Social Interaction in High-Rise Apartment: Architectural and Communal Perspective - A case of Merocity Apartment, Lalitpur

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Abstract
The rapid urban growth of Kathmandu, Nepal, has led to an unplanned increase in individually built houses due to insufficient city planning. As land prices rise, the demand for affordable housing increases. This shift in economic structure and lifestyle has transformed housing development modes in the Kathmandu valley. Interactive spaces within communities offer numerous benefits, including enhancing a sense of community pride, understanding among diverse populations, and fostering positive relationships. However, the lack of proper planning and design in the construction of high-rise apartment complexes can hinder social interaction and community engagement. This research aims to investigate the factors influencing social interaction within high-rise apartments. The study adopts a mixed-methods approach involving interviews, surveys, and literature review. The research highlights the significance of factors such as demographic characteristics, spatial configuration, community spaces in influencing social interactions. The research identifies limitations in current architectural designs and communal spaces, which hinder social interaction and community formation. The study shows that shared space and amenities, spatial layouts, and organized community events play pivotal roles in fostering social interaction. However, deficiencies in these areas are apparent in existing apartment complex. In addition, the article argues that apartment design should prioritize community-building and social interactions, as well as take into account the needs of families with young children, in order to promote neighborly traditions and improve the quality of social life in the apartment building.

Keywords
High-rise apartment, Social interaction, Community, Social spaces

1. Introduction

Nepal, a developing nation is witnessing a rapid urbanization boom. The urban population increased to 20.58% in 2020 from 17.11% in 2011, marking a significant rise. Majority of development in Nepal primarily centers around Nepal's larger urban areas—metropolitan zones, sub-metropolitan regions, and municipalities—where developmental progress is happening. Kathmandu stands as the most densely populated urban center, hosting around 24% of the entire urban population [1][2]. Kathmandu, the capital city of Nepal, experienced rapid urban growth in recent years but a lack of proper city planning, has resulted in an unplanned increase in the number of houses built by individuals. Because the construction of residential buildings is becoming more expensive due to rising land prices, leads to an increase in affordable housing demands. The shift in economic structure as well as changes in lifestyle of city dweller not only created housing demand, but also transformed modes of development of housing in Kathmandu valley. The government was unable to meet the enormous demand for dwelling unit and its maintenance. That is why private housing firms arose [3]. Apartment buildings play a vital part in city development as urban populations continue to rise and space becomes short and expensive.

According to prior researches, high levels of social contact between neighbors increase resident's sense of belonging, reinforce people's living safety level, optimize living environment and atmosphere, change living style, and encourage children in becoming more independent [4].

The architecture of residential structures has a significant impact on tenant's lives. Research indicates that residents of high-rise buildings often encounter social isolation, negatively impacting mental well-being. Challenges like tall buildings and restricted common areas hinder social interaction, compounded by fast-paced urban lifestyles and individualistic behaviors, further contributing to isolation [5]. Architects, urban planners, and developers must recognize the importance of social interaction and community within high-rise residences, incorporating design elements that encourage these aspects.

Also, the design's impact on social interactions is crucial, as housing not only meets physical needs but also influences social behavior and sense of security. [5]. Designing interactive spaces, such as lobbies, community rooms, and outdoor areas, is pivotal in fostering community pride, understanding, and safety. These spaces offer avenues for diverse interactions, improving well-being, safety, and neighborhood quality [6].

In general, contemporary and traditional high-rise housing can meet people's physical living requirements and demands, but it cannot entirely meet people's social interaction needs, which is one of the most significant and vital components of people's lives [7]. The increasing need for research on social interaction within high-rise apartments arises from the challenges residents face in forming connections and fostering a sense of community.

The concept of designing with social architecture arises, which

highlights the role of physical environments in shaping social behaviors. It emphasizes creating spaces that encourage communication and connections, fostering a sense of community and well-being [8]. Architects designing high-rise apartments should prioritize shared spaces, accessible designs, and privacy considerations to enhance resident's quality of life and build a stronger sense of community.

This study intends to bridge this gap by investigating the influence of community spaces within Kathmandu's high-rise residences, shedding light on the importance of well-designed common areas in fostering social interactions and building sense of community.

2. Objectives

- To identify the factors that influence social interaction within high-rise apartments.

- To analyze how social space can promote social interaction in high-rise apartments and contribute to a more cohesive and supportive community.

- To provide recommendations for high-rise apartment buildings that encourages social interaction and community engagement.

3. Literature study

The concept of housing traces back to ancient times, where people initially dwelled in caves and engaged in hunting. With the evolution of agriculture, communal living emerged, and dwellings gradually transitioned into more comfortable and luxurious abodes over time. This inclination towards increasing comfort has been a hallmark of human nature. Norbert Schoenauer, a Jewish architect, categorized dwellings into "Pre-Urban," "Oriental Urban," and "Occidental Urban" styles in his book "6,000 Years of Dwelling". These styles encompass temporary, semi-permanent, and permanent houses from various historical and cultural contexts [3].

Apartments, as self-contained units within larger structures, offer private living spaces including bedrooms, bathrooms, kitchens, and living areas. While resembling traditional houses in functionality, apartments stand out due to their integration within multi-story buildings, accommodating multiple households in the same edifice. The size, layout, and amenities of apartments vary widely, accommodating diverse needs and budgets. They might feature shared facilities such as fitness centers, swimming pools, and communal areas, or offer more modest amenities tailored to basic necessities.

High-rise living's history dates back centuries, with early 20th-century high-rise apartments addressing urbanization and population growth. However, initial developments prioritized efficiency over social interaction [9]. Ancient civilizations like Mesopotamia and Egypt featured towering structures serving as residential and administrative centers, though high-rise apartments gained prominence with the advent of steel-frame construction and elevator technology in the late 19th and early 20th centuries. These architectural advancements aimed to provide housing solutions in densely populated urban areas, as symbolized by iconic New York

skyscrapers. Despite their spatial efficiency, high-rise apartments posed challenges in nurturing meaningful connections among residents due to their density and scale. High-rise living's modern resurgence began in the 18th century in major European cities, followed by post-World War I mass housing initiatives and the rise of modern group housing after World War II [10]. Advantages of high-rise apartments include optimized land usage, panoramic views, communal amenities, security features, and urban accessibility. However, limitations include limited outdoor spaces, elevator dependency, reduced natural light, and a potential sense of disconnection [11]. Recently, there is the growing interests in the importance of social interaction in high-rise apartments as architects have shifted towards designs that promote community, prompted by changing social dynamics, sustainable urbanization, and social capital recognition. The desires of residents for well-designed communal spaces and green areas have been evident, influencing architectural planning [7] [12].

Socialization have been important aspects of Nepalese culture for centuries. The country has a long history of village life, where people lived in close-knit communities and interacted with each other on a daily basis. This close-knit social structure helped to promote a strong sense of community and cooperation. In the 20th century, Nepal began to modernize and urbanize [9]. However, social interaction and socialization remained important aspects of Nepalese culture. People continued to interact with each other in a variety of settings, including work, school, religious institutions, and community organizations.

In order to house more people and lessen each person's carbon impact, high-rise apartment complexes and the number of storeys added to each building are both on the rise in the future. The building's sustainability and overall quality of life highlight the increasing need for high-density, livable cities in order to effectively manage urban sprawl, traffic congestion, and infrastructure demands [10].

A study examining outdoor interaction spaces in high-rise housing concluded that both the types of spaces and their design elements played a substantial role in influencing resident's social behavior. Spaces that promoted circulation, offered scenic views, and facilitated various activities were associated with higher rates of social interaction [13]. Design elements such as visually appealing focal points, the presence of plants, play areas, and ample open spaces were found to significantly facilitate social interaction. Furthermore, incorporating vertical landscaping and open spaces at intermediate to high levels of high-rise building will contribute to the creation of cohesive neighborhoods that fostered social cohesion [12].

3.1 Social Interaction

Social interaction in high-rise apartments is about residents connecting, communicating, collaborating, and engaging with each other to form relationships and build a sense of community. It plays a crucial role in reducing feelings of loneliness, positively impacting mental well-being, reducing stress, and contributing to better physical health [14]. Furthermore, social interaction promotes collective

responsibility, cooperation, and shared values among residents, leading to harmonious living.

Research has shown that connecting with neighbors in high-rise apartments enhances social cohesion, community bonds, and overall life satisfaction.Recent research has considered factors such as building design, socioeconomic status, and culture, demonstrating that proper design with communal spaces and encouragement of participation can boost social interaction [10]. The COVID-19 pandemic further emphasized the importance of social interaction for resident's well-being, underlining the potential of apartment design to positively shape social interactions and enhance resident's quality of life. Creating opportunities for social interaction in high-rise apartments can involve informal encounters in well-lit, accessible spaces, as well as recreational activities, shared hobbies, collaborative efforts, and community events. Design considerations, including centrally located communal spaces and amenities like rooftop gardens, can catalyze community formation. Balancing density and scale, ensuring access to public spaces and services, and implementing effective management practices are all crucial factors that impact social interaction in high-rise apartment living [11].

3.2 Social Spaces in High Rise Apartment

High-rise residential buildings are designed to efficiently accommodate a large number of residents within limited land space. These tall structures offer significant advantages for promoting social interaction and resident's well-being. Unlike low-rise developments with constrained communal areas, high-rises have more room for shared spaces due to their smaller footprint [17]. The captivating views from high-rise apartments attract residents to outdoor social settings, further encouraging interaction. Enhanced security measures in these buildings also create a sense of safety, motivating residents to utilize shared facilities and fostering community engagement [18]. In contrast, safety concerns in low-rise areas can hinder outdoor activities, making high-rises a more appealing and secure environment for residents, thus promoting interactions [17]

Effective design within high-rise apartments involves establishing a hierarchy of public, semi-public, semi-private, and private spaces [19]. Public spaces, such as welcoming lobbies, facilitate entry and movement, while semi-public spaces like gyms and roof terraces offer exclusive amenities that encourage social interactions among residents. Semi-private spaces like laundry rooms provide opportunities for limited-resident interaction, and private spaces, including individual apartments and balconies, ensure resident's privacy [15]. High-rise buildings also prioritize community-building by incorporating various indoor and outdoor public spaces, such as paths, parks, playgrounds, swimming pools, terraces, and lounges. Various examples of high-rise apartment such as the Interlace at Singapore, Aqua tower at Chicago, here the architect's main concern was to address the social sustainability by improving social interaction and engagement through designs. These designs prioritize openness and visibility within the complex. Apartments often face common spaces rather than being isolated, encouraging residents to interact and engage with their neighbors.

Figure 1: The Interlace

Figure 2: Quad Tower

4. Methodology

A mixed-methods approach, combining both qualitative and quantitative research methods, is employed to gain a comprehensive understanding of social interaction within high-rise apartments. The research employs techniques such as semi-structured interviews, surveys, and case studies to delve into resident's experiences, perceptions, and challenges related to social interaction within high-rise apartments.

The research paradigm that will guide this research is constructivism. The ontology of this research acknowledges social interaction and community building within high-rise apartments as socially created phenomena. It recognizes that the occupant's perceptions, behaviors, and interpretations shape their experiences of social interaction and the sense of community. The ontology also acknowledges the role of the built environment and design interventions in influencing social dynamics. The epistemology of this research focuses on the exploration of the perspectives of the occupants to gain insights into the factors influencing social interaction and community formation.

The research initiates with a comprehensive literature review, identifying social problems related to high-rise apartments and forming research objectives followed by detailed exploration of theories, methods, and findings that underlie the influencing variables. Subsequently, research objectives were defined, and a questionnaire is designed. The questionnaire draws from literature reviews and focuses on variables and parameters relevant to the study. Prior to the field survey, a pilot test is conducted. Quantitative data is collected through a structured questionnaire, assessing resident's perceptions of social interaction, architectural features, and community engagement. Descriptive statistics, frequency analysis, and cross-tabulations are used to analyze survey data. The analysis examines relationships between variables and their impact on social interaction. Field observations of the case area are compared with literature findings to draw conclusions and recommendations.

5. Study Area

To fulfill the research objective, the study area was chosen where the apartment lies in the residential area. Mero City Apartments, located in Hattiban, Lalitpur, is an affordable housing project built in the year 2070. Consisting of three towers, each with 17 floors with 6-8 dwellings per floor i.e. 135units, the apartments offer a convenient living experience

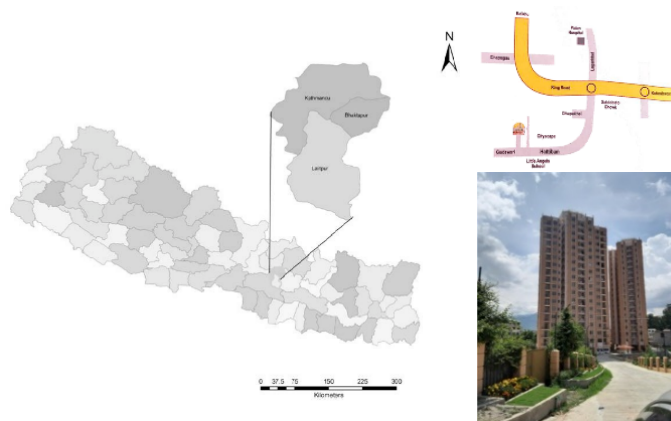with easy access to shopping centers, hospitals, schools, and dining options.

Figure 3: Location of study area

Residents can enjoy various amenities such as a swimming pool, fitness center, children's play area, and landscaped gardens. The affordable pricing was achieved through smart land acquisition. This apartment falls under the affordable housing.

Figure 4: Site Plan of Merocity Apartment

The apartment towers are arranged within setback lines, and the complex provides recreational spaces like a basketball court, gym, and swimming pool. The design caters to the needs of families, offering a play area for kids and even a temple surrounded by nature.

Although Merocity Apartment has three towers, the research was done only in one tower i.e. Block E (only where the authorization from the management association was granted). The sampling focused on covering at least 1-2 units from each floor or at least from certain bracket of floor levels.

6. Analysis and Discussions

6.1 Demographic information of Respondents

In the survey at Merocity Apartment, a total of 30 residents participated. Most of the participants were male, making up 66.7% of the respondents, while 33.3% were female. When it comes to age, the majority fell in the 26-35 age group, which

was 56.7% of the total. The other age groups, like 18-25, 36-50, and above 50, were smaller portions of the respondents. In terms of household structure, some lived alone (26.7%), some were couples (33.3%), and others were families with couples and children (40%). Ownership of their living spaces varied, with 46.7% being renters and 53.3% being homeowners. Regarding how long they'd lived there, there was a mix, with 20% living for less than a year, 33.3% for 1-3 years, 23.3% for 3-5 years, and 20% for more than 5 years. Interestingly, there was a diverse range of occupations among the residents, including medical and business sectors, engineering, teaching, and NGO work. This diversity in the Merocity Apartment community's demographic profile helped to understand the different people living there, including their ages, living situations, how long they've been there, and what they do for a living.

6.2 Social Interaction

The distribution of known neighbors is a notable aspect of the study. Remarkably, a significant proportion of respondents, constituting 53.3% (16 individuals), reported having less than 10% familiarity with their neighbors. Another segment of the residents, representing 16.7% (5 individuals), indicated knowing neighbors within the range of 10-30%. Furthermore, 23.3% (7 individuals) of the surveyed residents reported a familiarity extent falling within the bracket of 30-50
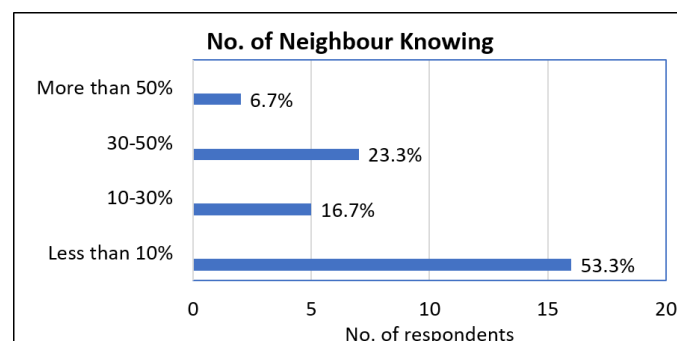

Figure 5: No. of Neighbor knowing

The data also reveals that a relatively smaller portion of respondents, accounting for 6.7% (2 individuals), reported being acquainted with more than 50% of their neighbors. This provides insights into the varying degrees of neighborly familiarity within the Merocity Apartment community, demonstrating a range of interactions from those with minimal connections to those who are more closely connected within the residential environment. These responses reflect varying degrees of neighbor interaction and community engagement, likely influenced by factors such as personal preferences, length of residency, and opportunities for social interaction within the apartment complex.

Respondents were also asked what type of interaction do they have with their fellow residents and the multichoice options were given.
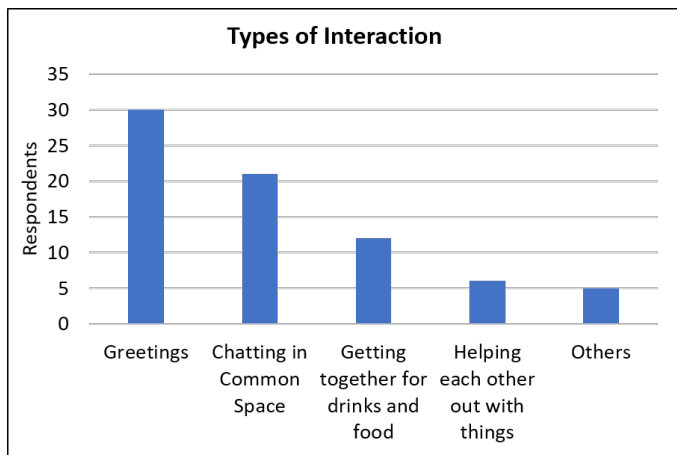
Figure 6: Types of Interaction

Many participants reported starting with basic greetings and chatting with their neighbors, which is a positive sign of neighborly engagement. Some even progressed to forming friendships and social gatherings like sharing meals and drinks. A few respondents indicated that they go a step further by helping each other out, reflecting a strong sense of community support. However, it's worth noting that there were also some who chose "others," which implies limited or non-verbal interactions, such as simply recognizing each other or commuting together. This shift in social interaction patterns reflects broader societal changes. In the past, people often had close-knit ties with their neighbors, relying on each other for various forms of support. But today, factors like technology and urbanization have led to more self-sufficiency, and sometimes, people don't even know their neighbors.

Furthermore, to understand the more about the factors that promote social interaction the residents were also asked about their reasons for the interaction with neighbors.
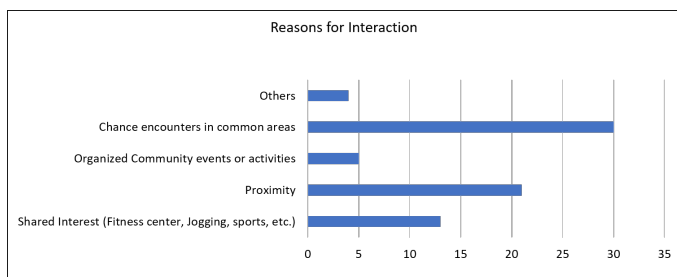

Figure 7: Reasons of Interaction

The above data revealed why neighbors interact with each other. One big reason is "Chance encounters in common areas," like meeting someone in the lobby or elevator. It's like when you see someone in the hallway and start talking—it happens naturally. Another reason is "Proximity," which means living close to each other makes people more likely to chat. If your neighbor is just a door away, you're more likely to have a conversation. "Shared Interests" also matter, especially for things like fitness or recreational activities. If the apartment complex has a gym or pool, people with similar interests tend to make friends while using these facilities. Lastly, "Organized Community events or activities" like parties or workshops can encourage interactions, but they might not

happen very often.

In simpler terms, it seems that chance meetings in shared spaces, living close to each other, having common interests, and sometimes attending community events are the main reasons neighbors interact in Merocity Apartment. These things make it easier for residents to get to know each other and build a sense of community. However, many residents mentioned a "Lack of shared spaces or amenities" as a big reason for limited neighbor interactions. This shows how important communal areas and facilities are for creating social connections in places like apartment buildings. When there aren't enough shared areas, it can be harder for people to interact and form a close-knit community. Also, "Limited opportunities for social activities" was mentioned, meaning there aren't enough chances for people to do things together and socialize with neighbors.

6.3 Spaces and Social Interaction

Table 1: Residents and the use of social space for social Interaction

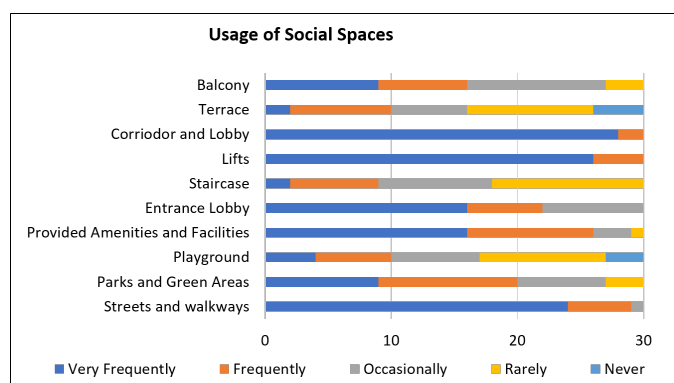| Parameters	Very frequently	Frequently	Occasionally	Rarely	Never
Streets and Walkways	28	2	0	0	0
Parks and Green Spaces	7	10	9	3	1
Playground	6	3	7	9	5
Provided Amenities and Facilities	6	9	5	6	4
Entrance Lobby	8	6	5	7	4
Staircase	3	5	8	14	0
Lifts	28	2	0	0	0
Corridor and Lobby	27	3	0	0	0
Terrace	6	11	8	3	2
Balcony	4	18	6	2	0

Figure 8: Usage of Social spaces

The survey results shown in fig.5 shows that many residents use the streets and walkways very often, likely for walking or jogging. Green spaces like parks are used differently, with some people using them frequently, while others only occasionally visit. Playgrounds seem to be more popular among families with kids, and not so much for individuals or couples without children. Amenities and facilities are used in a mixed pattern, with some residents using them very often,

while others rarely do. Entrance lobbies are commonly used for quick interactions like greeting neighbors. Staircases are rarely used, probably because most people prefer using elevators. Corridors and lobbies are frequently used for moving around and casual interactions. Terraces and balconies are used in diverse ways, possibly depending on personal preferences and apartment layouts.

The research also highlights the information regarding outdoor and indoor social spaces of this study area.

Figure 9: Street and surface parking

To begin with the outdoor spaces, observation highlighted the current condition and potential for enhancing social interaction among residents. Currently, the apartment faces challenges such as a damaged main entrance bridge, unpleasant secondary entrances, and surface parking that disrupts the welcoming atmosphere. These issues can negatively impact the resident's experience and their willingness to use these spaces as well as results in dissatisfaction among residents.
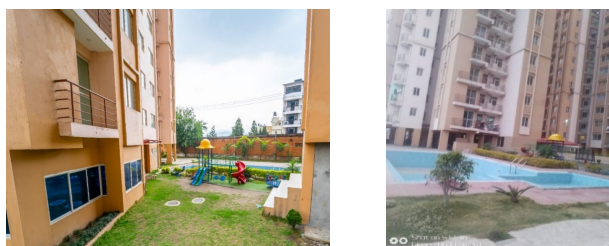

Figure 10: Outdoor recreational spaces

Furthermore, the usage of amenities and facilities such as swimming pool and outdoor open spaces. These spaces have the potential to serve as hubs for social interaction, but due to management and budget constraints, they are not fully leveraged. In contrast, it acknowledges the central children's play area as a safe and interactive zone, where mothers and children come together. However, the lack of seating and shaded areas in the park limits residents from spending extended time there. Overall, the information highlights both the existing challenges and the untapped potential of outdoor social spaces in Apartment, emphasizing the importance of well-planned and well-maintained communal areas to encourage social interaction and community well-being.

While observing the indoor social spaces, it was highlighted that the limited interactive spaces were available within the building. It was noted that the focus of the indoor design leans more towards private living spaces rather than communal areas.
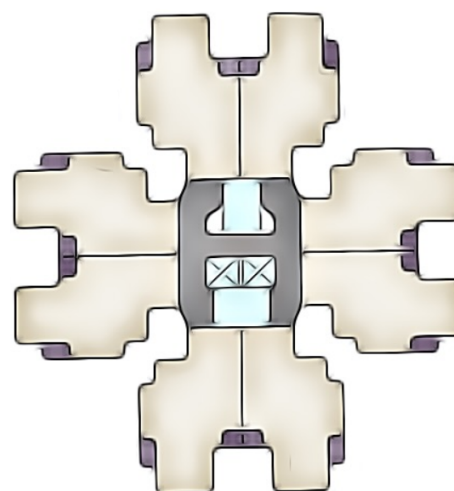

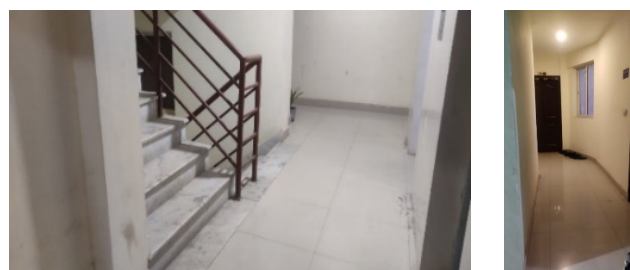**Figure 11:** Floor plan of block E

Figure 12: Indoor semi private spaces

The circulations are centrally located in point block layout where corridors encircle the core and connects the dwelling units. The corridors and lobbies prioritize privacy by concealing apartment doors from elevator and staircase lobbies, but they are often small and primarily serve as circulation spaces. This area has no natural lighting and visual link to the outdoor space. There is simply no reason that people will come out to the hallway and use it differently from circulation. As a result, residents tend to gravitate towards rooftop and terraces for their open and serene views. Different studies show that private apartments in the building are relatively smaller, which should motivate residents to utilize semi-private and public spaces as extensions of their living areas. The study further indicates that smaller apartment units tend to promote more social interaction and the use of communal areas. Hence, enhancing the quality of common spaces within and around the building is crucial to create a better living environment for the residents, aligning with research findings that suggest smaller apartments encourage the utilization of communal spaces for social engagement [20].

6.4 Level of Interaction and influencing factors

To study the influencing factors the cross tabulation between different variables were done. The number of neighbor knowns were cross tabulated with age, household structure, duration of living and usage of common spaces.

The survey found that many young people aged 18-35 know very few of their neighbors, possibly because they are busy

with their lives outside the apartment building and have existing friends. In contrast, those aged 31-55 and older tend to know more of their neighbors, possibly because older generations value community and have more time to socialize. Interestingly, older people are more likely to know at least half of their neighbors, possibly because they have a stronger desire to connect with others in their building due to different social norms and values. This gives the idea that age factor definitely influences the social interaction among residents.

The survey data also found that people who live alone or are in couples tend to know fewer than 10% of their neighbors. This could be because they are busy with their own routines and activities. However, families with kids tend to know more of their neighbors, possibly because they interact more with neighbors through shared play areas or school-related activities. Middle-aged couples also tend to know more neighbors, likely because they have more stable lives and more chances to socialize with others.
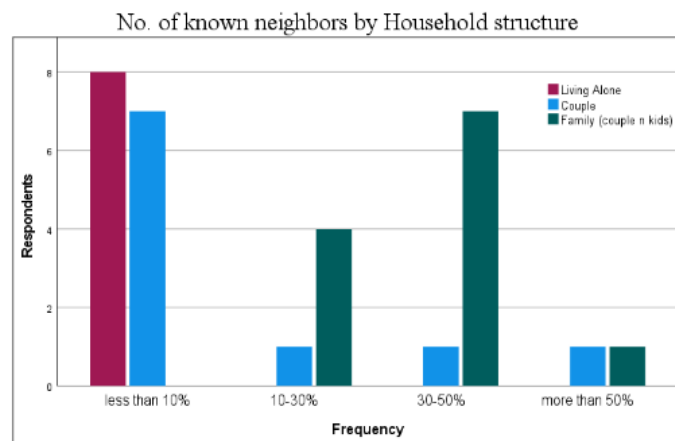

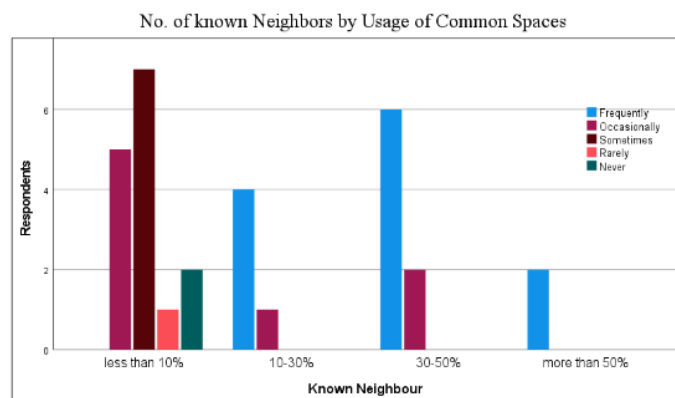**Figure 13:** No. of known Neighbours by household structure

Figure 14: No. of known Neighbours by use of social spaces

The survey results indicate a clear connection between how often residents use common spaces and their familiarity with neighbors and social interactions. Those who frequently use these spaces tend to know more of their neighbors and engage in interactions. This makes sense because when people regularly spend time in common areas like parks or community rooms, they naturally have more chances to meet and connect with their neighbors. Conversely, residents who rarely or occasionally use these common spaces seem to have

concerns about the quality of these areas, particularly open spaces on the ground level. This could be a significant factor discouraging them from using these spaces. If the quality of these common areas is subpar, with issues like poor maintenance or unattractive design, residents are less likely to find them appealing or conducive to socializing.

The data shown in fig 15 reveals that having well-designed "Community Spaces and Amenities" is super important, as 26 people pointed out how much they influence social interaction. This means that having places like parks, gyms, or community rooms where residents can gather and do things together really helps people get to know each other better. The way the apartment is designed and laid out, called "Spatial Configuration and Layout," is also a big deal, with many people saying it affects how often they interact with their neighbors. So, if the building is set up in a way that makes it easy for people to bump into each other, it encourages casual interactions.
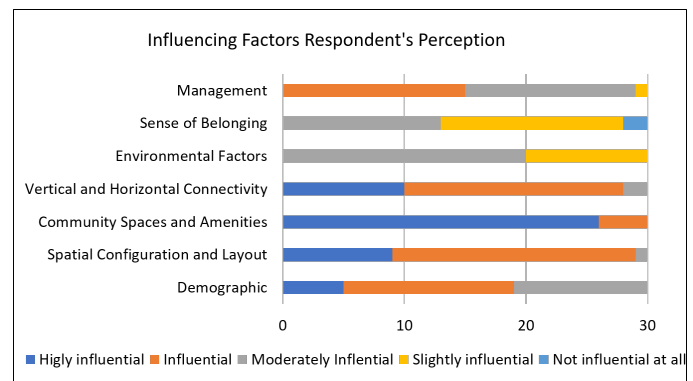

Figure 15: Influential factors as per Respondents

Having convenient pathways and common areas that are easily accessible and has some purposeful activities going on can attract the residents to use those spaces more often which encourages in social interaction and engagement. Having a nice and pleasant environment, known as "Environmental Factors," is important for 20 people, showing that a beautiful and comfortable setting encourages social connections. Lastly, feeling like you belong to a community, or having a "Sense of Belonging," matters to 13 people, indicating that being part of a friendly and inclusive community makes people want to interact more with their neighbors.

The open-ended interviews were also done with the residents where they were asked about need of social interaction and if they were willing to pay premium for those spaces as well as how they use common spaces for interaction and what they feel is lacking in the apartment complex. The responds were positive about needing the social interaction and willing to pay the premium if provided well designed and better spaces. The residents from Merocity apartment were highly disappointed with the condition of apartment complex which detached them from the place. Although they use provided spaces in their own way. The table tennis in community hall showed that the need for indoor gaming zone, the seniors walking in street asks for segregation of vehicle driveways and walkways.
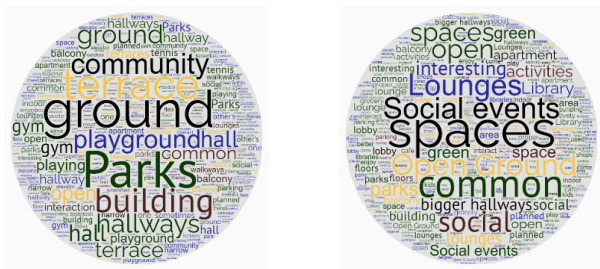
Figure 16: Word cloud (where residents interact the most) **Figure 17:** Word cloud (what residents feel is lacking)

"*I wish the ground space could have been much better, there's vehicles all around which is unpleasant and I myself don't prefer to stay there much but I do interact with people in gym, I call people in my houses too. we have WhatsApp group. We plan table tennis match, thankfully we have community hall we do a lot of communal activities there. for example, watch match together, playing together, etc.*"

- respondent

"*After I come from office, I must have tea I don't like the open spaces here it's not that well managed, I call my friends from the building to my apartment and we hang around here. May be one small café within building premise can also be attracting point, people will definitely gather around there.*"

- respondent

"*We have no other choice, we need to make best of what we have, nowadays we also understand that we need to socialize within the community, as an initiation we have started to celebrate smaller events together.*"

- respondent

There were many responses regarding ask for communal spaces that would encourage them to use them more often. Although the space provided there might be enough but they are underutilized.

7. Conclusion

In conclusion, social interaction is really important for making life better in high-rise apartments and building a sense of community. This study found some important things that affect how much people interact with their neighbors in these buildings. It turns out that age group, how long one has lived there, who they live with, and how often they use common spaces all make a big difference. Younger people who are busy outside their apartments tend to know fewer neighbors, while older folks value community connections and have more friends in the building. Living in the same place for a long time also helps you get to know more neighbors. People who live alone or as couples might have fewer chances to meet others, but families with kids often do more things together with their neighbors.

For any space to be successful it is important to fulfill some key attributes such as accessibility, comfort, socialization and activity [21]. Majority of respondent seems to require a purposeful activity to get them engage in the communal spaces.

The study showed that using shared spaces in the building, like parks or community rooms, is super important for meeting and connecting with neighbors. So, making these spaces better and more attractive can encourage people to interact more. Overall, this research suggests that well-designed and well-kept shared areas in high-rise apartments can create stronger communities, more friendly neighbors, and happier residents.

8. Recommendations

Everyone has a psychological desire for both privacy and socialization. The environments in which we live reflect this need. People look for more open spaces when they want to socialize with others, and they look for private spaces when they want to be by themselves [20]. Which is why it is important to plan and design the common spaces in such a way that it fosters freedom in public spaces and privacy for private spaces.

8.1 Outdoor Social Spaces

According to research, social interaction can be facilitated by outdoor areas. In order to meet the demand for social interaction, people visit outdoor areas. Outdoor areas are places for casual meets and potential social interactions. These areas give people the opportunities to interact in a high level. To increase recreational opportunities out of the house, people socialize in communal outdoor areas of large apartment complexes [13].

Optimizing outdoor areas by incorporating green pathways in driveways, which can encourage diverse activities such as jogging, gardening, and relaxation. Placing the central open spaces within apartment complexes with multiple blocks and strategically locating entrances to face the main garden can encourage informal interactions among residents from different buildings. providing the dedicated spaces for communal kitchen gardening not only actively involves residents but also motivates them to spend more time within the community. The inclusion of shaded areas with seating further enhances the practicality of these spaces. Leveraging existing open spaces, often reserved for future expansion, as temporary parks or playgrounds can contribute to social interaction. The entrance of every apartment complex acts as a semipublic space which is one of the potential social space for social interaction. Additionally, to maintain and regulate access to facilities like swimming pools and fitness clubs can attract residents, creating natural opportunities for social interaction. Allocating ground-floor spaces for commercial activities like community shops, libraries, and coffee shops can enliven common areas, fostering social connections. Hosting cultural events and festivals can also serve as catalysts for community engagement, even for those residents who may typically engage less socially.

8.2 Indoor Social Spaces

The majority of social interaction in the Highrise apartment occurs in the public areas indoor, which have the greatest occupancy rates. Yet, inner social spaces have received less attention than outer social spaces. The necessity for indoor social interaction is completely disregarded in the design of the majority of interior public space in High-rise apartments [20].

Creating spaces for lobby in ground and in different floors levels can encourage the social interaction among the residents. Incorporating proper lightings, indoor garden, seating in the elevator lobby and corridor can increase opportunities for socializing. The elevator lobby might serve as both a waiting area and functional spaces for residents to perform simple tasks inside the residential building, such as exercising or kids playing during bad weather, people lounging and chatting [19]. Also, indoor garden can be created and maintained by the residents of the floor which encourages the social interaction among the flat mates. The privacy for the apartment units should also considered while planning this space. Proposing gardens in private balconies with seating and lounges can visually connect residents with their surroundings and neighbors in different balconies, thereby encouraging more frequent balcony usage. Encouraging the use of staircases over elevators provides residents with increased opportunities for spontaneous interactions. Lastly, involving residents in decision-making processes regarding the design and maintenance of common spaces can instill a sense of ownership and responsibility, ultimately promoting social interaction.

If residents feel a sense of ownership and responsibility for their building and community, they are more likely to interact socially. Building management may provide people a sense of ownership and control over their environment by involving them in decision-making processes, such as the design and maintenance of common spaces.

These recommendations collectively present a comprehensive approach to enriching social interaction within high-rise apartment complexes by thoughtfully leveraging both outdoor and indoor social spaces. By adopting these strategies, building management and architects can work towards creating environments that inspire residents to connect, socialize, and cultivate a stronger sense of community, thus enhancing the overall quality of life in high-rise living

Acknowledgments

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