

# Determinants of Homeownership Satisfaction in Urban India: A Comparative Evaluation Across Housing Typologies in Lucknow

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## Abstract

*Housing satisfaction is a multidimensional concept shaped by physical, social, psychological, neighborhood, and socio-demographic factors that collectively influence residents' perceptions of their living environment. The habitability of a dwelling depends not only on its engineering and physical attributes but also on behavioral, cultural, interpersonal, and community characteristics. This study examines homeownership satisfaction across three major housing categories – private builder-constructed, government-constructed, and self-constructed houses – in Lucknow, India. Using an analytical research design, primary data were collected from 450 homeowners through semi-structured interview schedules, complemented by secondary data from national housing reports, census documents, and sector publications. The study investigates differences in satisfaction based on the built environment, socio-psychological environment, and neighborhood conditions, while also analyzing demographic influences. Findings indicate that a majority of respondents report medium to low levels of satisfaction across psychological environment (63.55%), neighborhood environment (66.0%), dwelling unit features (62.44%), support services (70.22%), public facilities (70.89%), and neighborhood facilities (72.0%). Significant differences in satisfaction were observed across age groups, gender, type of construction agency, income groups, educational status, and period of stay. However, some variables, such as household occupation in specific domains, showed no significant association with satisfaction. The study highlights critical gaps in built and social environments that affect homeownership satisfaction and offers recommendations for improving residential design, neighborhood planning, and support services. The findings may guide policymakers, urban planners, and housing agencies in developing more responsive and resident-centric housing environments.*

**Keywords:** Homeowner satisfaction, built environment, neighborhood facilities, psychological well-being, urban housing, India, residential typologies

## INTRODUCTION

Housing has historically served as a fundamental human necessity, protecting from environmental and external elements. However, the meaning and expectations attached to housing have evolved significantly with societal progress, urbanization, and shifting patterns of human interaction. Beyond its physical function as a shelter, housing plays a critical incubatory role throughout the lifespan of individuals – shaping personal identity, nurturing social relationships, providing privacy, and influencing psychological well-being. As an essential component of community life, housing forms the foundation upon which social cohesion, interpersonal relationships, and collective identity are constructed [1].

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Residential satisfaction, therefore, is a multidimensional construct shaped by physical, social, psychological, neighborhood, and demographic parameters. Scholars contend that housing satisfaction is not simply a reflection of the visible conditions of a dwelling but also an outcome of behavioral, cultural, socio-demographic, and environmental influences operating within the broader societal ecosystem. Factors, such as age, family size, marital status, length of residency, income, education, employment, sense of ownership, neighborhood interaction, safety, aesthetics, and access to services, collectively contribute to shaping an individual's perception of housing quality. Similarly, community layout, public open spaces, transportation access, building aesthetics, cleanliness, and noise levels play a significant role in fostering or diminishing residential satisfaction [2].

In contemporary urban India, homeownership is both a financial investment and a symbol of socio-economic achievement. Yet, satisfaction among homeowners varies greatly depending on the type of housing – private builder-constructed units, government-built housing, or self-constructed homes – each characterized by different standards of design, infrastructure, amenities, and social environments. Studies worldwide have demonstrated that fluctuations in homeownership satisfaction arise from interactions between built environment attributes and socio-psychological conditions, underscoring the need for performance evaluation of housing systems based on users' expectations and lived experiences [3].

Despite numerous initiatives by governments and private developers to improve housing supply, many developing Indian cities continue to face challenges such as overcrowding, environmental degradation, poor maintenance, inadequate services, and socio-psychological stressors. Lucknow, the capital of Uttar Pradesh, presents a particularly compelling context for such an inquiry. The city embodies a juxtaposition of traditional and modern neighborhoods, transitioning from its Nawabi-era urban fabric to rapidly expanding planned townships. Rapid population growth, increased migration, and expanding real estate activity have intensified pressure on infrastructure, public services, and residential environments. The diverse range of housing typologies – ranging from heritage dwellings in old Lucknow to integrated townships developed by private builders – offers a unique setting for examining variations in homeownership satisfaction [4].

While several global studies highlight determinants of residential satisfaction, limited empirical work in India systematically analyses how built, social, and psychological factors interact to influence satisfaction among homeowners across different construction agencies. Existing research seldom integrates sheltered housing components (dwelling unit features, construction quality, support services) with non-sheltered factors (public services, socio-psychological environment, neighborhood facilities). Furthermore, gaps remain in understanding how demographic characteristics interact with environmental and psychosocial variables to shape homeowners' satisfaction in rapidly urbanizing Indian cities [5].

Addressing these gaps, the present study, titled “*Determinants of Home Ownership Satisfaction: An Analytical Study of Built, Social, and Psychological Factors in Lucknow, India*”, examines the satisfaction levels of homeowners across private builder, government agency, and self-constructed houses in Lucknow. The study evaluates the built environment, socio-psychological characteristics, neighborhood conditions, and demographic variables to identify patterns, differences, and determinants influencing satisfaction. By analyzing a comprehensive residential satisfaction bundle across 450 respondents, the research provides insights into the interdependencies between housing attributes and homeowners' lived experiences [6].

The findings are expected to contribute to housing policy formulation, urban planning strategies, and design guidelines aimed at improving residential environments and promoting the holistic well-being of urban residents.

### **Objectives of the Study**

- To assess the level of homeowner satisfaction across physical, environmental, and socio-psychological dimensions.
- To compare satisfaction levels among three housing categories – public agency housing, private builder housing, and self-constructed houses.
- To identify key determinants contributing to overall residential satisfaction.
- To provide recommendations for policy and planning interventions to improve urban housing environments [7].

### **LITERATURE REVIEW**

#### **Studies Related to Housing Satisfaction (Rewritten, Journal-Ready Version)**

Housing satisfaction has been widely explored across disciplines such as economics, sociology, planning, environmental psychology, and public policy. Data-driven evaluation of residential conditions, needs, and preferences is essential for evidence-based housing policy and planning. The multidimensionality of housing satisfaction arises from the interplay of determinants such as socio-demographic characteristics, built environment attributes, neighborhood conditions, and psychosocial factors. Earlier research has evaluated how residents' perceptions of housing conditions influence their quality of life, project success, and overall housing performance. These studies collectively suggest that residential satisfaction reflects not only physical housing quality but also behavioral adaptability, social interaction, mobility patterns, and the likelihood of relocation [8].

A substantial body of literature categorizes homeownership satisfaction based on internal (psychological, socio-demographic, financial) and external (environmental, neighborhood, service quality) determinants. Housing satisfaction is often viewed as an outcome of an individual's physical and mental well-being, influenced by housing quality, maintenance levels, and neighborhood conditions. Long-term residents, in particular, are more sensitive to neighborhood quality – greenery, safety, noise, circulation, amenities – than to the physical condition of the dwelling alone. Financial capacity remains the most dominant factor shaping housing choice, affordability, maintenance capability, and ultimately satisfaction. Households with limited economic resources often experience dissatisfaction due to deteriorating conditions, lack of amenities, or poor-quality construction [9].

Socio-economic status has been found to play a marginal yet notable role in determining satisfaction among middle- and higher-income groups, whereas households belonging to economically weaker sections report higher dissatisfaction due to compromised design standards and maintenance burdens. A marked contrast is observed between homeowners and tenants; rental tenants often avoid investing in maintenance due to financial insecurity and shorter tenancy periods. These conditions are particularly evident in slow-developing localities where deteriorated housing stock and poor amenities undermine satisfaction [10].

Differences between rural and urban determinants of satisfaction are also prominent. Urban residents prioritize accessibility, education, quality of construction, and neighborhood amenities, whereas rural residents value affordability and proximity to employment. Migration to urban peripheries often leads to overcrowding and inadequate services, further reducing satisfaction. Community interaction and social cohesion emerge as key components of satisfaction; well-functioning communities with active participation in neighborhood upkeep tend to exhibit higher residential satisfaction. Conversely, high-density low-income housing with compromised construction quality leads to psychological stress, limited privacy, and dissatisfaction [11].

Housing demand in urban markets is closely linked to socio-economic conditions, policy efficiency, and residents' satisfaction. Ineffective policies and deteriorating neighborhoods reduce homeownership satisfaction, thereby diminishing market value. Conversely, improvements in community development and housing quality promote greater participation and stability [12].

Studies linking housing amenities to health have shown that sanitary facilities, water supply, ventilation, and social environment significantly influence both physical and mental health. These conditions, shaped by socio-economic status, determine perceptions of well-being and satisfaction. Poor-quality housing, especially in neglected urban pockets, undermines social capital and preventive health behaviors [13].

Research in international contexts also supports these findings. Neighborhood safety, housing quality, and social relations significantly influence life satisfaction among African American homeowners. Discriminatory policies, poor maintenance of rental units, and deteriorated neighborhoods contribute to dissatisfaction among tenants. Similar patterns of socio-spatial inequality are documented in Western Europe [14].

Construction delays and identified technological gaps, governance inefficiencies, and environmental factors as key contributors to poor-quality housing delivery. Poor service quality, limited customization, and misaligned design standards adversely affect satisfaction. Homeowners generally exhibit greater financial stability, community engagement, and locational stability than renters. Higher-income groups view homeownership as wealth accumulation, whereas low-income households often remain renters due to financial constraints and lower perceived returns from home investment [15].

Homeowners tend to report higher satisfaction than tenants, with housing quality and perception of space being major determinants. Occupant mobility is often driven by dissatisfaction rather than financial constraints, while homeowners' larger financial commitments act as deterrents to moving [16].

Housing satisfaction is also closely linked to neighborhood amenities and urban quality of life. Urban neighborhoods in Costa Rica found that satisfaction with safety, amenities, and accessibility strongly predicted overall life satisfaction. Studies in the Indian context show similar results. Kolkata, noted unfavorable perceptions among high-rise dwellers due to social isolation, overcrowding, and declining space quality [17].

Customer-centric research in construction indicates that service quality, reliability, design customization, and post-construction support significantly elevate owner satisfaction. In Malaysia, reported moderate satisfaction levels in low-cost housing, driven by dwelling support services and public facilities. Their model suggests that enhancing security, sanitation, and housing design can significantly increase satisfaction [18].

Environmental determinants of satisfaction are reinforced by research showing that green spaces, density, land use, and urban design directly affect mental health and social well-being. Similarly, studies have identified that improved public housing quality in Nigeria enhances neighborhood participation, maintenance behavior, and community cohesion. Additional findings highlight that demographic factors, cultural needs, financial status, and urban convenience strongly influence housing preferences and satisfaction in Malaysia [19].

Overall, the literature underscores that housing satisfaction is a multifaceted construct shaped by built form, services, socio-economic conditions, neighborhood quality, governance efficiency, and psychological well-being. These factors collectively form the foundation for evaluating homeownership satisfaction, particularly in rapidly urbanizing contexts such as Indian cities [20].

### **Satisfaction Models and Theoretical Framework**

Housing satisfaction research draws extensively from consumer behavior theories, most notably the expectation–performance paradigm, which posits that satisfaction results from a cognitive comparison between what consumers expect and what they actually receive. Early scholars conceptualized satisfaction as an evaluative process grounded in disconfirmation theory, where positive disconfirmation (performance exceeding expectations) generates satisfaction, while negative

disconfirmation leads to dissatisfaction. This perspective suggests that expectations can be exceeded either through normally acceptable performance or through unexpectedly superior outcomes [21].

In addition to disconfirmation-based theories, Contrast Theory asserts that individuals tend to magnify perceived differences between expected and actual housing conditions. Equity Theory also finds relevance in housing satisfaction evaluations, suggesting that occupants assess fairness by comparing their input–output ratios with those of others. Perceived fairness in housing acquisition, maintenance costs, neighborhood amenities, and service quality can significantly influence levels of satisfaction or dissatisfaction. Analytical tools, such as the chi-square test, are frequently applied in housing studies to examine relationships between demographic characteristics and satisfaction outcomes [22].

Based on these theoretical underpinnings, several scholars have developed comprehensive residential satisfaction models integrating physical, social, psychological, and managerial attributes. Residential satisfaction reflects the perceived adequacy of housing in meeting residents' needs, expectations, and aspirations. Accordingly, the present research framework considers multiple determinants, including characteristics of dwelling units, support services, neighborhood environment, housing estate management, acquisition processes, and socio-economic and demographic attributes of residents. These variables collectively shape the perceived quality of the housing environment and influence the degree of satisfaction among homeowners [23].

### **Neighborhood Satisfaction**

Neighborhood satisfaction constitutes an essential component of overall housing satisfaction, as external environmental and social conditions directly shape residents' well-being and perceptions of quality of life. A neighborhood can be understood both as a physical territory and as a network of social relationships. Residents' comfort or discomfort within a neighborhood reflects their evaluation of factors such as security, circulation patterns, recreational spaces, maintenance levels, parking availability, traffic density, noise, and the presence of green spaces. These socio-spatial attributes play a significant role in shaping the liveability and long-term desirability of residential areas [24].

Neighborhoods as complex commodities produced and consumed by households, businesses, property owners, and local governments. Households derive satisfaction from the quality of housing and surrounding public and private spaces. Housing societies and apartment clusters often exhibit shared experiences of satisfaction or dissatisfaction due to common exposure to environmental conditions. Neighborhoods that lack communal spaces or social amenities typically witness lower long-term occupancy and limited community cohesion [25].

Environmental psychology suggests that environmental amenities – green spaces, water bodies, pedestrian-friendly streets, and clean surroundings – positively influence neighborhood satisfaction. Conversely, environmental stressors, such as noise, air pollution, litter, and inadequate sanitation, reduce residential satisfaction and may contribute to poor mental health, anxiety, and higher mobility. Immigrants and renters, often with weaker social support networks, may express lower satisfaction due to relocation frequency, cultural barriers, and financial vulnerabilities [26].

Research consistently demonstrates that homeowners report higher neighborhood satisfaction than renters, primarily due to longer periods of residence, greater community engagement, and higher perceived security. Homeownership encourages investment in neighborhood relationships and participation in the upkeep of shared amenities. Greater familiarity with surroundings enhances social capital and stability, although it may also reduce residential mobility. Conversely, lower-income households and renters often face constraints, such as poor-quality infrastructure, insecurity, and elevated maintenance burdens, which undermine neighborhood satisfaction [27].

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### **Well-Being and Quality of Life**

Housing satisfaction is closely linked to personal well-being, encompassing physical, relational, and societal dimensions. Physical well-being is influenced by construction quality, ventilation, sanitation, access to basic necessities, and the absence of environmental pollutants. Psychological well-being is shaped by social interactions, perceived safety, income stability, and communal belongingness. It is argued that well-being arises from supportive environments that provide security, adequate resources, and opportunities for social participation. Inadequate living conditions or adverse social circumstances can diminish self-esteem and increase vulnerability to psychological distress. A strong sense of community is associated with positive mental health, lower psychological disruption, and greater resilience. Subjective well-being is strongly associated with neighborhood cohesion, perceived efficacy, and positive emotional experiences. The presence of supportive social networks enhances feelings of safety, belongingness, and collective efficacy – all of which contribute to overall satisfaction and stability [28].

Quality of life is another key indicator connected to housing and neighborhood conditions. It reflects both subjective evaluations and objective living circumstances. Community satisfaction has been linked to residents' sense of responsibility and belongingness. Further research identifies four domains influencing quality of life – cultural and social life, physical environment, public services, and economic circumstances. The interplay of these domains shapes community vitality, hygiene, security, and access to essential services, all of which contribute to housing satisfaction [29].

### **Built Environment and Residential Satisfaction**

The built environment encompasses all human-made physical spaces designed to meet societal needs. Its elements – including building design, structural quality, materials, environmental integration, connectivity, and communal facilities – significantly influence residential satisfaction. Features, such as open spaces, green areas, circulation networks, visual identity, and accessibility, contribute to perceptions of comfort, safety, and liveability [30].

Socio-economic factors further influence how residents perceive the built environment, often resulting in spatial segregation within cities. Affordability determines the distribution of households across colonies, where similarities in socio-economic status contribute to homogeneity in expectations and satisfaction levels. When designed effectively, residential colonies promote healthy social interactions, child-friendly environments, and community bonding [31].

Connectivity plays a crucial role in shaping satisfaction. Well-designed internal road networks, pedestrian pathways, and parking facilities enhance mobility and social interaction. Minimizing reliance on vehicular travel and providing essential amenities within walkable distances contribute to improved social cohesion and reduced environmental stress [32].

Cleanliness and sanitation are essential determinants of residential satisfaction. Efficient waste management, drainage systems, and general site maintenance reflect the combined effects of administrative responsiveness and resident participation. Persistent environmental nuisances – noise, unmanaged garbage, pollution – negatively affect mental and physical well-being [33].

The visual character of the built environment also shapes residents' perceptions of satisfaction and safety. Legible spatial organization, landmarks, and coherent design improve wayfinding and enhance the overall quality of the environment. Housing quality has been shown to positively influence satisfaction with the physical environment, which in turn affects perceived safety and stability [34].

### **Conceptual Framework**

Housing satisfaction has long been understood as a multidimensional construct shaped by physical, social, psychological, environmental, and demographic factors. Literature across disciplines consistently demonstrates that residents evaluate their housing not only on tangible attributes, such as

dwelling quality, neighborhood facilities, or public services, but also on intangible elements connected to perception, behavior, and subjective well-being. The theoretical foundations that guide this understanding draw from expectation–disconfirmation theory, equity theory, environmental psychology, and neighborhood satisfaction models. Together, these frameworks help explain how people form judgments about their living environments and how these judgments translate into housing satisfaction [35].

Across existing studies, it is shown that predictive factors affecting housing satisfaction can be grouped into three broad categories:

- Social factors,
- Physical factors, and
- Personal (socio-demographic) factors.

These predictive factors influence both objective measures (structural quality, environmental features, services) and subjective measures (perception, aspiration, satisfaction, disappointment) of housing quality. While objective components are easier to measure, subjective dimensions reflect deeper psychosocial interpretations of place, which ultimately determine the resident’s overall satisfaction [36].

The transition from objective attributes to subjective satisfaction is essentially a normative process. Individuals compare the *real* residential environment with their *ideal or expected* residential environment. This comparison is moderated by socio-demographic variables, personal expectations, past experiences, and residential histories. Thus, housing satisfaction is not a singular assessment, but a composite evaluation shaped by multiple interacting factors [37].

Further, the literature indicates that housing satisfaction is the outcome of five major psychosocial components, generally grouped as follows.

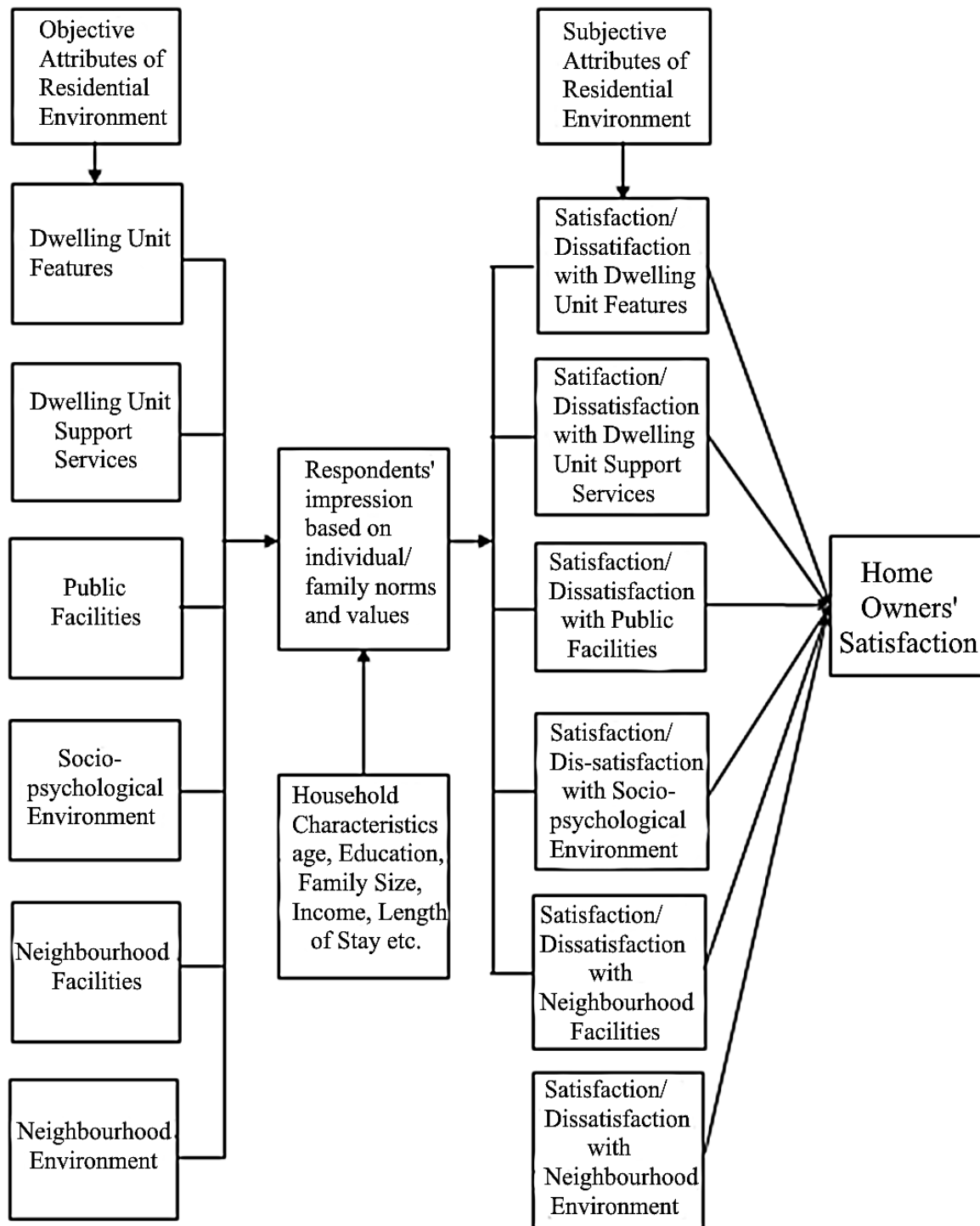
- Dwelling unit features,
- Support services,
- Public facilities,
- Neighborhood facilities, and
- Social and psychological environment.

These components collectively impact how residents perceive the adequacy, comfort, safety, and desirability of the living environment. The physical housing attributes – space organization, layout, ventilation, lighting, structural quality – interact closely with the psychosocial attributes – sense of control, privacy, security, and attachment – to shape overall satisfaction. Several studies have further established that poor building design, excessive noise, overcrowding, lack of green spaces, and poor indoor/outdoor conditions significantly contribute to psychological distress [38].

Neighborhood satisfaction also emerges as a critical component. Neighborhoods are not only geographic units but also social systems influencing residents’ well-being, identity, stability, and mobility. Neighborhood attributes – including safety, cohesion, accessibility, green spaces, cleanliness, traffic density, and proximity to essential services – are found to substantially impact the likelihood of long-term occupancy, community bonding, and attachment to place [39].

Studies on well-being and quality of life bridge the psychological and environmental dimensions of housing satisfaction. Sense of community, access to public services, social networks, economic opportunities, freedom from environmental hazards, and perceived safety all contribute to subjective well-being and residential satisfaction. The literature also notes that home ownership tends to raise community participation and social capital, although it may also restrict mobility and increase long-term financial burdens [40].

The built environment includes all human-constructed spaces designed for living, working, and recreation (Figure 1). Its elements – structure, material, design, circulation, open spaces, density, infrastructure, cleanliness, and connectivity – directly influence residents’ physical comfort and psychological responses. Well-designed residential colonies promote healthier lifestyles, stronger social interactions, enhanced security, and greater satisfaction [41].



**Figure 1.** Conceptual framework of study.

Drawing from the above theoretical and empirical foundations, the present study adopts a composite conceptual framework that integrates both objective and subjective dimensions of housing satisfaction.

It assumes that homeowner satisfaction is determined by a combination of socio-demographic characteristics, objective housing attributes, and subjective evaluations of the residential environment. The model posits that residents evaluate their dwelling through two major components:

### ***Sheltered Components***

Attributes directly associated with the dwelling unit and its immediate support systems.

#### *Dwelling Unit Features (12 variables)*

Living room, Dining, Bedroom, Kitchen, Bathroom, Toilet, Open area, Sunlight, Ventilation, Corridors, Staircase, Balconies [42].

#### *Support Services (11 variables)*

Electricity supply, Water supply, Sewerage system, Drainage system, Garbage disposal, Transport system, Road quality, Parking, Telecommunication, Lifts, Fire-fighting systems.

### ***Non-Sheltered Components***

Factors external to the dwelling but influencing the overall residential experience.

#### *Public Facilities (8 variables)*

Open spaces, Play area, Parking, Multipurpose halls, Perimeter roads, Pedestrian walkways, Local shops, Recreational areas [43].

#### *Socio-Psychological Environment (11 variables)*

Feeling of ownership, Greenery, Isolation, Safety from fire/earthquake, Noisy neighbors, Personal control over environment, Rush of people, Rush of traffic, Cost of house, Traffic noise, Air pollution.

#### *Neighborhood Facilities (9 variables)*

Distance to town centre, School, Police station, Hospital, Market, Religious buildings, Railway station, Bus station, Airport.

#### *Neighborhood Environment (8 variables)*

Interpersonal relationships, Harmony, Religious balance, Neighborhood cohesion, Helpfulness, Sense of safety, Community participation, Neighbor behavior [44].

This conceptual model reflects the notion that residential satisfaction arises from the interaction of *objective housing attributes* with *subjective perceptions*, filtered through individual socio-demographic characteristics. It is thus a holistic framework that aligns with established theories in housing research, environmental psychology, and social sustainability.

## **RESEARCH METHODOLOGY**

### **Research Design**

The present study adopts a descriptive and analytical research design. Descriptive research is data-driven and seeks to document existing conditions, behaviors, and perceptions with conclusions verifiable through observation or empirical measurement. This design requires the formulation of clear hypotheses or research questions, followed by systematic data collection to prove, disprove, or refine them.

In contrast, analytical research relies on existing data, literature, and documented evidence, which the researcher evaluates critically to derive meaningful inferences. The interplay between descriptive and analytical approaches strengthens the methodological rigor by allowing both empirical observation and theoretical interpretation of homeowner satisfaction in the housing sector [45].

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## Sources of Data

Both primary and secondary data sources were utilized.

### *Primary Data*

Information collected directly from homeowners occupying:

- Houses constructed by private builders.
- Houses constructed by government agencies.
- Self-constructed houses.

### *Secondary Data*

*Collected from*

- NHB Annual Reports.
- Census of India documents.
- National Accounts Statistics.
- NBO publications.
- Government housing-related reports.
- Academic articles and journals.
- Periodicals and housing industry reports.
- National housing policies.
- Statistical abstracts (India and U.P.).
- Economic surveys.
- Reputed online sources relevant to the Indian housing sector.

## Methods of Data Collection

In-line data may be gathered through interviews, observations, telephonic surveys, mail surveys, or online instruments.

For this study, interview and observation methods were adopted, enabling the researcher to capture detailed and nuanced responses directly from the homeowners [46].

## Tools of Data Collection

A semi-structured interview schedule was developed for primary data collection. This tool consisted of systematically arranged closed-ended questions to ensure

- Standardization.
- Uniformity of responses.
- Ease of tabulation.
- Reliability and comparability.

The interview schedule served as a structured form completed by the researcher during face-to-face interactions, based on the respondents' answers.

## Development of the Interview Schedule

Given the study's focus – to assess satisfaction levels among homeowners regarding socio-psychological, physical, and environmental conditions – no pre-existing questionnaire fully addressed the research needs. Therefore, a new instrument was developed.

## *Process Followed*

- Review of National and International Questionnaires Developed By
  - National Buildings Organization (NBO), New Delhi.
  - Central Building Research Institute (CBRI), Roorkee.
  - Hebert Research Inc. (2003).

- Seattle Housing Authority (2009).
- Morgan (2010).
- Okoye (2014).
- Consultations with experts in housing, planning, and behavioral sciences.
- Preparation of a preliminary interview schedule based on the above review.
- Preliminary pilot testing with 90 respondents (30 from each type of housing). Feedback from this phase guided modifications, additions/deletions of questions, and refinement of the final tool.
- The final semi-structured schedule included closed-ended questions, structured on a five-point Likert scale (Very Low to Very High).

### **Structure of the Interview Schedule**

The schedule comprised seven parts, each capturing a key dimension of housing satisfaction:

#### ***Part I – Background Information***

Captures socio-demographic and socio-cultural details (age, sex, religion, caste, education, income, period of stay), acknowledging that cultural background shapes values and preferences [47].

#### ***Part II – Socio-Psychological Environment (11 Variables)***

Measures satisfaction with: Feeling of ownership, Greenery, Isolation, Safety from fire/earthquake, Noisy neighbors, Personal control, Rush of people, Rush of traffic, Cost of house, Traffic noise, Air pollution.

#### ***Part III – Dwelling Unit Features (12 Variables)***

Living room, Dining, Bedroom, Kitchen, Bathroom, Toilet, Open area, Sunlight, Ventilation, Corridors, Staircase, Balconies.

#### ***Part IV – Support Services (11 Variables)***

Electricity supply, Water supply, Sewerage, Drainage, Garbage disposal, Transport, Roads, Parking, Telecommunication, Lifts, Firefighting.

#### ***Part V – Public Facilities (8 Variables)***

Open spaces, Play area, Parking, Multipurpose Hall, Perimeter roads, Pedestrian walkways, Local shops, and Recreational areas.

#### ***Part VI – Neighborhood Facilities (9 Variables)***

*Distance to:* town centre, school, police station, hospital, market, religious building, railway station, bus station, airport.

#### ***Part VII – Neighborhood Environment (8 Variables)***

Interpersonal relations, Harmony, Religious balance, Group cohesion, Help, Safety perception, Community participation, Neighbor behavior.

### **Canvassing of the Interview Schedule**

Field data collection posed practical challenges typical of urban surveys

- Respondents were often reluctant or unavailable.
- Homeowners in high-income areas were difficult to contact.
- Cooperation had to be individually negotiated.

Support from residential society presidents, secretaries, and local community groups was crucial in gaining access.

A three-week exploratory survey was first conducted to familiarize the researcher with housing localities. A pilot survey (90 respondents) in September 2015 helped refine the instrument. Respondents

for the final survey were selected using systematic random sampling, ensuring representation across all selected townships.

### **Selection of Respondents**

The study focuses exclusively on actual residents or family representatives of the owned house, due to the emphasis on experiential satisfaction. Therefore, the following inclusion/exclusion criteria were applied [48].

#### ***Inclusion Criteria***

- Homeowner residing in the selected house.
- If the homeowner is absent but the immediate family resides there, a family representative participates.

#### ***Exclusion Criteria***

- House without physical possession.
- The house is rented to others.
- Neither homeowner nor family member could be contacted.
- Respondent is unwilling to participate.

### **Sampling Frame**

The study covers three categories of homes in Lucknow.

- Government-built townships – LDA & UPAVP.
- Private builder townships – Top 10 as per Builders' Association (2015).
- Self-constructed houses – Government & private plotted developments.

#### ***Area Selection (Random Sampling)***

- 02 townships from government agencies.
- 03 townships from private builders.
- 04 areas with self-constructed houses.

#### ***Respondent Distribution***

An equal number of respondents from each category was planned.

#### ***Sampling Technique***

- Non-proportional stratified random sampling for agency-level selection
- Proportionate stratified sampling within each township
- Systematic sampling to select individual households

### **Sample Size Determination**

Using Cochran's formula (1977)

$$n_0 = \frac{(1.96)^2(0.5)(0.5)}{(0.05)^2} = 384$$

Since the sample size did not exceed 5% of the study population (15,220 houses), no correction factor was required.

To minimize non-response bias (as recommended by Salkind, Fink, and Cochran), the sample was increased by 15–20%, resulting in a final sample size of 450 respondents (Table 1).

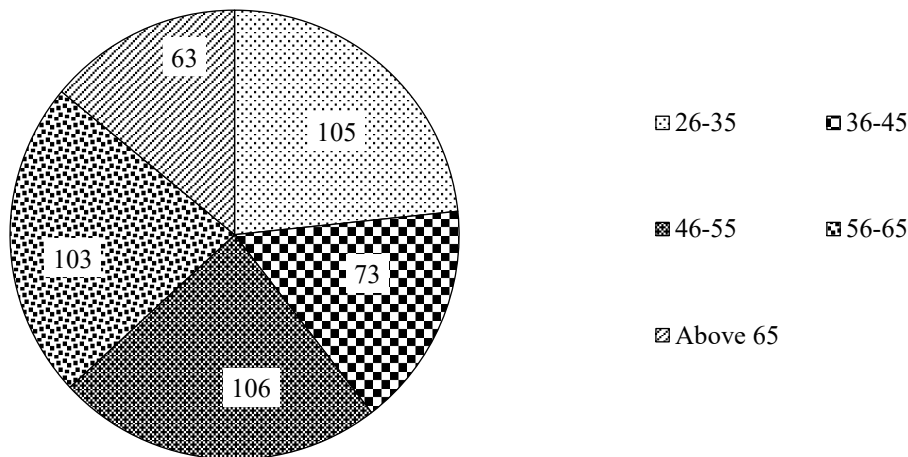
## **DATA ANALYSIS AND RESULTS**

### **Demographic Profile**

Respondents varied across age, income, education, and occupation, ensuring broad representation. Most households had a residential tenure of more than five years (Figure 2).

**Table 1.** Distribution of the sample population.

House Built By	Name of Township/Area/Site	Houses	Respondents
Government agency	Viram khand, Gomtinagar (lda)	3354	77
	D-block, Indiranagar (upavp)	3162	73
<i>Sub total</i>		6516	150
Private builder	Eldeco city	1476	45
	Ansal township	2257	68
	Omax integrated township	1243	37
<i>Sub total</i>		4976	150
Self-constructed	Vrindavan yojna, Sector-8 (upavp)	743	30
	Vipul khand, Gomtinagar (lda)	1148	46
	Manas vihar, Kukrail rd. (society)	864	35
	Mulayam nagar, Faizabad rd. (“-”)	973	39
<i>Sub total</i>		3728	150
<i>Grand total</i>		15220	450



**Figure 2.** Age of respondents.

### Satisfaction with Dwelling Unit Features

Self-constructed houses recorded the highest satisfaction due to autonomy in design. Public-agency units showed the lowest satisfaction with ventilation, sunlight, and interior layout (Table 2).

### Satisfaction with Support Services

Private builder housing showed better performance – consistent electricity, reliable water, organized parking, and modern lifts. Public housing showed gaps in drainage, sewerage, and garbage disposal systems.

Table 3 reveals that the Calculated Chi-Square value for the distribution of respondents as per various types of Construction Agencies w.r.t. satisfaction level due to Housing from dwelling unit support services is 15.389, which is more than the critical Chi-square value at  $df = 4$  and 0.01 significance level (13.277). So, it can be said that there is a highly significant difference in Satisfaction level between respondents of various types of Construction Agencies w.r.t to the dwelling unit support services of their houses.

### Satisfaction with Public Facilities

Private townships provided better recreational spaces, internal roads, play areas, and commercial nodes. Public-agency colonies showed only minimal facility provision (Table 4).

**Table 2.** Satisfaction level with dwelling unit features.

1	2	3	4	5
1.	Neighborhood facilities: Distances to the town centre, distance to the nearest school, distance to the police station, distance to the closest hospital, distances to the market, distances to religious buildings, distances to the railway station, distances to bus stations, and distances to the airport	72.00% medium level of satisfaction, average marks 26.80 from 09 facilities (49.44%), which is below average	w.r.t. type of construction agencies	
			11.798	0.1598
			w.r.t. age groups	
			11.941	0.1608
			w.r.t. gender	
			10.013	0.1475
			w.r.t. educational status	
			7.418	0.1273
			w.r.t. household occupation	
			4.815	0.1029
w.r.t. household income				
13.181	0.1687			
w.r.t. period of stay				
10.606	0.1517			
2.	Public facilities: Open space, play area, parking, multi-purpose halls, road perimeter, pedestrian walkways, various local shops, and recreational area	70.89% medium level of satisfaction, average marks 23.86 from 08 facilities (49.56%)	w.r.t. type of construction agencies	
17.780	0.1950			
3.	Dwelling unit support services: Electricity supply, water supply, sewerage, drainage, garbage disposal system, transport system, road, parking, telecommunication, lifts, and fire-fighting system	70.23% medium level of satisfaction, average marks 32.97 from 11 services (49.94%)	w.r.t. type of construction agencies	
15.389	0.1818			
4.	Dwelling unit features living, dining, bedroom, kitchen, bathroom, toilet, open area, sunlight, ventilation, corridors, staircase, and balconies	62.44% medium level of satisfaction, average marks 37.57 from 12 features (53.27%)	w.r.t. type of construction agencies	
13.254	0.1691			

**Table 3.** Significance of difference in satisfaction level among respondents of various types of construction agencies with respect to Dwelling unit features of their houses.

Construction Agency	Low		Medium		High		Total
	f(o)	f(e)	f(o)	f(e)	f(o)	f(e)	
Government agencies	42	55.00	48	50.33	60	44.67	150
Private agencies	56	55.00	51	50.33	43	44.67	150
Self-constructed	67	55.00	52	50.33	31	44.67	150
Total	165	165	151	151	134	134	450

Note:  $\chi^2 = 15.389$ ,  $df = (3 - 1) \times (3 - 1) = 2 \times 2 = 4$ , Level of Significance ( $p$ ) = 0.01, Critical value of chi-square at  $df = 4$  and  $p = 0.01 = 13.277$ .

**Table 4.** Distribution as per the satisfaction level of respondents from public facilities available in the housing area.

Satisfaction level	No. of Respondents	Percentage	Average Marks
Low	162	36.00	15.68
Medium	157	34.89	24.43
High	131	29.11	33.28
Total	450	100.00	23.86

### Socio-Psychological Environment

Self-constructed houses scored higher on perceived safety, ownership, comfort, and greenery. Private housing reported higher traffic noise and crowding (Table 5).

**Table 5.** Distribution as per the satisfaction level of respondents from the socio-psychological environment.

Rank Order	Causes/Issues	Percentage	Results of Chi-Square Test	
			X2 Value	Contingency Coefficient
1	2	3	4	5
4.	Social environment (neighborhood environment), inter-personal relationship, harmony, religious imbalance, neighborhood/group cohesion, neighbor help, feeling of safety, community participation, and neighbor's behavior.	66.00% medium level of housing satisfaction average mark is 25.35 from 08 aspects of social environment (54.22%), which is above average.	w.r.t. type of construction agencies	
			11.953	0.1609
			w.r.t. age group of respondents	
			12.241	0.1627
			w.r.t. gender	
			10.619	0.1518
			w.r.t. educational status	
			11.597	0.1585
			w.r.t. household occupation	
			13.708	0.1719
w.r.t. household income				
11.463	0.1576			
w.r.t. period of stay				
13.476	0.1705			
5.	Psychological Environment: feeling of ownership, greenery, isolation, safety from fire & earthquake, neighbors' noise, personal control on psych. Environment, rush of people, rush of traffic, cost of the house, traffic noise, and air pollution.	63.55% medium level of housing satisfaction average mark is 35.27 from 11 aspects of psych. Environment (55.16%), which is above average.	w.r.t. type of construction agencies	
			13.556	0.1710
			w.r.t. age group of respondents	
			13.298	0.1694
			w.r.t. gender	
			8.573	0.1367
			w.r.t. educational status	
			11.527	0.1580
			w.r.t. Household occupation	
			10.465	0.1508
w.r.t. Household income				
11.561	0.1583			
w.r.t. Period of stay				
12.707	0.1657			

### Neighborhood Facilities

Private builder areas offered superior connectivity to major facilities. Public housing reflected moderate satisfaction (Table 6).

**Table 6.** Distribution as per the satisfaction level of respondents from the neighborhood facilities available in the housing area.

Satisfaction Level	No. of Respondents	Percentage	Average Marks
Low	168	37.33	17.33
Medium	156	34.67	27.85
High	126	28.00	38.12
Total	450	100.00	26.80

### Neighborhood Environment

Self-constructed houses displayed stronger community bonds; private-builder housing reported reduced neighborhood interaction (Table 7).

**Table 7.** Distribution as per the satisfaction level of respondents from the neighborhood environment.

Satisfaction Level	No. of Respondents	Percentage	Average Marks
Low	139	30.89	15.46
Medium	158	35.11	24.98
High	153	34.00	34.73
Total	450	100.00	25.35

### Overall Residential Satisfaction

Aggregate scores indicate:

- Self-constructed housing – highest satisfaction.
- Private builder housing – moderate satisfaction.
- Public agency housing – lowest satisfaction.

This pattern holds across most components (Table 8).

**Table 8.** Distribution as per the satisfaction level of respondents from dwelling unit features.

Satisfaction Level	No. of Respondents	Percentage	Average Marks
Low	128	28.44	22.16
Medium	153	34.00	36.83
High	169	37.56	49.92
Total	450	100.00	37.57

## DISCUSSION

The study confirms that homeowner satisfaction is shaped by both the built environment and socio-psychological comfort.

### *Key Insights Include*

- Design flexibility (in self-constructed housing) enhances satisfaction.
- Modern infrastructure (in private builder housing) improves service satisfaction.
- Poor maintenance and outdated layouts reduce satisfaction in public housing.
- Community bonding and perceived safety strongly influence overall satisfaction.

These results align with international literature emphasizing the interplay of physical and psychological factors.

## CONCLUSIONS

This study highlights the multi-dimensional nature of homeowner satisfaction and identifies critical determinants across different urban housing categories.

### Key Contributions

- Provides empirical evidence from a Tier-II Indian city.
- Distinguishes satisfaction levels across three major housing sectors.
- Integrates subjective and objective predictors into a unified framework.

### Policy Recommendations

- Public agencies must improve service delivery, maintenance, and neighborhood facilities.
- Private developers should enhance community spaces and noise control.

- Self-constructed housing areas need support for organized civic services.
- Urban planning must adopt people-centric housing models integrating socio-psychological aspects.

### Limitations

- The study is limited to Lucknow city.
- Cross-sectional data may not capture long-term changes.

### Future Research

- Longitudinal studies to track satisfaction over time.
- Comparative studies across multiple Indian cities.
- Use of structural equation modelling (SEM) to measure predictive strength of variables.

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