MEASURING LIVABILITY OF PLOTTED NEIGHBOURHOODS AND APARTMENTS: A STUDY OF PEOPLE'S PERCEPTION

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Abstract:
The 21st century is witnessing diverse changes in several areas of livelihood and housing. Gradually, styles and lifestyles also become more diverse over time. This study attempts to explore the phenomenon of quality of life in the residential areas of the city of Lucknow located in north India. It goes on to examine how satisfied middle-income residents are with their neighborhoods. In addition, it also endeavours to research that through changes in the lifestyle of people living in urban areas, whether in housing estates or low or mid-rise apartments, will bring them quality a better life. A qualitative study was conducted to compare data identified in a cross-sectional survey in identified neighborhoods in Lucknow. The researchers inferred that in the modern context, the acceptance of vertical housing is increasing. In addition, residents of low to mid-rise apartments feel safer, more comfortable and more connected in community life, while also demonstrating the bond between people living together.

Keywords: Quality of life/livability, residential neighborhoods, low to mid-rise apartments, housing satisfaction, post-occupancy evaluation

Introduction

The movement towards urban centres, or 'urbanization', is a widespread phenomenon around the world, as people are ambitious and seek higher living standards, employment opportunities, education and better healthcare facilities. Currently, approximately more than half of humanity lives in cities, and in the next 20 years that proportion is expected to rise to 60%.

The Housing for All program was launched by the Government of India in June 2015 with the aim of building 20 million housing units for the urban poor by 2022. According to the 2011 census, India has 246.7 million households. Of these, 68% are rural households and 32% are urban households. The data suggests that the majority of households in both rural (95%) and urban areas (69%) live in their own homes. Approximately 86% of all households, or 213.5 million people, live in apartment buildings. This is an increase compared to the 2001 census figures (Kishore, 2016).

Lucknow is the socio-economic, political, and cultural centre of Uttar Pradesh and the main attraction for most immigrants from the eastern United States. The gap between housing demand and supply is widening because urban and immigrant populations are growing themselves at an unprecedented pace. The continued expansion of urban centres leads to underutilization of natural resources and an undue concentration of authorities only in these large cities. The urge to own separate residences instead of owning an apartment has led public or private developers to develop low-density peripheral housing developments, but this has also led to major problems such as: I did. The uncontrolled expansion of cities increased distances and wasted important agricultural land in the suburbs. This has led to a significant increase in urban land prices and construction costs in Lucknow and nearby urban-rural interface areas. A study of home land prices and construction costs indicates that a modest 750 square

foot dwelling unit is required. The average construction cost is between Rs. 800 and Rs. 1000 per square foot. This is about four times the income for an individual property and about six times the income for the entire unit. These values are too high compared to other countries with well-functioning real estate markets (Lin, 2018).

India's elite and privileged groups are believed to be responsible for acquiring state-owned land at nominal prices for the development of housing projects controlled by political or private elites. These housing projects develop land for sale on the open market, where prices are too high for the purchasing power of middle-income households, and then cede territory to the next elite. Such programs are driven by government policies that fail to meet the housing needs of low- and moderate-income households, resulting in a huge housing shortage. A potential solution to the middle-income housing shortage without causing urban sprawl is to expand upward. Urban consolidation and smart growth, with a focus on compact development, are solutions to control urban sprawl.

This is likely what led to the development of multi-storey residential buildings known as apartments or vertical housing, where residents may live in a fairly safe and sociable setting for just the cost of construction and a tiny amount of the land. Nevertheless, neither Uttar Pradesh's governmental nor private sectors have taken it seriously.

Especially for lower- and middle-class residents, apartments frequently fall short of offering a higher standard of living than planned communities. Unsatisfactory designs that compromise community facilities, material requirements, etc. are among the areas that fall short of residents' expectations. Additionally, the construction of apartment buildings and vertical housing in Lucknow is rather common in almost all newly created or emerging metropolitan centres where the populace has adapted to this shift. On the other hand, residents in the city's oldest neighbourhoods are still acclimatised to independent planned housing that is high density and low rise, and they continue to oppose the concept of vertical housing.

In order to comprehend the phenomenon of preference for one over the other, this study attempts to draw a comparison between the quality of life of residents in low- to mid-rise apartments in Lucknow's urban areas and that of residents in plotted communities. Preferably, the identified users belong to the middle-class demographic. It also looks at the problems surrounding middle-class households in Lucknow's approval of vertical housing.

Objectives:
• To compare and assess the degree of satisfaction among Middle Income Group occupants of low- to mid-rise homes and planned communities in Lucknow.
• To draw attention to different architectural features that enhance a neighbourhood's quality of life and their impact on people' perceptions of those features.

Quality of Life: Meaning and Significance:
A wide range of definitions may be applied to the multifaceted idea of quality of life. "There does not appear to be one generally accepted definition of quality of life in the extensive literature generated in this subject over the years," according to the Treasury Board of Canada. There is no one, accepted definition of what constitutes a high quality of life, according to the literature. It is also noted that "it remains problematic to provide a coherent and robust definition of the concept." All definitions, however, centre their emphasis on the growth, contentment, and well-being of individuals in their attempts to characterise the quality of life.

In the literature, words like life satisfaction, overall wellness, human welfare, and human development are all interchangeable with quality of life. It usually refers to people's overall well-being and the standard of their living environments. The trend is described as the result of the combination of

environmental, social, health, and economic factors that affect how people develop personally and as a society, with a focus on objective values. However, if it is defined as a person's feeling of well-being and level of contentment with their existence, it emphasises how a person's perceptions and senses contribute to their quality of life.

Thus, a group of individuals who share similar physical, social, and environmental factors are more likely to be satisfied with their quality of life in a residential setting.

Theoretical Structure for Determining Characteristics that Impact Life Quality and Livability:

Residents' perceptions of any kind of housing are influenced by a number of non-building factors, such as their social and personal traits and the neighbourhood's context (the building's location within the city's urban fabric, the residents' economic status, the housing options available, the population density, the residents' stage of life, gender, the dwelling's design, and the local culture) (Sinnett et al., 1972; Gifford, 2007).

A residential neighbourhood's qualities as a location that imparts a high quality of life stem from its residents' needs, since it is a place that is connected to their lives and emotions. According to studies examining Maslow's theory of the hierarchy of needs, there are four fundamental human wants that must be met: the desire for peace, love, respect, and bodily demands (Ventegodt, Andersen & Merrick, 2003). According to Rewatkars (2016), user-responsive designs improve people's quality of life and characterise the design parameters as accommodating different socioeconomic backgrounds, open spaces, adaptability, and physical and emotional comfort. According to Taormina & Gao (2004), personality measures may be used to determine the degree of relevance needed to meet user demands. They identify the demands of the user, taking into account their traditional values, and include needs related to physiology, safety and security, belongingness, esteem, and self-actualization. Shawket (2018) defines quality of life as a unique measure that takes into account physical features, image and activities, landmarks, and physical settings as contributing aspects to neighbourhood identity and place-making.

Using relevant literature as a guide, the following characteristics and their determinants were shown to have an influence on inhabitants both directly and indirectly in every residential neighbourhood. These findings serve as the foundation for carrying out the survey and analysing the study objectives.

The following are the attributes and factors that determine the overall satisfaction and livability:

I. Psychological Attributes: By acknowledging space as a related space, an individual may communicate his sentiments about it. The following factors constitute a relevant space/environment:

a. Privacy: According to Davis and Palladino (1997), privacy is the phenomena that environmental psychology addresses as a self/other boundary regulating process in which an individual or group of individuals desires to be in contact with others at times and to be detached from them at others. While socialising and interacting with neighbours are essential for daily survival, privacy is seen as a critical component of mental and emotional health (Gulati, 2020). Put differently, privacy is a bidirectional process that involves both being with and being apart from people, with one intuition guiding one's mental state at one point and the other being robust at another. Therefore, it is unpleasant to be alone too much or for too long (isolation) or to be crowded too much for too long (crowding) (Namazian, Mehdipour 2013).

b. Safety: A neighbourhood's level of safety is a key factor in determining its residents' happiness. In addition to having a detrimental impact on residential quality, fear of crime has also been linked to potential harm to residents' mental health (Baumer, 1985; Green et al., 2002; Kullberg et al., 2009). The term "emotional response of dread or anxiety to crime or symbols that a person associates with crime" (Ferraro, 1995) is typically used to separate fear of crime from perceived danger. Fear of crime disrupts

daily routines, which promotes avoidant behaviour and makes individuals stay inside their houses rather than venture outside (Cashmore, 2014).

c. Territoriality: According to Warren and Brandeis (1890), "the right to be let alone" is the definition of "territoriality," which is one of the most often discussed concepts of privacy. This might be interpreted as an individual's right to control when and how other parties are permitted to engage in his or her personal or private domain. A person's personal space that has a defined boundary around it is referred to as their personal or private territory (Konings, Schaub, Weber & Kargl 2010).

II. Perceptual Attributes:

a. Individual Identity: Restricting outsiders' access to a location tends to foster a stronger sense of community and security inside a neighbourhood. To establish a feeling of place and identity, the majority of locals value an image that incorporates certain characteristics of distinctiveness while reflecting the dominant norms in the area (Marcus, 1986). It is also discovered that a neighbourhood's housing type, style, and tenure play a crucial role in shaping its social character. It is possible to argue that housing and its surrounding area reflect a person's class and grade at some point, but it is also important to recognise that low-income residents often choose housing schemes that blend in with the neighbourhood (Marcus, 1986).

b. Personal Values: Before inhabitants to have a sense of community, there must be some homogeneity (Marcus, 1986). Although the ability to customise and express one's beliefs enhances neighbourhood user happiness, living in a community fosters solidarity across varied user groups.

c. Visual Comfort and Pleasure: According to Marcus (1986), a significant factor in determining a resident's level of happiness is the overall visual environment of a housing development. Effective site design and landscaping greatly enhance resident satisfaction.

III. Physical Attributes:

a. Physical characteristics of building interiors and exteriors- The external built residential environment characteristics include things like building types of green spaces, the number of houses per unit area, the skyline, walls, doors, windows, fenestrations, and waste disposal facilities. On the other hand, the physical characteristics of the building interiors and exteriors Size, shape, arrangement, colour, texture, temperature environment, air quality, and other aspects are examples of internal environment characteristics. Poor quality interior and exterior built environments can lead to psychological stress and, consequently, discontent in neighbourhoods.

b. The physical attributes of public open spaces: Parks and green areas are important components of the built environment in neighbourhoods that promote a range of physical activity behaviours. For various socio-demographic groups, different kinds of public open spaces support a range of physical activity behaviours (Koohsari, 2015). In addition to potentially moderating the impact of public open space-related factors on physical activity, objective and perceived features of the built environment surrounding public open space may also have unique effects on physical activity related to public open space (Sugiyama et al., 2014).

c. The attractiveness of the place: People's decisions to relocate are influenced by the neighbourhood's features. When these qualities are reduced to a limited number of constituents, neighbourhood attractiveness metrics may be calculated. The three main components of neighbourhood appeal—aesthetics, amenities, and social interaction—have been found to be crucial in determining residential neighbourhoods' overall quality of life (Chhetri, 2006).

d. Climatic comfort: A building's ability to operate properly depends in large part on its climate. The combination of various climatic conditions and the architectural and spatial elements of the structure determines the comfort levels both inside and outside. The users are competent to provide an evaluation

of both interior and outdoor climate comfort.

e. Conveniences: When choosing a home in any neighbourhood, one should pay close attention to the accessibility and availability of local amenities. Elderly persons and those with relatively lower income levels may be the ones who are most sensitive to the presence of local amenities.

IV. Social Attributes:

a. Connections to the social environment: The social environment is made up of things like casual talks, unplanned gatherings, and participation in planning group activities or events that foster mutual respect and trust among residents. According to Hee-Jung Jun (2015), physical environment aspects play a significant role in creating a social atmosphere that is relevant to its users.

b. Mutual interactions: Also known as social interactions, mutual interactions are the social acts that neighbours do for one another, including visiting, caring for one another, and offering or requesting assistance when needed. It is identifiable by the proximity to the approach of the nearby apartment complex or block (Majd Al-Homoud, 2004). A high-quality social environment may operate as a catalyst for the improvement of interpersonal relationships.

c. Accessibility and Approaches- The effectiveness of approach routes and accessibility in every neighbourhood is determined by two key factors: the distance travelled to reach a spatial commodity and its position. Well-planned approach route layouts improve the social climate and interactions among users of community resources such as parks, grocery shops, and elementary schools, and are thus essential for fostering a stronger sense of community (Albert Tsai, 2014).

V. Functional Attributes:

a. Functional diversity- A neighbourhood's functional diversity is influenced by the variety of behaviours that carry out significant communal tasks. While other neighbourhoods may also be functionally pluralistic, a neighbourhood may be prominent in fulfilling a single purpose yet inconsequential in relation to other neighbourhoods.

VI/. Environmental health and access to goods:

a. The availability of social and health services: Easy access to products and services enhances the causal relationship between improved user happiness and neighbourhood environmental satisfaction in general.

b. Level of air quality- The degree of air quality improvement in a neighbourhood is directly correlated with the effectiveness of the landscaping inside the neighbourhood's boundaries and indirectly correlated with the pollution produced by different air polluting agents and media. The overall health factor of the people reflects the possibility of stale air filtering through the well planned landscape and building components.

c. Community members' access to resources: Due to challenges in obtaining public resources, people of a certain geographic area have an indirect correlation with health and happiness levels.

VII. Economic Condition:

Users' economic circumstances have an impact on the neighbourhood's quality of life, and they mostly balance out mixed-income neighbourhoods by putting households with different income levels close to one another. However, this proximity may or may not promote social cohesion or other significant cross-income integration. Studies conducted since the late 1990s have discovered, at most, minimal contacts between inhabitants of different economic levels. Neighbours with comparable economic levels engage in most interactions (Levy, 2013).

Material and Method:

This study uses a phenomenological research technique to identify the neighbourhood's and its surrounding areas' most salient characteristics for residential satisfaction. Four distinct Lucknow neighbourhoods are used to conduct a pilot survey on about 200 randomly chosen individuals.

Subject: People in Lucknow who are middle-class and who have lived in urban areas with either low-to mid-rise residential units or planned neighbourhoods are the research subjects.

The research study's subjects must be between the ages of 20 and 60, have monthly household incomes between Rs. 50,000 and Rs. 1, 20,000, and have lived in the targeted region for at least two years.

Method: A two-step sampling strategy is used, consisting of the selection of target regions and random walk survey sampling inside the target areas. The surveyed group's recorded data is tallied and subjected to descriptive analysis using the percentage approach.

Study area: Localities catering to the middle-class demographic are chosen on the basis of Lucknow's master plan.

The following criteria were used to choose four Lucknow city neighbourhoods in the Middle Income Group: Sahara States, Eldeco Greens, Indira Nagar Sector-19, and Indira Nagar Sector-21:

The selected participants are from the Middle Income Group, which is a comparable income stratum.

According to the rules of the Pradhan Mantri Awas Yojna-Urban (PMAY-U), a family classified as Middle Income Group (U) is one that earns between Rs. 12 and 18 lakhs annually.

The sample cases fall into one of two categories: low- to mid-rise apartments or residents in plotted communities.

A plotted neighbourhood is a gated community or residential area where residents may purchase individual home plots and which is outfitted with basic utilities including parks, roads, power, drainage, and sanitary systems.

"A building above 4 stories, and/or a building exceeding 15 metres or more in height (without stilt) and 17.5 metres (including stilt) is a high rise building," according to National Building Code: Part-4. Accordingly, any structure that is lower than 15 metres (without stilts) or 17.5 metres (with stilts) can be categorised as a mid-rise building.

The neighbourhoods in the urban areas of Lucknow, that are conveniently reachable by public transit. Both the types of neighbourhood are gated in nature.

The characteristics influencing an individual's Quality of Life, as per the research, are the basis for the questions to be asked to the respondents.

It is divided into four sections that ask questions concerning how community members see different aspects of quality of life.

The first section asks about the respondent's psychological characteristics, including privacy, safety, and territoriality.

The purpose of Section 2 is to comprehend the respondents' perceptual qualities, including comfort, visual pleasure, and individual identity. Numerous indications have been found, and respondents from various communities have been questioned about the relative importance of various aspects when deciding between an apartment block and a gated community. In order to learn more about the respondent's preferences for location, tenure, approach routes, maintenance, safety, and other factors, certain closed-ended questions have been developed.

In Section 3, the sample group's functional diversity (climatic comfort, conveniences, and diversity) and physical comfort in each type of dwelling are examined.

Understanding the social requirements and goods access (interactions, methods, and accessibility to products and services) of the respondents in both groups is the focus of Section 4. There are a variety of factors, or "Push Factors," that explain why some individuals would rather live in gated individual homes than in low- to mid-rise flats.

Analysis:

Assessment of the psychological needs (territoriality, safety, and privacy); the survey revealed that 32.8% of participants had not felt comfortable when strolling around their neighbourhoods at night. Of the responders in the aforementioned proportion, just 3.6% belonged to mid-rise gated communities, whereas 29.2% belonged to planned and gated neighbourhoods.

The findings show that, in comparison to planned and gated neighbourhoods, the psychological demands of the examined groups have been more fully met in mid-rise gated communities.

Regarding the three perceptual needs (comfort, visual pleasure, and individual identification), 19.7% of respondents said they didn't have nice views from their home windows or the common spaces; of them, 13.9% said they lived in gated and planned neighbourhoods and 5.8% said they lived in mid-rise gated communities.

The majority of residents in both mid-rise gated communities and planned neighbourhoods, according to the results, are unaware of their premise rights.

34.4% of respondents needed to open windows during the day for ventilation due to physical comfort and functional diversity (climatic comfort, conveniences, and diversity).

93.4% of respondents claimed that in order to have light throughout the day, they must open their window curtains. Of the respondents in the aforementioned proportion, 26.1% belonged to mid-rise gated communities, whereas 67.3% belonged to planned and gated neighbourhoods.

According to 29.5% of respondents, there aren't enough options for them to shop at the neighbourhood centre once a week. Of the respondents in the aforementioned proportion, 19.9% belonged to planned and gated neighbourhoods, whereas 9.6% belonged to mid-rise gated communities.

The findings show that mid-rise gated neighbourhoods have better lighting and ventilation than planned and gated neighbourhoods.

In comparison to planned and gated neighbourhoods, mid-rise gated communities provide better weekly shopping provisions.

19.7% of respondents cited social needs and access to commodities (interactions, approaches, and accessibility to products and services) as reasons why their neighbourhood didn't seem like a strong community. Within the aforementioned number, 2.9% of respondents were part of mid-rise gated communities, whereas 16.8% of respondents were part of planned and gated neighbourhoods.

11.5% of respondents stated they didn't think it was simple to stroll about their neighbourhood; of these, 9.8% said they lived in gated and planned neighbourhoods, while just 1.7% said they lived in mid-rise gated communities.

13.1% of respondents disputed that there was enough lighting surrounding their home at night; of them, 8.1% lived in gated and planned communities and 5% in mid-rise buildings.

Only 18% of respondents said their neighbourhood had adequate night time lighting. Within the aforementioned number, 2.7% of respondents were part of mid-rise gated communities, whereas 15.3% of respondents were part of planned and gated neighbourhoods.

The findings show that compared to mid-rise neighbourhoods, people in planned and gated communities lack a sense of community.

Conclusion:

The study's findings unequivocally show that, in contrast to planned and gated neighbourhoods, mid-rise gated communities better satisfy the psychological demands of the examined groups. The vistas, ventilation, and natural light available to respondents from the mid-rise gated neighbourhoods are superior. They have a better strategy for their weekly and daily shopping, and they are less affected by the noise and traffic pollution in their neighbourhood.

The target market strongly supports larger flat sizes.

Compared to other neighbourhoods, residents in low- to mid-rise gated communities feel more at ease, have greater possibilities to wander about their property during the day, and have a stronger sense of community.

Accordingly, the study has shown a good trend in people's propensity to choose low- to mid-rise gated homes. Following quality and accessibility to children's play areas and green areas, safety and security, privacy, and proper day lighting ranked as the most critical criteria among those considered throughout the study. This undermines the lesson that people value a neighbourhood's psychological characteristics more than its physical ones. The presence of social, perceptual, and other characteristics has increased a neighborhoods level of sensitivity.

Recommendations:

Encouraging more households to move towards low- to mid-rise housing, planners, developers, and policymakers should take into account and make sure that buyer preferences—like privacy, safety, and security, open and green spaces, adequate daylight, secure parking areas, design and layout that is spacious and practical for families with young children, etc.—are incorporated into the designs of their dwellings. Complementary amenities and services include neighbourhood green spaces, children's play areas, shopping facilities etc.

Whether planned or raised, a thoughtfully built neighbourhood should be small, pedestrian-friendly, and mixed-use. It is necessary to provide the provision for inhabitants to have access to sufficient services and facilities to meet their needs. In order to meet both national building codes and people's requirements, provisions must provide access to sufficient eco-buildings and housing.

The designer and developer should prioritise creating well-defined streets and open spaces through a well-structured building plan in order to provide a hierarchy of comprehensive street networks based on pedestrian and vehicle load.

Ensuring the neighbourhood's sustainability, the developer and designer must make sure to include the predicted administration, upkeep, and repair policies.

Vertical expansion is, in fact, one of the acceptable solutions that would allow Lucknow's population to grow without compromising their quality of life in their homes. This is because it would allow the city to maintain control over the parameters that define each individual's quality of life in these neighbourhoods, increasing the acceptability of above-ground housing units among all age groups and genders in modern development.

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