisation, the common hall and surrounding areas provide plenty of seating. These spaces are for residents to watch TV or relax. A corridor with rooms on either side runs from the common hall. Residents have privacy and comfort in the rooms. Between the rooms, there is a courtyard area that makes living there better. This courtyard offers people natural light and peace. The main kitchen is accessible at the end of the corridor. The kitchen has a large dining area for residents to eat together. The dining hall encourages inhabitants to socialise. A small medical clinic serves residents at the back of the property. The clinic opens to a vast green space, creating a peaceful and therapeutic atmosphere for patients to connect with nature and enjoy outdoor spaces.

---

#### 4.5.2 ACCESSIBILITY AND MOVEMENT



*Figure 89 : Corridor toward the rooms*  
Source : Author



*Figure 90 : Sitting spaces under the trees*  
Source : Author



*Figure 91 : Medical examination space next to the garden*  
Source : Author



*Figure 92 : Entrance of the building*  
Source : Author



*Figure 88 : Accessibility Floor plan*  
Source : Author

The design of the facility ensures that all areas are accessible, fostering mobility, independence, and a sense of leisure on the premises. The entrance has wide doorways and a ramp for wheelchair users and individuals with difficulty getting around. The staircase leading to the first floor, provides access to additional amenities and living quarters is equipped with sturdy handrails and appropriate lighting, ensuring safety and facilitating movement for residents who are comfortable using stairs. The rooms are spacious, allowing residents to move around without difficulty. Adequate space is allocated for the positioning of mobility aids, such as walkers or wheelchairs, ensuring that residents can move around their rooms without obstacles. The outdoor spaces of Jeevan Sandhya Old Age Home are also carefully planned to enhance access and movement. Ample pathways, ramps, and handrails are incorporated, ensuring that residents can enjoy the surrounding gardens and green spaces comfortably.



---

#### 4.5.3 NATURAL ENVIROMENT INTEGRATION



*Figure 94 : Grass lawn near the entrance*  
Source : Author



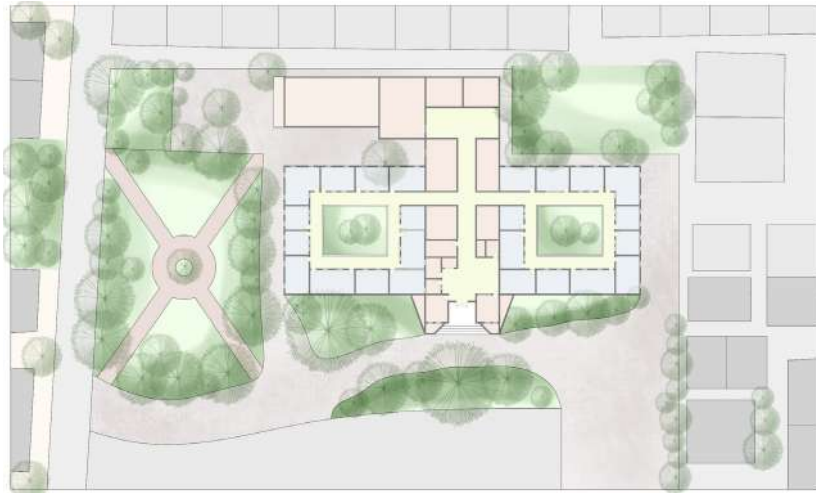
*Figure 95 : Sitting spaces in the green law*  
Source : Author



*Figure 96 : Walking pavement around green spaces*  
Source : Author



*Figure 97 : Central courtyard around the rooms*  
Source : Author



*Figure 93 : Green areas plan*  
Source : Author

When entering the property, a large sitting area is situated directly opposite the entrance. This expansive sitting area provides residents, staff, and guests with a space to congregate, unwind, and engage in conversation. Surrounding this sitting space, abundant greenery is integrated, offering a visual connection with nature. On the left side of the building, there is a big garden space that gives residents a quiet place to enjoy nature and do various activities outside. This expansive garden provides opportunities for strolling, and socialising among the luscious greenery. Incorporating broad pathways throughout the garden ensures that residents can easily access various areas and appreciate the scenery at their own pace. The garden functions as an inclusive space, providing benches and seating areas for rest and relaxation for residents of varying mobility levels. Two tiny courtyards strategically surround the residential rooms within the facility. These courtyards serve as intimate and tranquil spaces where residents can find solitude, engage in mild outdoor activities, or simply breathe in the fresh air.

---

#### 4.5.4 SOCIAL INTERACTION SPOTS



*Figure 98 : Plan showing Social interaction in the Morning*  
Source : Author



*Figure 99 : Plan showing Social interaction in the Afternoon*  
Source : Author



*Figure 100 : Plan showing Social interaction in the Evening*  
Source : Author



*Figure 101 : Activities in the hall*  
Source : Author



*Figure 102 : Sitting spaces in the common hall*  
Source : Author



*Figure 103 : swing seatings across the main building*  
Source : Author



*Figure 104 : shaded areas in the green spaces*  
Source : Author

In the morning, residents gather in the courtyard to enjoy the fresh air, chat with their neighbors, and appreciate the simple pleasures of the day. The corridor, which has benches, becomes a lively place where residents meet and greet each other, sharing stories and building a strong sense of community. It serves as a pathway that connects everyone and enhances their bond. These interactions bring happiness, friendship, and a feeling of belonging to the residents, making their mornings more special. By spending time in the green spaces, chatting on the benches, and participating in various activities, residents find joy and a sense of connection that enriches their daily routines.

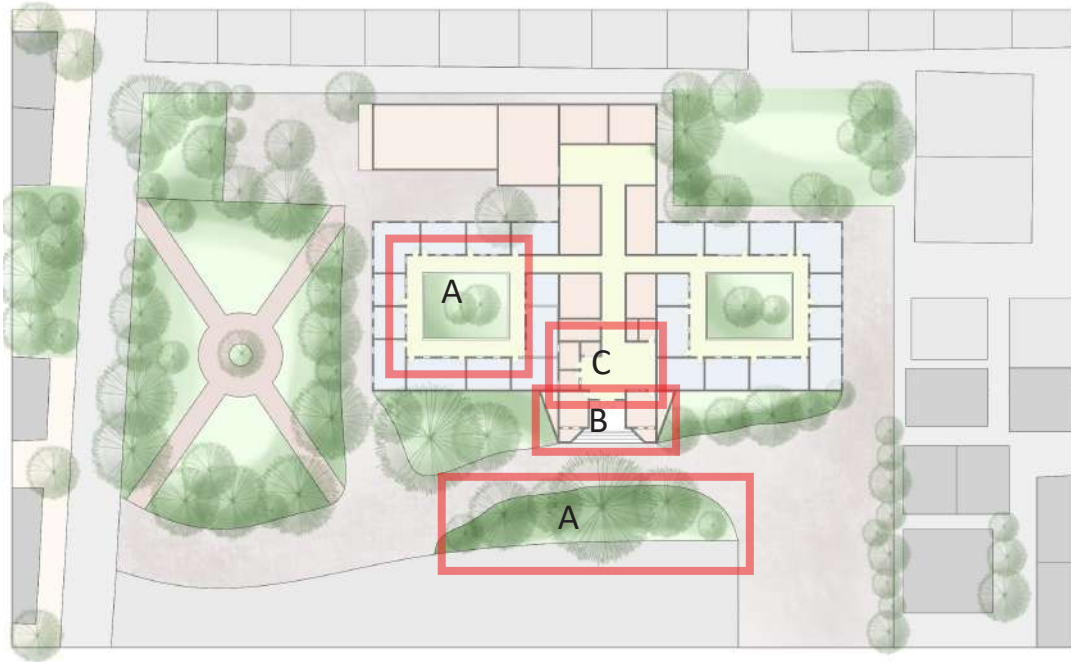
The common hall is a welcoming space designed to encourage social interactions. With ample seating and cozy lighting, it creates a comfortable environment for the residents in the afternoon while reading newspaper or watching tv etc. However, some retreat to their rooms but still find comfort of their personal spaces, they delight in the beautiful views offered by the courtyard through their windows.

In the evenings, the hall and the access to the porch attract people together and make them happy. A lot of different things happen here, like bhajans (devotional songs), dairas (spiritual meetings), and kirtans (devotional singing). The porch door, which is next to the hall, has its own charm in the evenings. When the weather is nice enough, people gather in the open space under the trees. Swinging seats and comfortable places to sit make it easy for senior citizens to talk to each other. The peaceful surroundings and the sound of leaves moving give them a natural setting for their conversations, making them feel more at ease and closer to each other.

---

#### 4.6 UNDERSTANDING THE SPACES SENIOR CITIZEN ARE ATTACHED TO

In the plan below the marked spaces are the most repeated by the residents of the senior living. Further more the spaces are understood in details to find out the architectural features which add on to the space and their attachment with the space



*Figure 105 : Floor plan showing the identified place attachments spaces*  
*Source : Author*



Emotional Attachment					
Likert Scale Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
How strongly do you feel emotionally connected to your living space?	1	1	9	6	8
To what extent do you feel that your living space reflects your personal identity?	4	3	8	6	4
How much do you enjoy spending time in your living space?	1	2	4	7	11

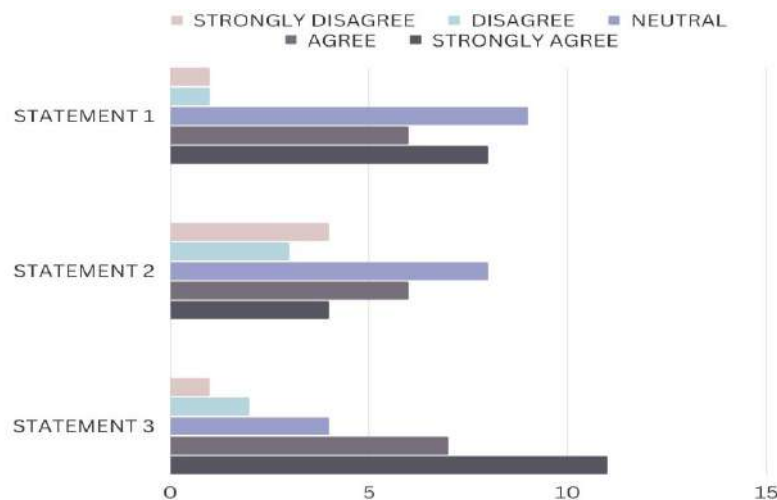


Figure 106 : Likert scale graph  
Source : Author

The responses provided indicate that the participants are naturally emotionally connected due to the sense of community that is fostered in the home. The residents have created a close-knit group of friends and family, and they support each other. living spaces, such as the courtyard in their living space around their rooms gives them easy access to the nature and make them feel more lively and engage in other activities, more than half of them people feel a sense of belonging to the senior living. Almost all of them enjoy spending time around the property as it offers numerous spaces to interact such as the wing porch area opposite to the entrance of the building, the garden that they can walk in the evening.

Cognitive Attachment					
Likert Scale Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
How well do you know your living space and the surrounding environment?	2	2	3	6	12
How much do you feel that you belong to the community around you?	3	5	3	4	10
How much do you think the design of your living space and surrounding environment contributes to your quality of life?	2	4	8	3	9

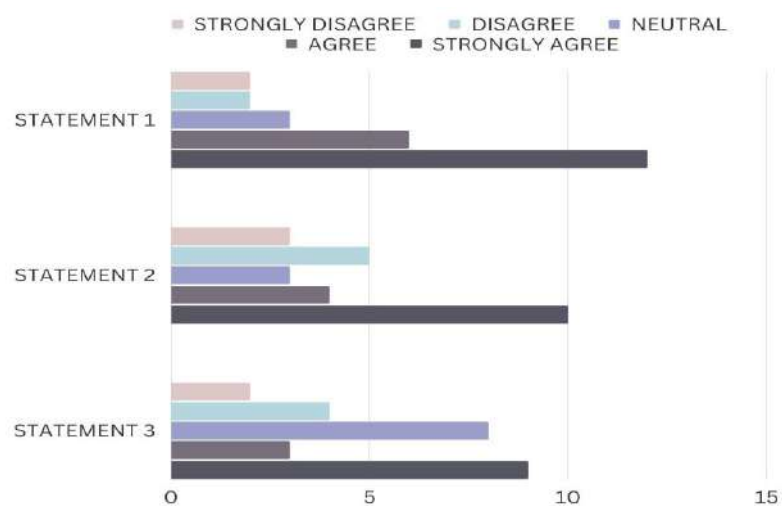


Figure 107 : Likert scale graph  
Source : Author

The majority of residents feel that they know their living space and the surrounding environment well. They also feel that they belong to the community around them, and that the design of their living space and surrounding environment contributes to their quality of life. The layout of the senior living is simple and easy to navigate. The design is based on the principles of environmental psychology, and it is intended to create a sense of familiarity and belonging, which can help to improve cognitive function.

Behavioral Attachment					
Likert Scale Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
How often do you engage in activities in your living space and surrounding environment?	3	4	6	4	8
How much do you feel that your living space and surrounding environment are convenient and accessible for your daily activities?	2	3	6	7	7
How much do you feel safe and secure in your living space and surrounding environment?	1	2	6	5	11

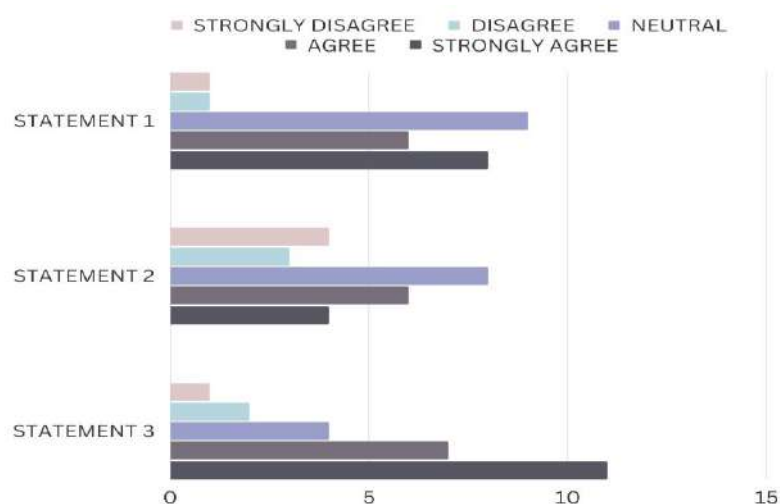
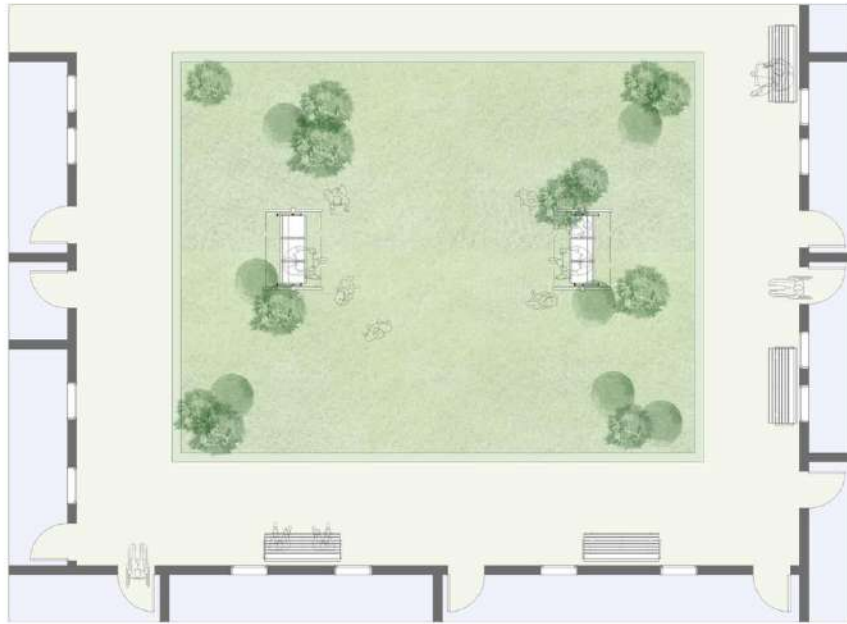


Figure 108 : Likert scale graph  
Source : Author

The architectural design of Jeevan Sandhya Senior Old Age Home contributes to the behavioral attachment of the residents in a number of ways. The home is designed to be open and inviting, accessible, stimulating and engaging, and safe and secure. These design features create a positive and supportive environment for residents, which helps to promote their well-being and quality of life. The home's surrounding environment is beautifully landscaped and provides residents with a place to walk, garden, or simply enjoy the outdoors. This can help to improve residents' physical and mental health.

---

#### 4.6.1 IDENTIFIED SPACES



*Figure 109 : Plan representing Identified space*  
*Source : Author*

The above plan is the living space community which is designed to promote a sense of connection to nature and community. The central courtyard is a focal point of the space, and each room has easy access to it. The courtyard is surrounded by a 2-meter-wide corridor, which provides a buffer between the indoor and outdoor spaces. The corridor that surrounds the courtyard provides a path for residents to move around the space, and the large windows in the activity room allow natural light and views of the surrounding green spaces to enter the space. In the mornings, residents often sit in the courtyard to read newspapers, have breakfast, or chat with each other. The wide windows in the rooms provide residents with a view of the courtyard, even when they are inside their rooms. In the evenings, residents often gather in the courtyard to socialize, play games, or simply relax.



*Figure 110 : photos of the space*  
*Source : Author*



*Figure 111 : photos of the space*  
*Source : Author*



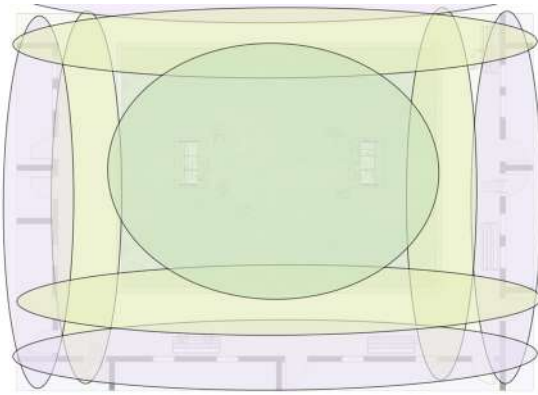
*Figure 112 : photos of the space*  
*Source : Author*



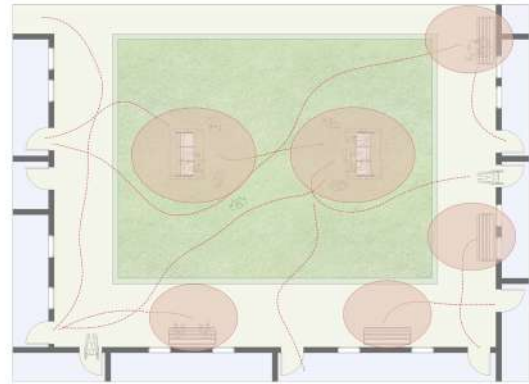
*Figure 113 : photos of the space*  
*Source : Author*

---

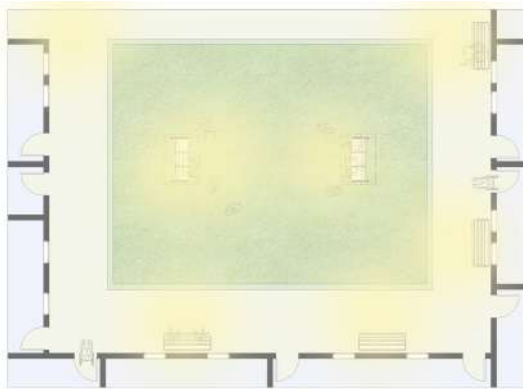
## ANALYSIS OF THE SPACE



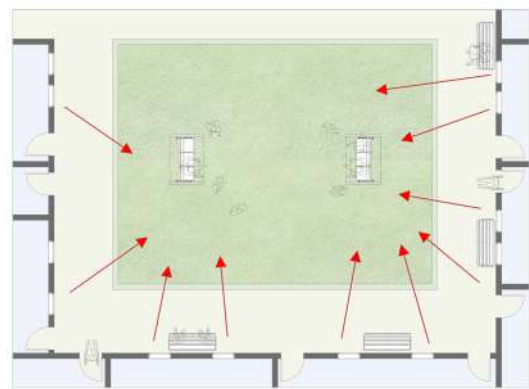
*Figure 114 : plan representing Space layout*  
Source : Author



*Figure 115 : plan representing major Movements*  
Source : Author



*Figure 116 : plan representing Social interaction*  
Source : Author



*Figure 117 : plan representing the views*  
Source : Author

The spatial layout of the facility is intended to promote social interaction while also providing private places. Rooms are organised around the centre courtyard, which acts as a focal point. This fosters a sense of community by allowing residents to see and engage with one another. The space is designed to facilitate fluid movement and simple access. Residents can freely pass each other in the corridor that surrounds the courtyard. The facility is intended to be usable by all residents, regardless of physical abilities. This includes broad doorways, ramps, and restrooms that are easily accessible. This allows all inhabitants to participate in social activities and enjoy the space.

---

## UNDERSTANDING HOW DO THE SENIOR CITIZEN RESIDENTS FEEL ABOUT THE SPACE

5 Likert statements to understand how senior citizens feel about an identified space:

- I feel very comfortable in the identified space.
- I feel very safe and secure in the identified space.
- I feel very connected to the identified space.
- I find the identified space to be very aesthetically pleasing.
- The identified space meets my needs and preferences very well.

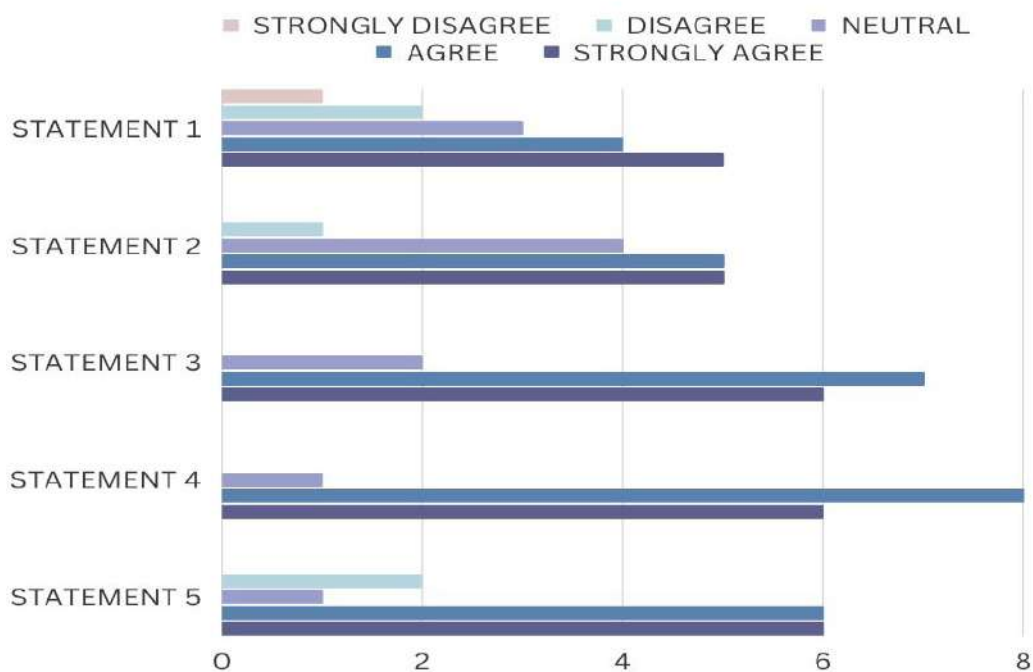


Figure 118 : Likert scale graph  
Source : Author

Few statements of the participants from the survey on how they feel about they space.

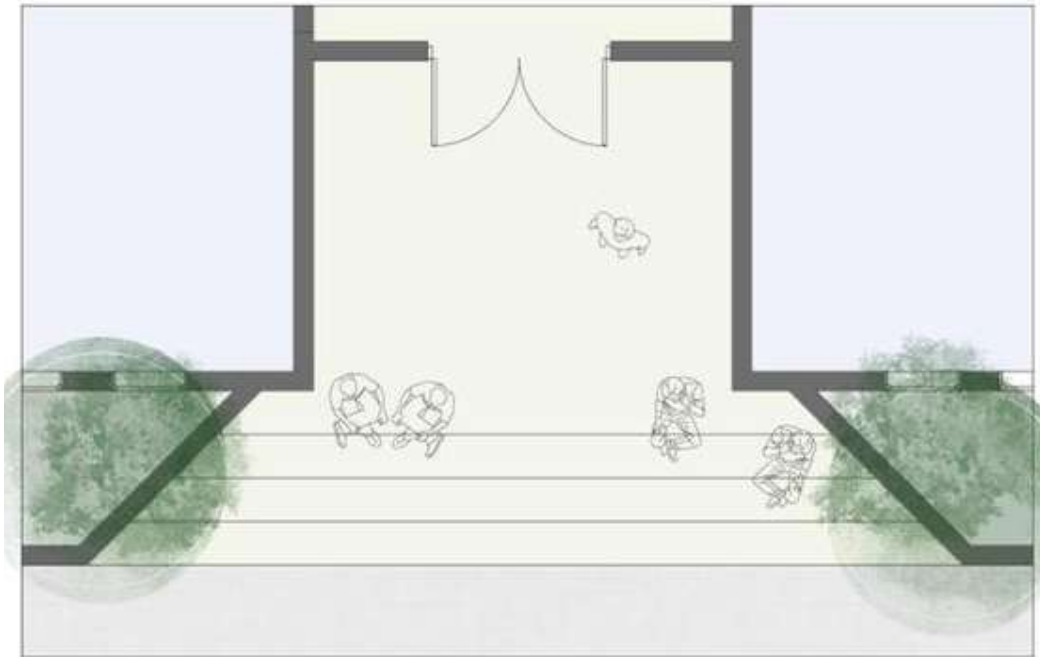
“I love the way the courtyard is so peaceful and relaxing. It’s the perfect place to start my day.” - Jaya Ben

“I love the way the courtyard is so vibrant and lively in the evenings. It’s the perfect place to end my day.” - Natvarlal Bhai

“I love the way the courtyard is so connected to nature. It’s the perfect place to feel at peace.” - Suman Ben

---

#### 4.6.2 IDENTIFIED SPACES



*Figure 119 : Plan representing Identified space*  
*Source : Author*

The entrance of the building is a major interaction spot for the residents. The space is used for a variety of activities, including socializing, reading, and playing games. In the afternoon, a few of the residents like to read their bhajan kirtan books in the entrance. They sit in groups and discuss the meaning of the texts. In the evening, the residents of Jeevan Sandhya gather in the entrance to sit on the stairs and interact with each other. They chat, laugh, and simply enjoy each other's company. The space is well-lit and has a view of the surrounding area, which makes it a pleasant place to spend time.



*Figure 120 : photos of the space*  
*Source : Author*



*Figure 121 : photos of the space*  
*Source : Author*

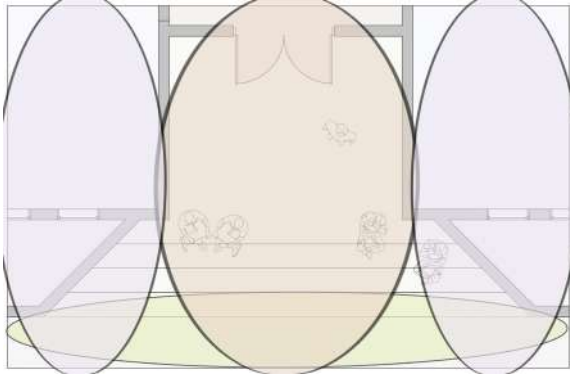


*Figure 122 : photos of the space*  
*Source : Author*

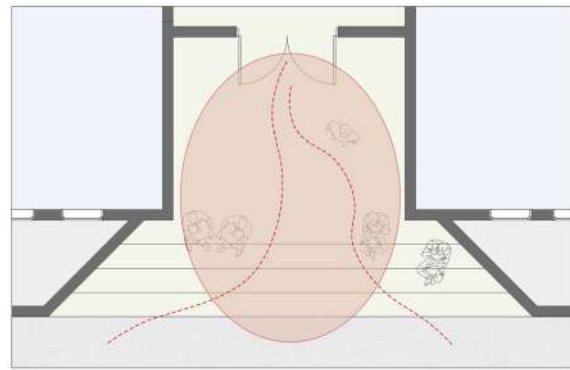


---

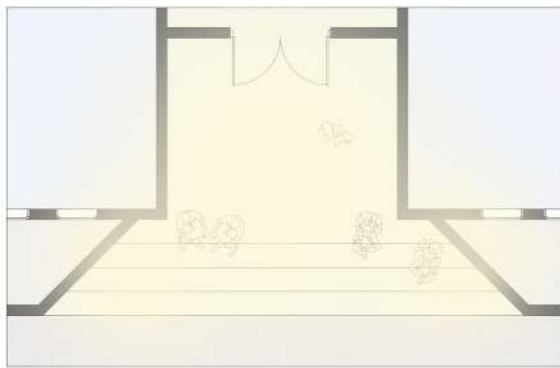
## ANALYSIS OF THE SPACE



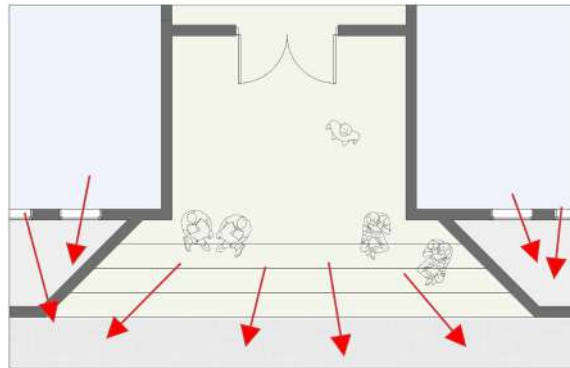
*Figure 123 : plan representing Space layout*  
Source : Author



*Figure 124 : plan representing major Movements*  
Source : Author



*Figure 125 : plan representing Social interaction*  
Source : Author



*Figure 126 : plan representing the views*  
Source : Author

The entrance is large and airy, providing a shaded and cool space for residents to gather and socialize. The entrance acts as an interactive place, with intentionally framed views of the surrounding landscape. The movement and access to the space are intended to be fluid and simple. The entrance is wide enough for residents to comfortably pass one another. This allows people to effortlessly move between interior and outdoor spaces, and it also contributes to a sense of openness and accessibility. The enormous size and open mood of the entrance improve the social interaction of the space. The space is large enough to accommodate a large number of residents, and the open environment makes it a comfortable and appealing place to gather and socialise.



---

## UNDERSTANDING HOW DO THE SENIOR CITIZEN RESIDENTS FEEL ABOUT THE SPACE

5 Likert statements to understand how senior citizens feel about an identified space:

- I feel very comfortable in the identified space.
- I feel very safe and secure in the identified space.
- I feel very connected to the identified space.
- I find the identified space to be very aesthetically pleasing.
- The identified space meets my needs and preferences very well.

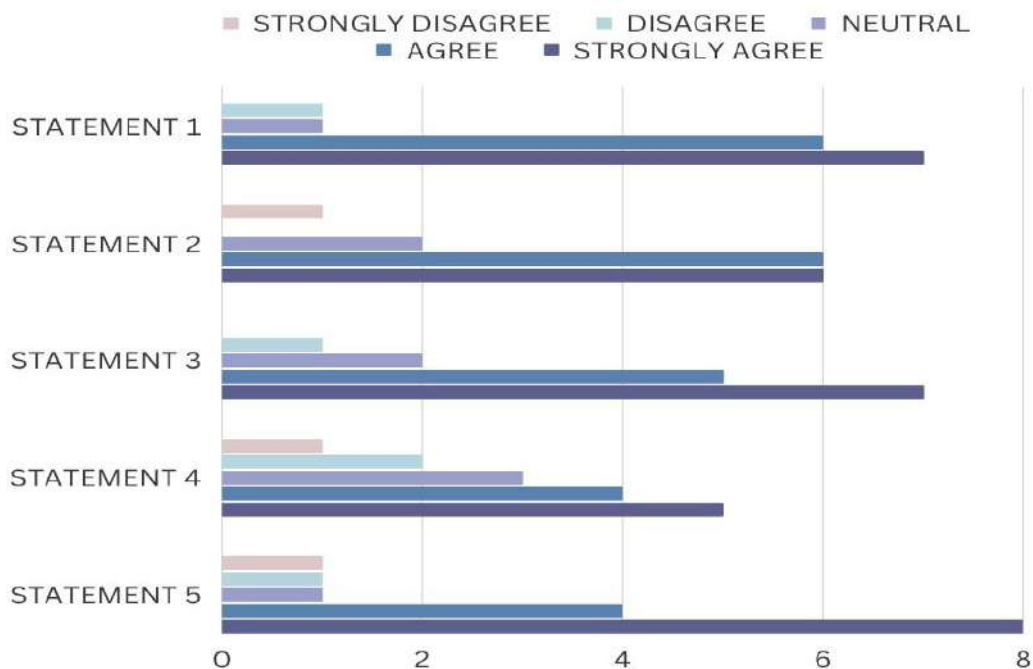


Figure 127 : Likert scale graph  
Source : Author

Few statements of the participants from the survey on how they feel about they space.

“I love the way the entrance is so bright and welcoming. It’s the perfect place to start my day.” - Nagin Bhai

“I love the way the entrance is so quiet and peaceful. It’s the perfect place to relax and unwind.” - Jashoda Ben

“I love the way the entrance is so full of life and energy. It’s the perfect place to socialize and meet new people.” - Suman Ben

---

### 4.6.3 IDENTIFIED SPACES



*Figure 128 : Plan representing Identified space*  
*Source : Author*

The common hall in the entrance is a vibrant and active space. It is used for a variety of activities throughout the day, including socializing, watching TV, playing games, and participating in cultural events. In the morning, the residents sit together and chat, read, or simply relax. The space is bright and airy, with large entrance that let in plenty of natural light. In afternoons, the hall is used for cultural events, such as bhajan kirtan, daira, and garba. These events are a great way for residents to socialize and It provides a comfortable and inviting space for residents to socialize, relax, and enjoy their time. The space also helps to foster a sense of community among the residents. celebrate their culture.



*Figure 129 : photos of the space*  
*Source : Author*



*Figure 130 : photos of the space*  
*Source : Author*



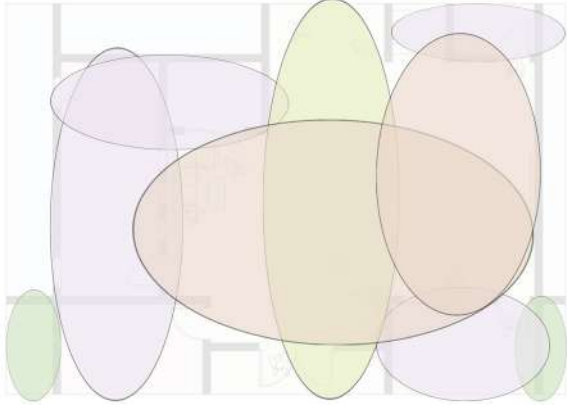
*Figure 131 : photos of the space*  
*Source : Author*



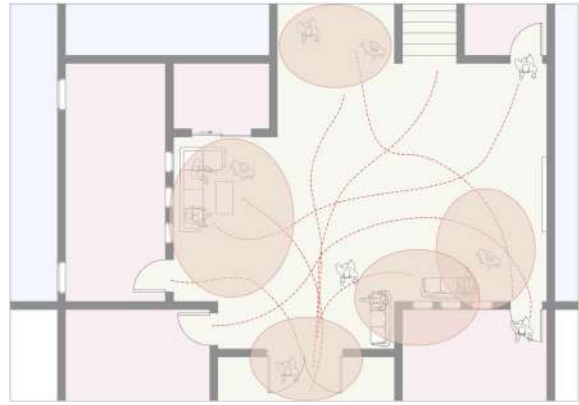
*Figure 132 : photos of the space*  
*Source : Author*

---

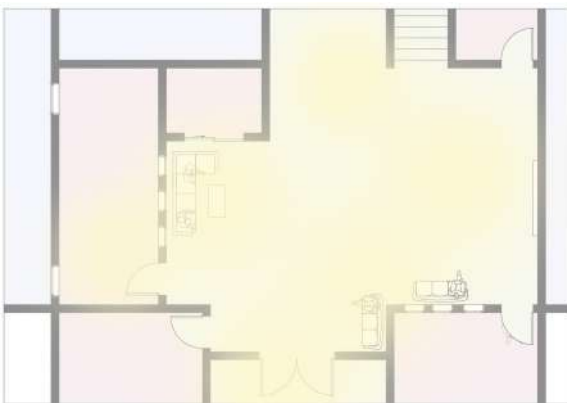
## ANALYSIS OF THE SPACE



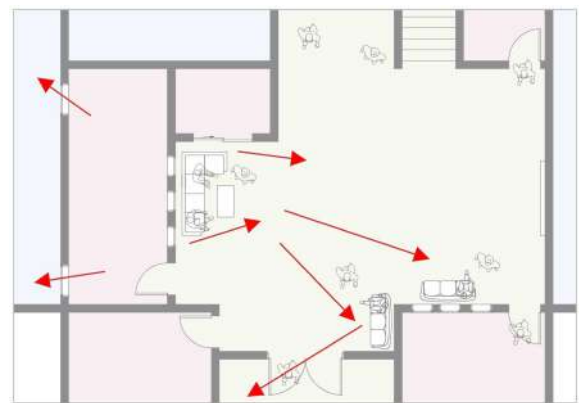
*Figure 133 : plan representing Space layout*  
Source : Author



*Figure 134 : plan representing major Movements*  
Source : Author



*Figure 135 : plan representing Social interaction*  
Source : Author



*Figure 136 : plan representing the views*  
Source : Author

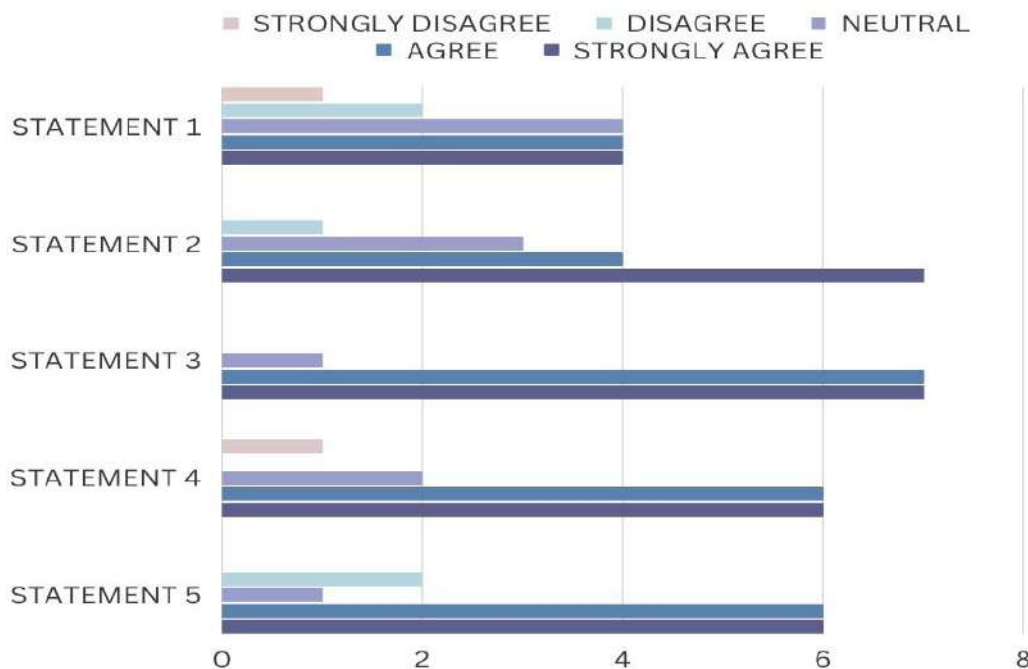
The spatial layout of the common hall is designed to promote social interaction. The seating area is set up in such a way that residents can easily observe and engage with one another. The common hall's accessibility and mobility are intended to be fluid and simple. The corridor connected to the hall proceeds directly to their rooms, allowing for easy movement from public to private space. The huge area and open atmosphere of the common hall facilitate the social interaction. The range of activities offered in the venue promotes social interaction and ownership as well.

---

## UNDERSTANDING HOW DO THE SENIOR CITIZEN RESIDENTS FEEL ABOUT THE SPACE

5 Likert statements to understand how senior citizens feel about an identified space:

- I feel very comfortable in the identified space.
- I feel very safe and secure in the identified space.
- I feel very connected to the identified space.
- I find the identified space to be very aesthetically pleasing.
- The identified space meets my needs and preferences very well.



*Figure 137 : Likert scale graph*  
*Source : Author*

Few statements of the participants from the survey on how they feel about they space.

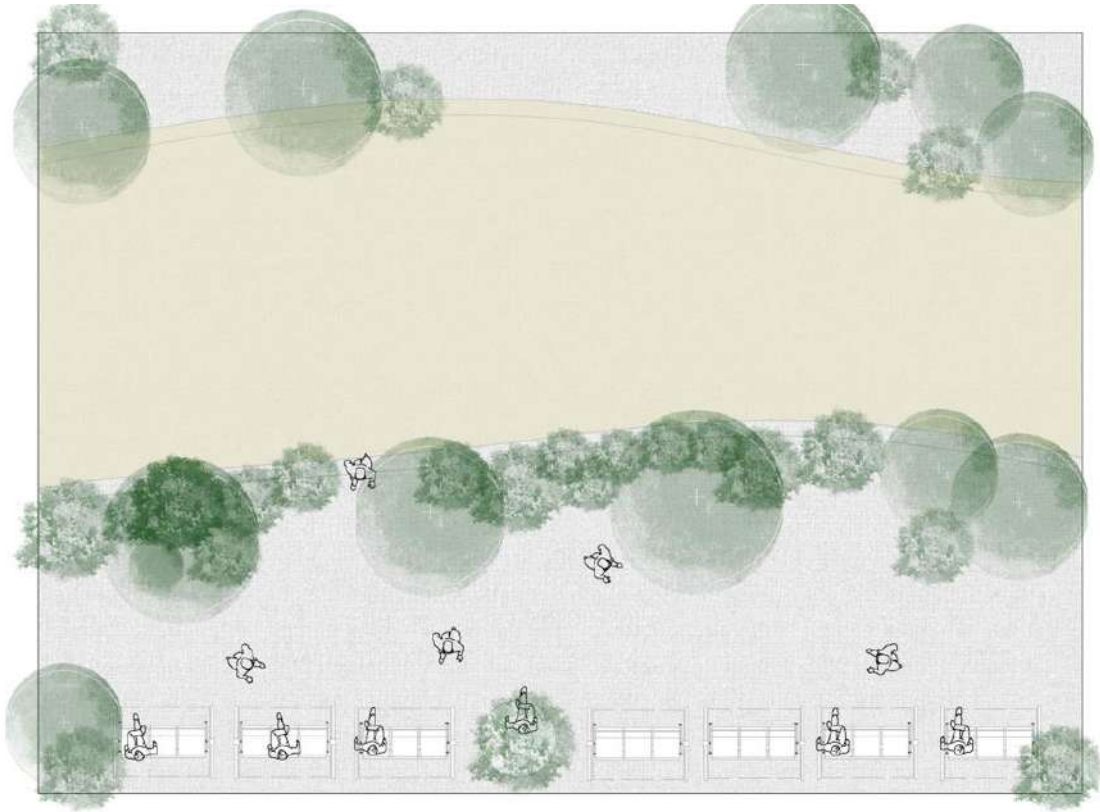
"I love the way the common hall is so bright and airy. It's the perfect place to relax and unwind." - Jaya Ben

"I love the way the common hall is so full of life and energy. It's the perfect place to socialize and meet new people." - Urmila Ben

"I love the way the common hall is so welcoming and inclusive. It's the perfect place to feel at home." - Girdhari Ashok

---

#### 4.6.4 IDENTIFIED SPACES



*Figure 138 : Plan representing Identified space*

*Source : Author*

The sitting space is a large, open area with 10-12 sitting swings. It is positioned opposite the property's entrance and is one of the most popular places for residents to rest and socialize. The sitting area is utilized for a range of activities such as socialising, reading, and playing games. Residents frequently gather in the place to talk with one another. The community is located in a residential area, and the neighbours frequently visit the sitting area to socialise with the residents or simply to enjoy the company. It provides an inviting and pleasant atmosphere for residents to socialise, rest, and enjoy their time. The park also contributes to a sense of community among residents and neighbours.



*Figure 139 : photos of the space*  
*Source : Author*



*Figure 140 : photos of the space*  
*Source : Author*



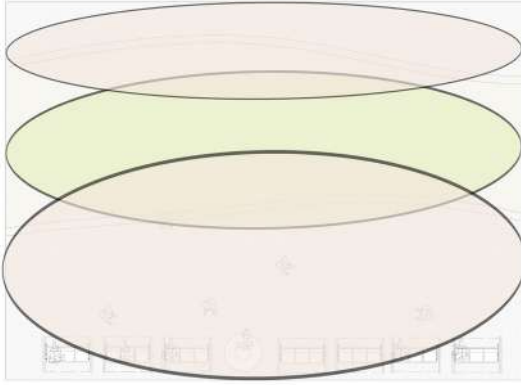
*Figure 141 : photos of the space*  
*Source : Author*



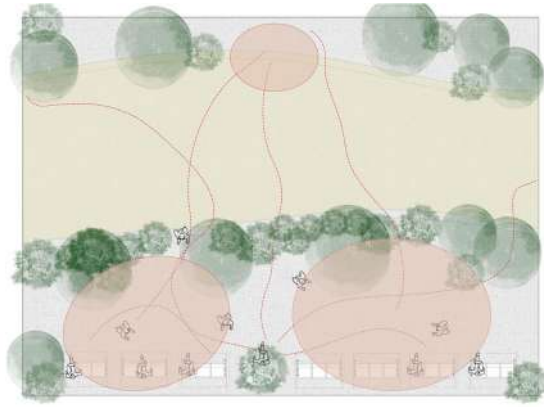
*Figure 142 : photos of the space*  
*Source : Author*

---

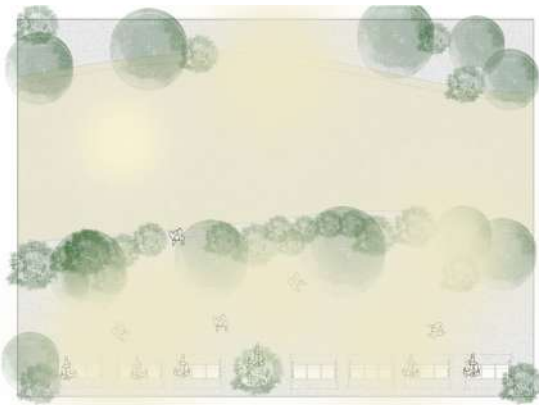
## ANALYSIS OF THE SPACE



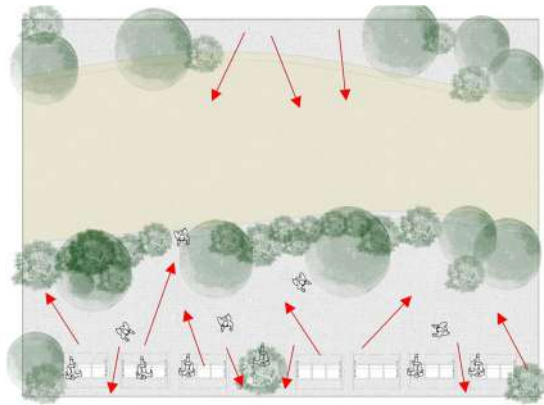
*Figure 143 : plan representing Space layout*  
*Source : Author*



*Figure 144 : plan representing major Movements*  
*Source : Author*



*Figure 145 : plan representing Social interaction*  
*Source : Author*



*Figure 146 : plan representing the views*  
*Source : Author*

The spatial layout of the outdoor sitting space is designed to promote social interaction. The space is arranged in a semi-circle, which allows residents to easily see and interact with each other. The swings and other seating options also encourage residents to move around and interact with each other. The lush trees provide shade and peace and quiet, which can help residents relax and feel more at ease. The outdoor seating area's accessibility and mobility are intended to be fluid and simple. The huge size and open ambiance of the outdoor sitting place encourages social interaction. The room is large enough to house a large number of residents, and the open atmosphere makes it a comfortable and appealing place to socialise.



---

## UNDERSTANDING HOW DO THE SENIOR CITIZEN RESIDENTS FEEL ABOUT THE SPACE

5 Likert statements to understand how senior citizens feel about an identified space:

- I feel very comfortable in the identified space.
- I feel very safe and secure in the identified space.
- I feel very connected to the identified space.
- I find the identified space to be very aesthetically pleasing.
- The identified space meets my needs and preferences very well.

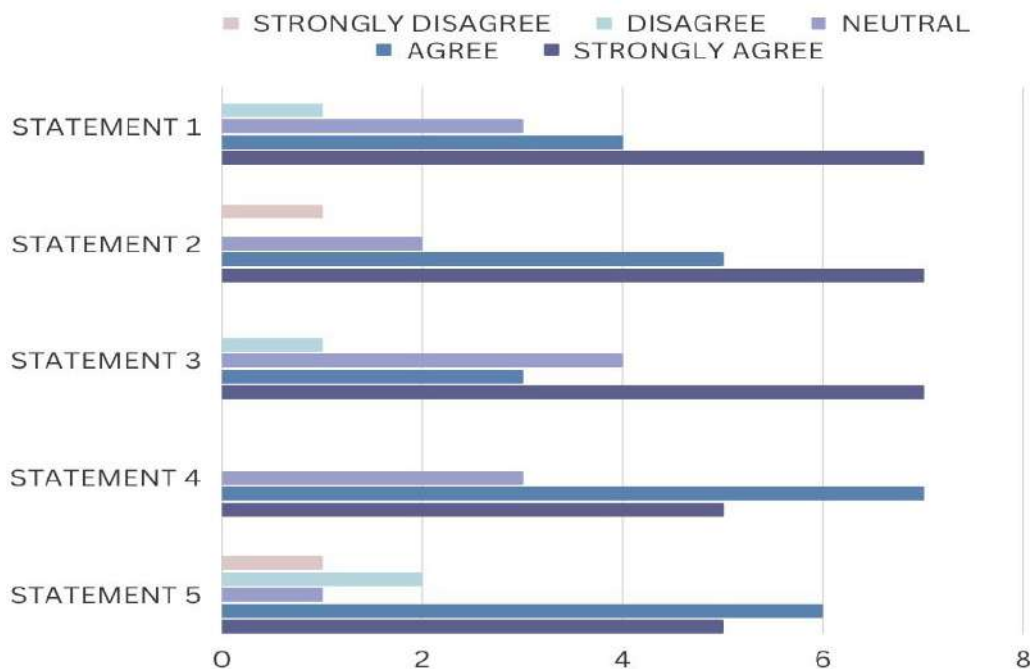


Figure 147 : Likert scale graph  
Source : Author

Few statements of the participants from the survey on how they feel about they space.

"I love the way the sitting space is so open and airy. It's the perfect place to relax and unwind." - Nagin bhai

"I love the way the sitting space is so full of life and energy. It's the perfect place to socialize and meet new people." - Urmila Ben

"I love the way the sitting space is so welcoming and inclusive. It's the perfect place to be at peace." - Shalu ben





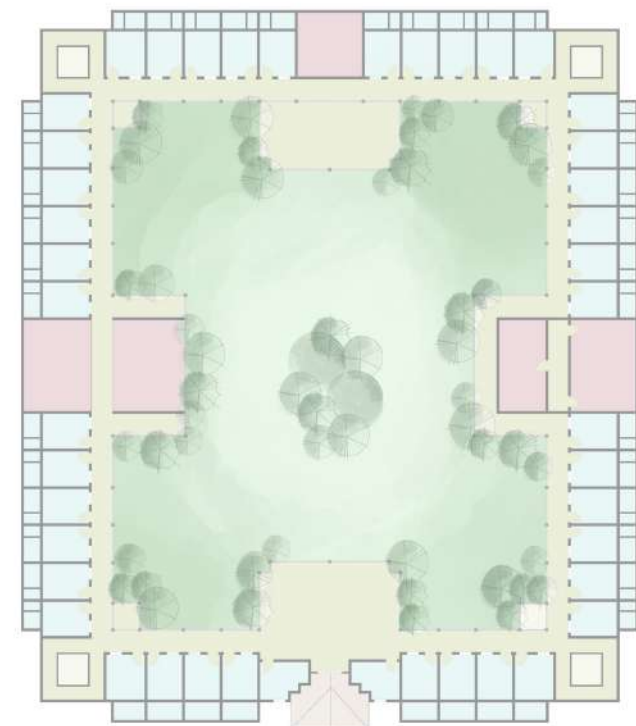
---

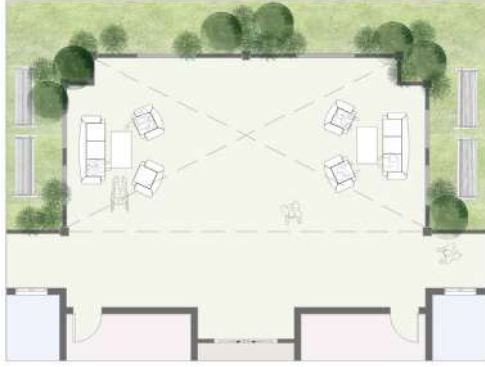
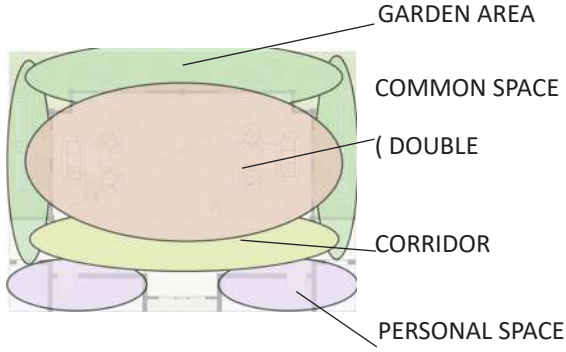
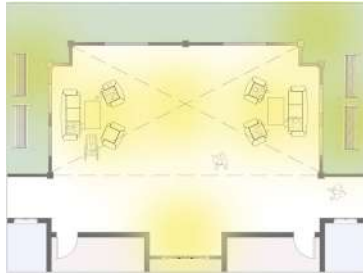
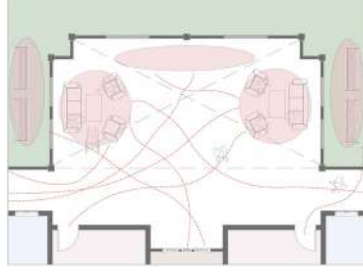
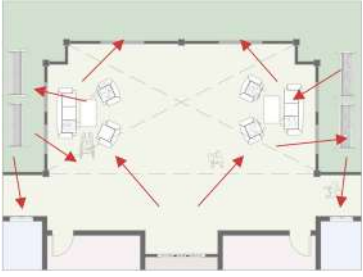


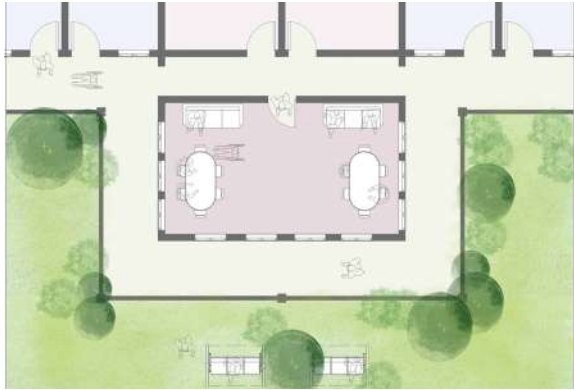
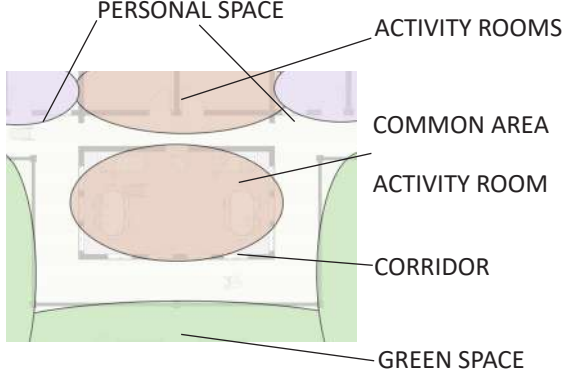
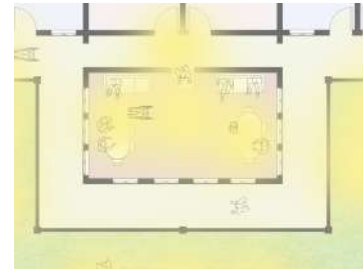
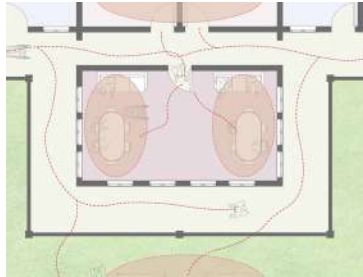
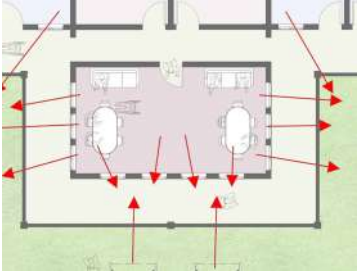



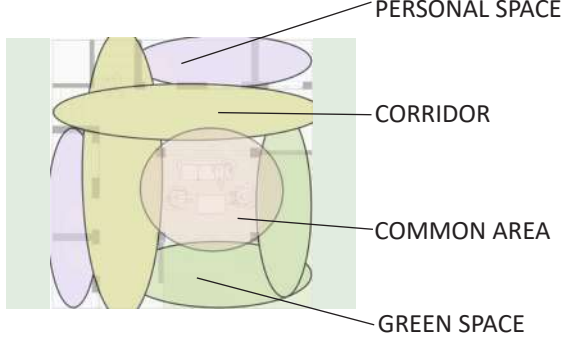
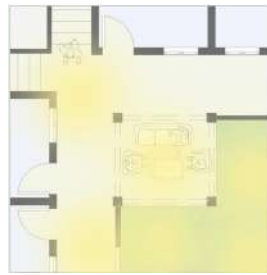
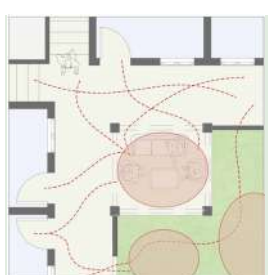
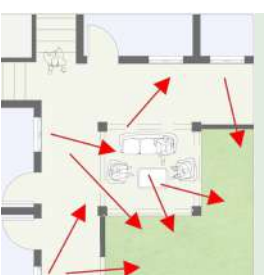

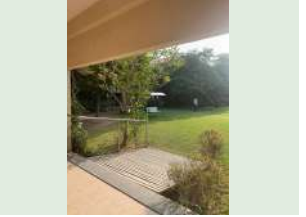

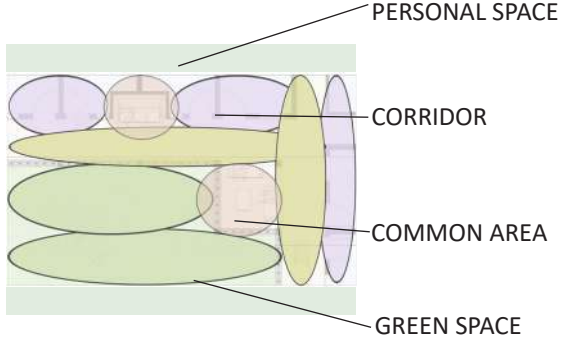
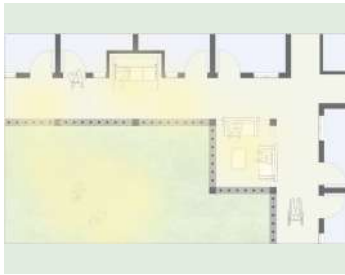
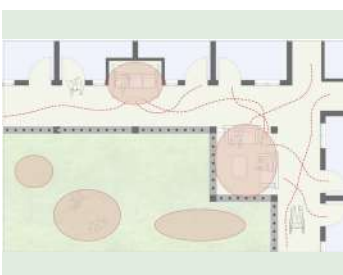
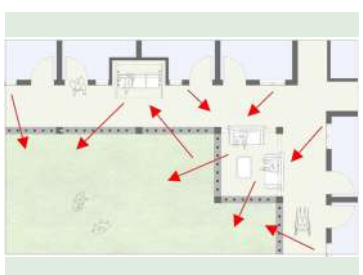


# **CONCLUSION & INFERENCES**

## **Chapter 5**

- 5.1 Shantiniketan senior living
- 5.2 Jeevan sandhya old age home
- 5.3 Conclusion

## CASE STUDY 1 SHANTINIKETAN SENIOR LIVING, ADALAJ


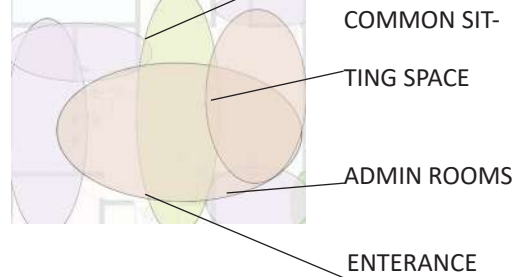

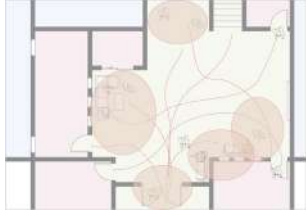



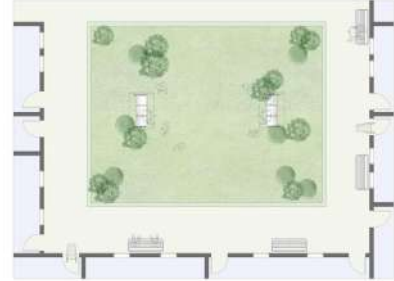
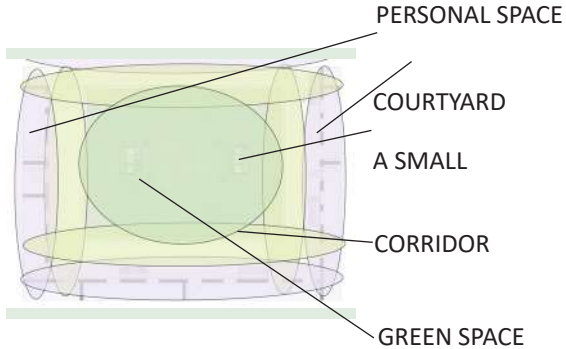

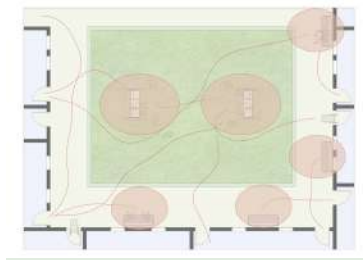
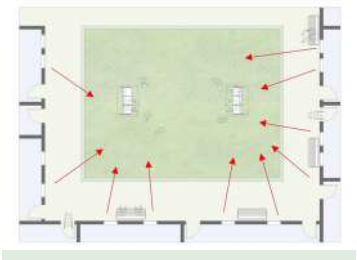



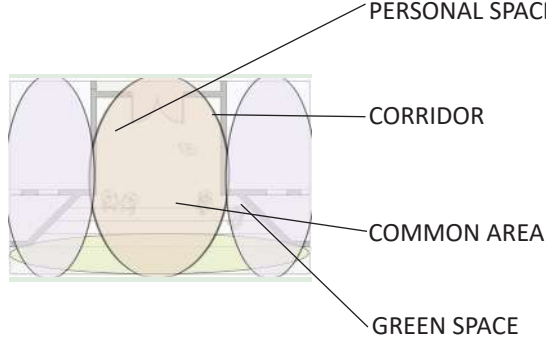
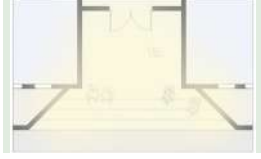
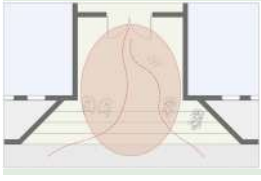
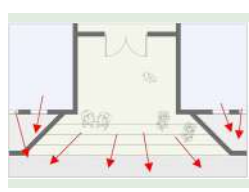


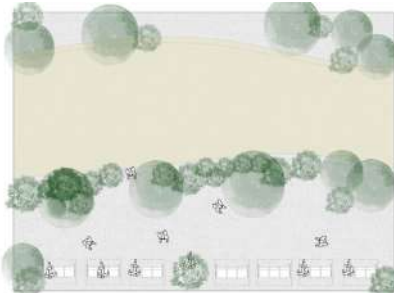
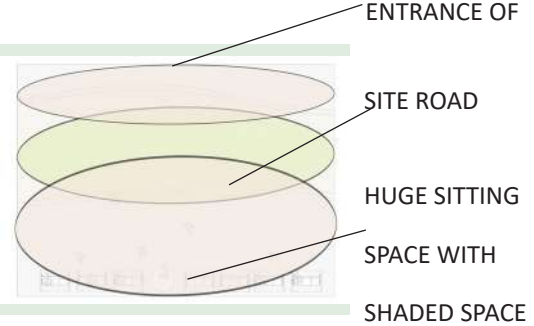

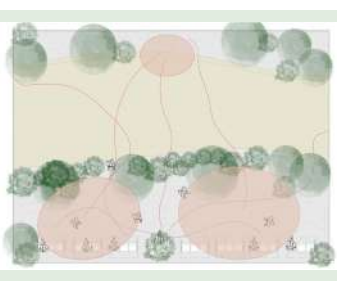
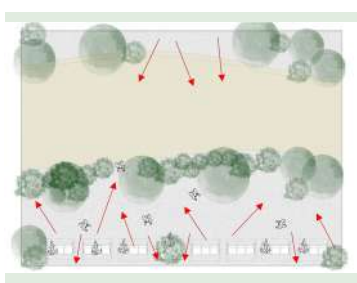




PLACE	SPACE LAYOUT	SOCIAL INTERACTION SPOTS	MOVEMENT AND ACTIVITES	VIEWS	ARCHITECTURAL FEATURES	REASONS FOR ATTACHMENT
 <p>DOUBLE HEIGHT SITTING SPACE</p> <p>NO. OF TIMES REPEATED BY PARTICIPANTS-</p>	 <p>GARDEN AREA</p> <p>COMMON SPACE</p> <p>( DOUBLE</p> <p>CORRIDOR</p> <p>PERSONAL SPACE</p>		 <p>dynamic environment with significant movement and interaction opportunities in the semi-open double-height space and the adjacent green shaded area, featuring strategically placed sitting</p>	 <p>semi-open spaces surrounding the sitting area allows for direct sight-lines towards the expansive courtyard and other wings of the building, fostering a strong visual</p>	 <p>double heighted space with a small sky light</p>  <p>landscape as buffer between built and unbuilt</p>	<p>Offers a connection to nature and a serene environment.</p> <p>Provides opportunities for relaxation, reflection, and physical activity.</p>
 <p>ACTIVITY</p> <p>NO. OF TIMES REPEATED BY PARTICIPANTS- 16</p>	 <p>PERSONAL SPACE</p> <p>ACTIVITY ROOMS</p> <p>COMMON AREA</p> <p>ACTIVITY ROOM</p> <p>CORRIDOR</p> <p>GREEN SPACE</p>		 <p>Facilitate significant movement and foster interaction within the activity room, gym, and library by utilizing the corridor as a transitional space connecting these areas.</p>	 <p>Incorporated large windows in the activity room to allow ample natural light and views of the surrounding green spaces.</p>	 <p>large windows throughout the room facing the huge courtyard</p>  <p>corridors with adjusant landscape</p>	<p>Large windows in the activity room provide abundant natural light and captivating views of green spaces, fostering attachment</p>
 <p>SEMI OPEN CORNER SITTING SPACE</p> <p>NO. OF TIMES REPEATED BY PARTICIPANTS- 8</p>	 <p>PERSONAL SPACE</p> <p>CORRIDOR</p> <p>COMMON AREA</p> <p>GREEN SPACE</p>		 <p>Promote significant movement flow around the corridor corners by incorporating sitting spaces that seamlessly connect with the adjacent green space</p>	 <p>The sitting space outside each room offers unobstructed views of the open spaces, while the room windows facing the corridor enhance the visual connection</p>	 <p>Sitting spaces with landscape as transtional space</p>  <p>ramps to access the property</p>	<p>The sitting space outside each room offers unobstructed views of the open spaces, while the room windows facing the corridor enhance the visual connection</p>
 <p>SITTING SPACE IN THE</p> <p>NO. OF TIMES REPEATED BY</p>	 <p>PERSONAL SPACE</p> <p>CORRIDOR</p> <p>COMMON AREA</p> <p>GREEN SPACE</p>		 <p>Major movement and social interaction in the corridor space with a swing niche and transitional sitting areas between rooms.</p>	 <p>The seating areas on the first floor offer captivating views from the corridor or balcony, overlooking the courtyard, while the rooms provide direct visual access too</p>	 <p>corridors facing the courtyard and sitting space as</p>  <p>swing sitting space</p>	<p>Captivating views of the courtyard from seating areas on the first floor, with direct visual access from the rooms.</p>



## CASE STUDY 2 JEEVAN SANDHYA OLD AGE HOME, AHMEDABAD



PLACE	SPACE LAYOUT	SOCIAL INTERACTION SPOTS	MOVEMENT AND ACTIVITES	VIEWS	ARCHITECTURAL FEATURES	REASONS FOR ATTACHMENT
 <p>COMMON HALL/ MEETING AREA</p> <p>NO. OF TIMES RE- PEATED BY PARTICI- PANTS- 7</p>	 <p>CORRIDOR THAT LEADS TO THE</p> <p>COMMON SIT- TING SPACE</p> <p>ADMIN ROOMS</p> <p>ENTRANCE</p>		 <p>A dynamic and versatile common hall/ meeting area designed to facilitate movement, interaction, and various activities.</p>	 <p>semi-open spaces surrounding the sitting area allows for direct sight-lines towards the expansive courtyard and other wings of the building, fostering a strong visual</p>	 <p>Huge hall with maximum sitting spaces as interaction nodes</p>  <p>maximum amount of ventilation throughout the hall</p>	<p>Offers a connection to nature and a serene environment.</p> <p>Provides opportunities for relaxation, reflection, and physical activity.</p>
 <p>SPACE AROUND</p> <p>NO. OF TIMES RE- PEATED BY PARTICI- PANTS- 11</p>	 <p>PERSONAL SPACE</p> <p>COURTYARD</p> <p>A SMALL</p> <p>CORRIDOR</p> <p>GREEN SPACE</p>		 <p>semi-open courtyard serves as the centerpiece, with rooms and a corridor enveloping it, facilitating fluid movement, circulation, and energizing activities within the space.</p>	 <p>Incorporated large windows in the activity room to allow ample natural light and views of the surrounding green spaces.</p>	 <p>corridors as transtional space between private and public space</p>  <p>Courtyards can serve multiple purposes, including</p>	<p>Large windows in the activity room provide abundant natural light and captivating views of green spaces, fostering attachment</p>
 <p>ENTRANCE AS IN- TERACTION SPACE</p> <p>NO. OF TIMES RE- PEATED BY PARTICI- PANTS- 5</p>	 <p>PERSONAL SPACE</p> <p>CORRIDOR</p> <p>COMMON AREA</p> <p>GREEN SPACE</p>		 <p>The entrance is thoughtfully designed as an interactive space, encouraging movement and circulation</p>	 <p>provides strategically framed views of the surrounding environment, drawing attention to noteworthy features and creating a seamless transition between the exterior and interior real.</p>	 <p>huge and a welcoming entrance</p>  <p>barrier free elements for easy access</p>	<p>The sitting space outside each room offers unobstructed views of the open spaces, while the room windows facing the corridor enhance the visual connection</p>
 <p>HUDE COMMON OUTDOOR SITTING</p> <p>NO. OF TIMES REPEATED BY</p>	 <p>ENTRANCE OF SITE ROAD</p> <p>HUGE SITTING SPACE WITH SHADED SPACE</p>		 <p>The expansive common outdoor sitting space promotes fluid movement, allowing residents to freely navigate and explore the area while facilitating social</p>	 <p>framing scenic views of the surrounding landscape and architectural elements, enhancing the overall visual experience and fostering a greater connection with the natural and</p>	 <p>Entire seating space shaded by trees</p>  <p>Ample amount of seating options</p>	<p>Captivating views of the courtyard from seating areas on the first floor, with direct visual access from the rooms.</p>

---

## Conclusion

In Ahmedabad, the case studies of Shantiniketan Senior Living and Jeevan Sandhya Old Age Home provide unique insights into the significance of architectural design in fostering place attachment for senior citizens. The evaluation of various architectural features, amenities, and resident experiences indicates that well-designed architecture has a major impact on the physical, emotional, and social well-being of senior residents, establishing a strong sense of place.

Both Shantiniketan older Living and Jeevan Sandhya Old Age Home have comprehensive design considerations that prioritise older residents' needs and preferences. These senior living communities' architectural designs emphasise big living rooms, simple accessibility, and age-friendly features. These characteristics enhance independence, mobility, and convenience, making it easier for senior citizens to manage their living situations. Natural light, ventilation, and green spaces all contribute to a healthy and comfortable living environment, improving residents' sense of well-being. Furthermore, the central courtyards at Shantiniketan Senior Living and Jeevan Sandhya Old Age Home are critical in encouraging social interaction and a sense of community. These gathering places serve as hubs for a variety of activities such as reading, socialising, playing games, and relaxing. Wide windows that provide views of the courtyard from within the rooms, for example, increase the connection between inhabitants and their environment. These locations' communal nature encourages social engagement, companionship, and a sense of belonging, all of which are important components in forming place attachment.

In addition, the case studies emphasise the relevance of residents' perceptions and experiences in creating their attachment to their living environment. Residents at both senior living homes exhibit a positive behavioural attachment to their architectural surroundings, as evidenced by the Likert scale statements on engagement in activities, ease and accessibility, and sense of safety and security. Residents' strong agreement with these assertions reflects their active engagement in activities, their impression of convenience and accessibility, and their

---

sense of safety and security within the architectural design. The incorporation of age-friendly features, the incorporation of natural elements, and the provision of social areas all contribute to the general well-being and pleasure of senior inhabitants. Residents' positive experiences and views reflect the successful incorporation of architectural design elements that promote a strong feeling of place attachment. As the senior citizen population grows, it is critical to recognise the importance of architectural design in meeting their specific needs and developing a feeling of place attachment. Senior living communities can provide an exciting and fulfilling living experience for their inhabitants by building environments that prioritise accessibility, comfort, social interaction, and involvement with nature. The insights gathered from the case studies of Shantiniketan Senior Living and Jeevan Sandhya Old Age Home serve as significant lessons for future efforts in building senior-friendly places that foster place attachment and improve senior residents' overall well-being.

---

## SURVEY QUESTIONS

1. What is your age range?

-60-69 years old

-70-79 years old

-80-89 years old

-90 years old and above

2. How long have you been living in your current residence?

-Less than 1 year

-1-5 years

-5-10 years

-More than 10 years

3. How satisfied are you with the design and layout of your current residence?

-Very satisfied

-Satisfied

-Neither satisfied nor dissatisfied

-Dissatisfied

-Very dissatisfied

4. How much do you feel the design and layout of your current residence contributes to your sense of place attachment?

-Contributes extremely well

-Contributes very well

-Contributes somewhat well

-Contributes slightly well

-Does not contribute at all

---

5. How much did living in a senior residence designed specifically for senior citizens contribute to your sense of place attachment?

- Contributed extremely well
- Contributed very well
- Contributed somewhat well
- Contributed slightly well
- Did not contribute at all

6. What do you believe are the most important design elements in a residence for senior citizens that contribute to a sense of place attachment? (Please select all that apply)

- Accessible design and features
- Community spaces for socialization
- Outdoor spaces such as gardens or patios
- Adequate natural light
- Easy navigation and wayfinding
- Personalization options for residents
- Other (please specify)

7. How often do you engage in activities or social interactions within the common areas of the senior living community?

- Rarely or never
- Occasionally
- Sometimes
- Often
- Very often



---

Based on the PPP framework, the following is a proposed Likert scale for understanding place attachment of senior citizens in the context of architectural design in their living environment.

1. Emotional Attachment:

- How strongly do you feel emotionally connected to your living space?
- To what extent do you feel that your living space reflects your personal identity?
- How much do you enjoy spending time in your living space?

2. Cognitive Attachment:

- How well do you know your living space and the surrounding environment?
- How much do you feel that you belong to the community around you?
- How much do you think the design of your living space and surrounding environment contributes to your quality of life?

3. Behavioral Attachment:

- How often do you engage in activities in your living space and surrounding environment?
- How much do you feel that your living space and surrounding environment are convenient and accessible for your daily activities?
- How much do you feel safe and secure in your living space and surrounding environment?

The Likert scale would consist of a range of responses for each question, such as “strongly agree,” “agree,” “neutral,” “disagree,” and “strongly disagree,”



---

## FIGURES LIST

<i>Figure 1 Sense of place with place attachment</i> Source : Steele;(1981) .....	21
<i>Figure 2 Sense of place parameters</i> Source : Steele;(1981) .....	21
<i>Figure 3 Components of a place</i> Source :Author .....	22
<i>Figure 4 Factors for place identification</i> Source : Foroudi Consultancy, UK .....	23
<i>Figure 5. Factors of place attachment</i> Source : Author .....	24
<i>Figure 6. Phychological factors of a physical place</i> Source : <a href="https://doi.org/10.1016/j.jenvp.2021.101558">https://doi.org/10.1016/j.jenvp.2021.101558</a> .....	25
<i>Figure 7. Embodiment of spatial experience for emotional connection</i> Source : Seongnam-si 13120 .....	26
<i>Figure 8. Factors that affect place attachment to a space</i> Source : Author .....	26
<i>Figure 9. Embodiment of spatial experience for emotional connection</i> Source : Seongnam-si 13120 .....	27
<i>Figure 10 : Qualitative measures of place attachment</i> Source : Masoumeh Shira, 2019 .....	29
<i>Figure 11: A multidimensional framework of place attachment</i> Source : Masoumeh Shira, 2019 .....	30
<i>Figure 12 : Framework of the ppp theory with likert scale</i> Source :Author .....	35
<i>Figure 13: Map of India</i> Source :Fernando Lima, 2010 .....	41
<i>Figure 14: Components of Age friendly cities</i> Source : <a href="https://www.nature.com/articles/s43587-021-00140-5">https://www.nature.com/articles/s43587-021-00140-5</a> .....	42
<i>Figure 15 : Shantiniketan senior living with context</i> Source : Google earth .....	44
<i>Figure 17: View from the courtyard</i> Source : Author .....	45
<i>Figure 18: Corridor and windows of the rooms</i> Source : Author .....	45
<i>Figure 19: View from the first floor corridor.</i> Source : Author .....	45
<i>Figure 20: First floor corridor showing swing niche</i> Source : Author .....	45
<i>Figure 21: Spatial layout floor plan</i> Source : Author .....	45
<i>Figure 22: Accessibilty in the corridor</i> Source : Author .....	46
<i>Figure 23: Accessibilty in the corridor</i> Source : Author .....	46

---

---

<i>Figure 24: Ramps Accessibility to rooms</i>	
Source : Author .....	46
<i>Figure 25: Corridor accessibility to the courtyard on ground floor</i>	
Source : Author .....	46
<i>Figure 21: Accessibility Floor plan</i>	
Source : Author .....	46
<i>Figure 27: Corners of the courtyard</i>	
Source : Author .....	47
<i>Figure 28 : Sitting spcaes in the courtyard</i>	
Source : Author .....	47
<i>Figure 29 : Views of the huge central courtyard</i>	
Source : Author .....	47
<i>Figure 30 : View of the courtyard from the first floor</i>	
Source : Author .....	47
<i>Figure 26 : Green areas plan</i>	
Source : Author .....	47
<i>Figure 31: Plan showing Social interaction in the Morning</i>	
Source : Author .....	48
<i>Figure 33 :Plan showing Social interaction in the Evening</i>	
Source : Author .....	48
<i>Figure 32 :Plan showing Social interaction in the Afternoon</i>	
Source : Author .....	48
<i>Figure 34 : View of the double heighted space in the entrance</i>	
Source : Author .....	49
<i>Figure 35 : People interacting in the activity hall</i>	
Source : Author .....	49
<i>Figure 36 : image showing the span of windows in the room</i>	
Source : Author .....	49
<i>Figure 37 : corner sitting niche in the groud floor corridor</i>	
Source : Author .....	49
<i>Figure 38: Floor plan showing the identified place attchments spaces</i>	
Source : Author .....	50
<i>Figure 39 : Likert scale graph</i>	
Source : Author .....	51
<i>Figure 40 : Likert scale graph</i>	
Source : Author .....	52
<i>Figure 41: Likert scale graph</i>	
Source : Author .....	53
<i>Figure 43 : Sitting space</i>	
Source : Author .....	54
<i>Figure 44 : view from the space</i>	
Source : Author .....	54
<i>Figure 45 : double heighted space</i>	
Source : Author .....	54
<i>Figure 46 : photos of the space</i>	
Source : Author .....	54

---

---

Figure 47 : plan representing Space layout	55
Source : Author .....	
Figure 49 : plan representing Social interaction	55
Source : Author .....	
Figure 48 : plan representing major Movements	55
Source : Author .....	
Figure 50 : plan representing the views	55
Source : Author .....	
Figure 51 : Likert scale graph	56
Source : Author .....	
Figure 52 : Plan representing Identified space	57
Source : Author .....	
Figure 53 : photos of the space	57
Source : Author .....	
Figure 54 : photos of the space	57
Source : Author .....	
Figure 55 : photos of the space	57
Source : Author .....	
Figure 56 : photos of the space	57
Source : Author .....	
Figure 57: plan representing Space layout	58
Source : Author .....	
Figure 59: plan representing Social interaction	58
Source : Author .....	
Figure 58: plan representing major Movements	58
Source : Author .....	
Figure 60: plan representing the views	58
Source : Author .....	
Figure 61 : Likert scale graph	59
Source : Author .....	
Figure 63 : photos of the space	60
Source : Author .....	
Figure 62 : Plan representing Identified space	60
Source : Author .....	
Figure 64 : photos of the space	60
Source : Author .....	
Figure 65 : photos of the space	60
Source : Author .....	
Figure 66 : photos of the space	60
Source : Author .....	
Figure 67 : plan representing Space layout	61
Source : Author .....	
Figure 69 : plan representing Social interaction	61
Source : Author .....	
Figure 68 : plan representing major Movements	61
Source : Author .....	

---

---

<i>Figure 70 : plan representing the views</i>	
Source : Author .....	61
<i>Figure 71 : Likert scale graph</i>	
Source : Author .....	62
<i>Figure 72 : Plan representing Identified space</i>	
Source : Author .....	63
<i>Figure 73 : photos of the space</i>	
Source : Author .....	63
<i>Figure 74 : photos of the space</i>	
Source : Author .....	63
<i>Figure 75 : photos of the space</i>	
Source : Author .....	63
<i>Figure 76 : photos of the space</i>	
Source : Author .....	63
<i>Figure 77 : plan representing Space layout</i>	
Source : Author .....	64
<i>Figure 79 : plan representing Social interaction</i>	
Source : Author .....	64
<i>Figure 78 : plan representing major Movements</i>	
Source : Author .....	64
<i>Figure 80 : plan representing the views</i>	
Source : Author .....	64
<i>Figure 81 : Likert scale graph</i>	
Source : Author .....	65
<i>Figure 82 : Jeevan sandhya old age home with context</i>	
Source : Google earth .....	66
<i>Figure 84 : Entrance of the property</i>	
Source : Author .....	67
<i>Figure 85 : Common hall of the building</i>	
Source : Author .....	67
<i>Figure 86 : Accessibilty to the building</i>	
Source : Author .....	67
<i>Figure 87 : huge common garden</i>	
Source : Author .....	67
<i>Figure 83 : Spatial layout floor plan</i>	
Source : Author .....	67
<i>Figure 89 : Corridor toward the rooms</i>	
Source : Author .....	68
<i>Figure 90 : Sitting spcaes under the trees</i>	
Source : Author .....	68
<i>Figure 91 : Medical examination space next to the garden</i>	
Source : Author .....	68
<i>Figure 92 : Entrance of the building</i>	
Source : Author .....	68
<i>Figure 88 : Accessibilty Floor plan</i>	
Source : Author .....	68

---

---

<i>Figure 94 : Grass lawn near the entrance</i>	
Source : Author .....	69
<i>Figure 95 : Sitting spaces in the green law</i>	
Source : Author .....	69
<i>Figure 96 : Walking pavement around green spaces</i>	
Source : Author .....	69
<i>Figure 97 : Central courtyard around the rooms</i>	
Source : Author .....	69
<i>Figure 93 : Green areas plan</i>	
Source : Author .....	69
<i>Figure 98 : Plan showing Social interaction in the Morning</i>	
Source : Author .....	70
<i>Figure 99 : Plan showing Social interaction in the Afternoon</i>	
Source : Author .....	70
<i>Figure 100 : Plan showing Social interaction in the Evening</i>	
Source : Author .....	70
<i>Figure 101 : Activities in the hall</i>	
Source : Author .....	71
<i>Figure 102 : Sitting spaces in the common hall</i>	
Source : Author .....	71
<i>Figure 103 : swing seatings across the main building</i>	
Source : Author .....	71
<i>Figure 104 : shaded areas in the green spaces</i>	
Source : Author .....	71
<i>Figure 105 : Floor plan showing the identified place attachments spaces</i>	
Source : Author .....	72
<i>Figure 106 : Likert scale graph</i>	
Source : Author .....	73
<i>Figure 107 : Likert scale graph</i>	
Source : Author .....	74
<i>Figure 108 : Likert scale graph</i>	
Source : Author .....	75
<i>Figure 110 : photos of the space</i>	
Source : Author .....	76
<i>Figure 109 : Plan representing Identified space</i>	
Source : Author .....	76
<i>Figure 111 : photos of the space</i>	
Source : Author .....	76
<i>Figure 112 : photos of the space</i>	
Source : Author .....	76
<i>Figure 113 : photos of the space</i>	
Source : Author .....	76
<i>Figure 114 : plan representing Space layout</i>	
Source : Author .....	77
<i>Figure 116 : plan representing Social interaction</i>	
Source : Author .....	77

---

---

<i>Figure 115 : plan representing major Movements</i>	
<i>Source : Author</i>	77
<i>Figure 117 : plan representing the views</i>	
<i>Source : Author</i>	77
<i>Figure 118 : Likert scale graph</i>	
<i>Source : Author</i>	78
<i>Figure 119 : Plan representing Identified space</i>	
<i>Source : Author</i>	79
<i>Figure 120 : photos of the space</i>	
<i>Source : Author</i>	79
<i>Figure 121 : photos of the space</i>	
<i>Source : Author</i>	79
<i>Figure 122 : photos of the space</i>	
<i>Source : Author</i>	79
<i>Figure 123 : plan representing Space layout</i>	
<i>Source : Author</i>	80
<i>Figure 125 : plan representing Social interaction</i>	
<i>Source : Author</i>	80
<i>Figure 124 : plan representing major Movements</i>	
<i>Source : Author</i>	80
<i>Figure 126 : plan representing the views</i>	
<i>Source : Author</i>	80
<i>Figure 127 : Likert scale graph</i>	
<i>Source : Author</i>	81
<i>Figure 129 : photos of the space</i>	
<i>Source : Author</i>	82
<i>Figure 128 : Plan representing Identified space</i>	
<i>Source : Author</i>	82
<i>Figure 130 : photos of the space</i>	
<i>Source : Author</i>	82
<i>Figure 131 : photos of the space</i>	
<i>Source : Author</i>	82
<i>Figure 132 : photos of the space</i>	
<i>Source : Author</i>	82
<i>Figure 133 : plan representing Space layout</i>	
<i>Source : Author</i>	83
<i>Figure 135 : plan representing Social interaction</i>	
<i>Source : Author</i>	83
<i>Figure 134 : plan representing major Movements</i>	
<i>Source : Author</i>	83
<i>Figure 136 : plan representing the views</i>	
<i>Source : Author</i>	83
<i>Figure 137 : Likert scale graph</i>	
<i>Source : Author</i>	84
<i>Figure 139 : photos of the space</i>	
<i>Source : Author</i>	85

---

---

<i>Figure 138 : Plan representing Identified space</i>	
<i>Source : Author</i> .....	85
<i>Figure 140 : photos of the space</i>	
<i>Source : Author</i> .....	85
<i>Figure 141 : photos of the space</i>	
<i>Source : Author</i> .....	85
<i>Figure 142 : photos of the space</i>	
<i>Source : Author</i> .....	85
<i>Figure 143 : plan representing Space layout</i>	
<i>Source : Author</i> .....	86
<i>Figure 145 : plan representing Social interaction</i>	
<i>Source : Author</i> .....	86
<i>Figure 144 : plan representing major Movements</i>	
<i>Source : Author</i> .....	86
<i>Figure 146 : plan representing the views</i>	
<i>Source : Author</i> .....	86
<i>Figure 147 : Likert scale graph</i>	
<i>Source : Author</i> .....	87

---

## REFERENCES

Abowardah, E., Khalil, M., & Ramadan, M. (2019). Sense of place attachment to the architectural academic library: Toward an interactive learning environment. *The International Journal of Design Education*, 14(2), 43–69. <https://doi.org/10.18848/2325-128x/cgp/v14i02/43-69>.

Alitajer, S., Khanian, M., & Sharifi, A. (2013). Measure and analyze how continuity in place influence place attachment case study: Abadianian residential community, Hamedan, Iran. *Research Journal of Environmental and Earth Sciences*, 5(11), 645–650. <https://doi.org/10.19026/rjees.5.5719>.

Anil, D., & Hemamala, K. (2018). Perceptions on service quality: A study of old age homes in Kerala and Tamil Nadu. *MATEC Web of Conferences*, 172, 05003. <https://doi.org/10.1051/mateconf/201817205003>

Cerina, V., Fornara, F., & Manca, S. (2017). Architectural style and green spaces predict older adults' evaluations of residential facilities. *European Journal of Ageing*, 14(3), 207–217. <https://doi.org/10.1007/s10433-016-0406-z>

Daneshgarmoghaddam, G., & Bahrainy, H. (n.d.). The role of architecture-nature interaction in the quality of place attachment. *Armanshahrjournal.com*. Retrieved May 30, 2023, from [https://www.armanshahrjournal.com/article\\_33521\\_cd054546d8c1b9e90af12957b36b9f06.pdf?lang=en](https://www.armanshahrjournal.com/article_33521_cd054546d8c1b9e90af12957b36b9f06.pdf?lang=en)

Fornara, F., Lai, A. E., Bonaiuto, M., & Pazzaglia, F. (2019). Residential place attachment as an adaptive strategy for coping with the reduction of spatial abilities in old age. *Frontiers in Psychology*, 10, 856. <https://doi.org/10.3389/fpsyg.2019.00856>



---

Gauthier, A. H. (2001). Historical trends in the patterns of time use of older adults. Oecd.org. <https://www.oecd.org/els/public-pensions/2430978.pdf>

Halpenny, E. A. (n.d.). Environmental Behaviour, Place Attachment and Park Visitation: A case study of visitors to Point Pelee National Park. Uwaterloo.Ca. Retrieved May 30, 2023, from <https://uwspace.uwaterloo.ca/bitstream/handle/10012/718/eahalpen2006.pdf?sequence=1>

Hashem, H., Abbas, Y. S., Akbar, H. A., & Nazgol, B. (n.d.). Comparison the concepts of sense of place and attachment to place in Architectural Studies. Ukm.My. Retrieved May 30, 2023, from <http://journalarticle.ukm.my/6072/1/107-117.pdf>

Hashemnezhad, H., Heidari, A. A., & Hoseini, P. M. (n.d.). "sense of place" and "place attachment." Srbiau.Ac.Ir. Retrieved May 30, 2023, from [https://ijaud.srbiau.ac.ir/article\\_581\\_a90b5ac919ddc57e6743d8ce32d19741.pdf](https://ijaud.srbiau.ac.ir/article_581_a90b5ac919ddc57e6743d8ce32d19741.pdf)

Kuboshima, Y., & McIntosh, J. (2022). Housing design and the quality of life for older people with care needs: Gaps in knowledge. *The Journal of Aging and Social Change*, 12(1), 49–74. <https://doi.org/10.18848/2576-5310/cgp/v12i01/49-74>

Lee, K. (2022). The interior experience of architecture: An emotional connection between space and the body. *Buildings*, 12(3), 326. <https://doi.org/10.3390/buildings12030326>

Lestari, W. M., & Sumabrata, J. (2018). The influencing factors on place attachment in neighborhood of Kampung Melayu. *IOP Conference Series. Earth and Environmental Science*, 126, 012190. <https://doi.org/10.1088/1755-1315/126/1/012190>

Liu, H. (2018). Place Attachment in rapid urbanization areas-a case study of Zhu Village. Columbia University. <https://doi.org/10.7916/D8JD6D8Z>

---

Ramadhani, A., Fatimah, E., & Wartaman, A. S. (2021). Place attachment of railroad settlement residents, case study: Kampong Tenggumung, Surabaya City. IOP Conference Series. Earth and Environmental Science, 737(1), 012065. <https://doi.org/10.1088/1755-1315/737/1/012065>

Soheili, F., Karimi, R., Avazpour, B., & M.E. Sepasgozar, S. (2020). The effect of place attachment on educational efficiency in elementary schools. In Smart Cities and Construction Technologies. IntechOpen.

Ujang, N., & Zakariya, K. (2015). Place attachment and the value of place in the life of the users. Procedia, Social and Behavioral Sciences, 168, 373–380. <https://doi.org/10.1016/j.sbspro.2014.10.243>

---

---