

Research Article

Factors Influencing Residents' Perception of Privacy Across-Selected Public Housing Estates in Ibadan

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Abstract

This study identified and examined residents' socioeconomic and cultural characteristics of residents, examined the housing and neighborhood characteristics, and determined the factors influencing residents' perceptions of privacy across selected public housing estates in Ibadan. This approach aimed to provide information that could enhance public housing design. The study population consisted of all household heads in the six public housing estates managed by the Oyo State Government. The sampling frame consisted of 1130 household heads, while a sample size of 565 household heads was selected for questionnaire administration using systematic random sampling, representing 50% of the sampling frame. The data were analyzed using descriptive and inferential statistics. Factor analysis revealed that the factors influencing residents' perceptions of privacy across selected public housing estates in Ibadan were wall building materials, housing social and physical characteristics, floor finishing material for available spaces, window types for available spaces, and available housing spaces, with percentages of variance of 7.99%, 7.43%, 7.27%, 5.52%, and 5.12%, respectively. The most significant factors influencing residents' perception of privacy were wall and floor finishing materials and window type. The study concluded that residents' perceptions of privacy were influenced more by housing characteristics.

Keywords

Housing, Privacy, Public Housing, Residents' Characteristics

1. Introduction

Privacy is a fundamental human need, the deprivation of which can be a highly distressing experience. Privacy is crucial as it contributes to well-being: without it, people are at risk of physical or mental health issues. Residential overcrowding has been linked to physical and psychological distress [26]. Privacy is essential for quality of life, and the need for it and personal space are universal requirements for security and satisfaction [20]. Privacy encompasses solitude, personal space, or intimacy with family and friends, making it a widespread and cross-cultural phenomenon. The privacy of

individuals and groups is a vital characteristic of all human cultures that should not be unduly violated ([23, 31, 32]).

In the context of housing, privacy is a primary need in dwellings and is influenced by the living patterns of individuals and families [17]. [26] considered privacy to be a major design feature that enhances living environments. Therefore, privacy, as a complex concept, varies across cultures, personalities, and backgrounds. It is both a universal value and a culture-specific behavior exhibited in virtually every society, using varied regulatory mechanisms. Although common

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Received: 8 September 2024; **Accepted:** 29 September 2024; **Published:** 17 January 2025



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themes are shared, what is considered private differs among cultures [7].

The study of privacy is particularly important in the context of public housing because it has been identified as a means of controlling overcrowding, developing a sense of identity and territoriality, maintaining personal autonomy and self-evaluation, and providing protected information, social behavior and healthy relationships among individuals within society [3]. Furthermore, public housing privacy has been found to influence residents' living conditions [27].

Ibadan, the capital of Oyo State, is considered to be an appropriate context for the study because it represents evolving cities in the developing world, where cultural characteristics strongly influence residents' lifestyles and residential experiences [29]. Additionally, the public housing estates in Ibadan have existed long enough to provide the expected quantitative and qualitative data [10]. Based on this background, this study identified and examined the socioeconomic and cultural characteristics of residents, examined the housing and neighborhood characteristics of residents, and determined the factors influencing residents' perceptions of privacy across selected public housing estates in Ibadan. This approach aimed to provide information that could enhance public housing design.

1.1. Statement of the Research Problem

Residents' socioeconomic attributes have been found to influence privacy [18]. However, public housing is usually designed without the input of prospective residents, and their personal, socioeconomic, and cultural characteristics are rarely considered. Studies on privacy reveal differences in perceptions and practices related to age, gender, socioeconomic status, family size, family life cycles, age of children, and other factors that may influence perspectives on privacy. [28] found that the need for privacy varies with age. [21] found that differences in socioeconomic status also influence the desire and need for privacy, with privacy norms being less stringent in low-income than in high-income groups, as the former's crowded living conditions force a lack of privacy. Affluent populations have extra visual privacy demands to be secluded from the economically deprived sectors of the population. This study will build upon these empirical findings, particularly in the rarely studied context of public housing.

To enhance privacy in housing, architectural and behavioral variables should work in tandem [11]. The house is the primary setting for privacy; hence, its associated attributes are important for regulating privacy. When the characteristics of a house and its neighborhood do not convey the culture of its intended inhabitants, it may not provide a comfortable level of privacy. [5] explored the relationship between privacy control and personal space expressed by the physical components of the quality and quantity of bedroom space in single-family homes. [12] examined the design characteristics of indigenous courtyard houses in Diyarbakir, Turkey, in terms of the effects

of climate and privacy measures. [14] examined the layout of modern apartments in Iran from a private perspective. It is therefore essential to examine housing and neighborhood characteristics in a public housing context. This study, therefore, employed a comprehensive approach to determine the factors influencing residents' perceptions of privacy at the housing unit and neighborhood levels.

1.2. Aim and Objectives of the Study

The aim of this study is to determine the factors influencing residents' perceptions of privacy across public housing estates in Ibadan, Oyo State, with the aim of enhancing public housing design.

The specific objectives of this research are as follows:

1. identify and examine the socioeconomic and cultural characteristics of residents in selected public housing estates in Ibadan;
2. examine the housing and neighbourhood characteristics of the residents;
3. determine the factors influencing residents' perceptions of privacy across the study area.

2. Literature Review

The factors influencing privacy can be broadly classified into four categories: socioeconomic characteristics, cultural characteristics, physical characteristics of housing units, and neighborhood factors [7]. Socioeconomic factors influencing privacy can be viewed from sociological and economic perspectives. To sociologists, human beings are the key to the process of housing design [8]. The economist suggested that it is the economic benefits that are derived from using a particular housing unit and would also consider the issues of scarcity, demand, and nature of use. Cultural factors affecting privacy include local customs, traditions, norms, laws, and others [22]. [30] listed ten factors influencing privacy: individual characteristics, physical setting, social factors, physical variables, space arrangement of entrance doors, street form, proximity, neighborhood characteristics, habitat selection, and interaction. The results showed that people's visual privacy needs varied systematically both concerning viewing conditions and individual personality factors.

2.1. Socio-economic Characteristics of Residents

The results of [2] showed that privacy needs may vary according to personal and socioeconomic characteristics. [7] noted that the concept of privacy was related to individual members of a family and community in general. According to her, different personalities may have varying privacy needs. Differences in individual personality and socioeconomic characteristics related to privacy were found in her study to be related to sex, age, life stage, family life circle, history of the person, and personality variables such as introversion or ex-

troversion and mental health.

Privacy is also directly related to income levels. This is proven by the fact that the richer a person is, the more likely he or she is to own a larger house [27]. Therefore, it is common for a rich resident to live in a luxurious mansion, while a poor person lives in a poor quality shelter made of cheap quality materials with less space and little room for privacy, as the housing relates very much to his affordability. Housing affordability measures the cost of a house against the amount buyers can afford to spend on housing. The amount available for housing investment depends on many factors, such as recurrent housing costs, housing options, and standards. These norms can be established through the measurement of the privacy of the dwelling unit and neighborhood.

2.2. Cultural Characteristics of Residents

The desire for privacy varies from one culture to another. Some cultures need more privacy than others ([9, 29]). [23] explained that cultural characteristics are theoretically related to privacy needs. He noted how cultural variables were the conception and definition of privacy from culture to culture. [4] indicated that there were subcultural and micro-cultural differences in privacy. According to this fact, [16] classified culture into two different classes: contact and noncontact. Based on his studies, the spatial behaviors of the Mediterranean (contact groups) and northern European people (non-contact groups) are significantly distinguishable: Mediterranean societies prefer proximate interactive distances, while northern European societies prefer more extensive interactive distances. Hall's studies became the basis of subsequent research in the field of cultural effects on special behavior and the personal space of the public. Researchers, working based on Hall's classification, supported his results and ideas through surveys they had undertaken [25].

2.3. Housing Characteristics

An important factor influencing privacy in housing is the physical characteristics of dwelling units. This involves measuring the subjective reaction of people to characteristics of their dwelling units, which requires knowledge of the objective characteristics that contribute to privacy through which the subjective reactions of families are obtained. The main parameter for measuring the privacy of dwelling units is space requirements or space norms [28, 6]. Space requirements or space norms are normally determined by activities. This is usually done by determining the amount of space required to perform a certain activity [24]. According to [13], housing characteristics are more crucial determinants than the demographic characteristics of housing residents. Thus, studies have shown that building features such as the number, size, location, and arrangement of spaces, such as bedrooms, kitchens, and toilets, are strongly related to privacy [1]. [27] found a positive relationship between the number of rooms

and privacy. He also found a negative connection between the person-per-room ratio and public housing privacy.

In his survey of the critical issue of public housing privacy in Hong Kong, [27] revealed that while residents were highly satisfied with the price of the house owned, they were not satisfied with the size of spaces such as kitchens, bedrooms, and public facilities such as recreational areas and private playgrounds in the housing area. [3] and [15] analyzed housing characteristics related to privacy and found that building design, spatial orientation, space size, fitting and fixture design, layout, location of fittings such as doors, the material of building components and finishes, elements, and fixtures, and building safety and comfort were related to privacy.

2.4. Neighborhood Characteristics

One of the most complex factors influencing privacy is neighborhood characteristics. In her survey study of "over-looking", [30] explained this phenomenon more than any other factor. According to her, she observed that the nature of the relationship in the neighborhood could range from almost no involvement to varying degrees of involvement and intimacy with neighbors. She mentioned that this social dimension of privacy differed from one person to another, though it may be related to its physical dimension, such as the distance between dwellings. The location of the dwelling units and the nature of the immediate environment or the neighborhood are prime factors affecting privacy [28]. Some aspects of the location of the dwelling units that potentially would be considered by households concerning housing are location. The physical environment comprises density, conditions of other dwellings surrounding the housing units, and community facilities and services. In this respect, the factors upon which the responses of residents can be measured are the distance of their housing to facilities and the site of their dwelling units, which can be measured through the level of privacy, safety, and exposure to noise and other forms of pollution [19].

3. Methodology

The survey research method was adopted for this study. The data for this study were derived from primary and secondary sources. Quantitative primary data were obtained by means of questionnaire administration to the residents and physical observation by the expert. The secondary data were derived from multiple sources, such as published and unpublished materials in books, journals and housing demographics from Oyo State Housing Corporation.

The study population for this research consists of all household heads in six public housing estates managed by the Oyo State Government. The study population for the Old Bodija Estate is 466, that for the Olubadan Estate is 114, that for the Owode Estate is 280 and that for the Ajoda New

Town is 270, for a total of 1130 household heads, while Bashorun Estate and Akobo Estate are allocated by the Oyo State Government under site and service schemes.

A combination of two sampling methods was considered appropriate for this research. These two sampling methods were the purposive and systematic random sampling methods. The sampling frame of the housing units consisted of 1130 household heads in the four purposively selected public housing estate designs, which were developed, completed and allocated by the Oyo State Government, namely, Bodija Estate, Owode Estate, Ajoda New Town, and Olubadan Estate (Table 1). A systematic random sampling method was adopted to select a sample size of 565 household heads representing 50% of the sampling frame. The first house was selected randomly, and subsequently, every 2nd house on the street was systematically selected for questionnaire administration to the household head or his representative.

Table 1. Summary of Sampling Frame and Sample Size in the Study Area.

Public Housing Estates	Sampling Frame	Sample Size
Bodija Estate	466	233
Owode Estate	280	140
Ajoda New Town	270	135
Olubadan Estate	114	57
Total	1130	565

Source: Author Field Work (2019)

4. Analysis, Findings and Discussions

4.1. Socioeconomic and Cultural Characteristics of Residents

The survey of residents' socioeconomic and cultural characteristics in the four selected public housing estates revealed significant variations in eleven variables across the estates, namely, age, marital status, religion, occupational status, level of education, type of tenure system, mode of ownership, type of building, length of stay/residency, household size, reason for living in the estate, and family background. Additionally, seven socioeconomic and cultural characteristics did not vary significantly, namely, gender, ethnicity, monthly income, household size, number of male children, number of female children and children's sleeping arrangement (Table 2).

In the four selected estates, 73.5% of the respondents were males, while 26.5% were females. Young people and young adults accounted for 15.9% and 48.1%, respectively, of household heads. In essence, 64.0% of respondents were in the age bracket of 21–45 years. The percentages of adults and

aged adults were 26.9% and 9.0%, respectively. The age range of the respondents was 21–79 years, while the mean age was 42.6 years.

The findings further revealed that 84.2% of the respondents were married, and 10.3% were single in the study area. Marital status represented 84.1%, 87.9%, 84.4% and 75.4% of the respondents in Bodija, Owode, Ajoda and Olubadan estates, respectively; single status represented 10.3%, widow/widower status accounted for 3.4%, while respondents who were separated represented the least (0.9%). A total of 53.6% of the respondents were civil servants. This accounted for the highest proportion in the study area. Civil servants were predominant across the different estates, representing 59.2%, 57.1%, 45.2% and 42.1%, respectively, in Bodija, Owode, Ajoda and Olubadan estates. The second- and third-ranked respondents were self-employed (23.2%) and private employees (11.5%), respectively, while the smallest proportion (5.3%) were students or unemployed individuals in the estates.

The minimum income of the residents in the study area was N5000, while the maximum was N550000. The mean monthly income was computed to be N78855.94. The highest proportion (39.5%) of the respondents earned between N20000 and N40000. The findings also showed that the majority (99.5%) of the residents in the study area had one form of formal education or the other, while 0.5% had no formal education. It was established that 0.4%, 14.0% and 85.1% of residents had primary, secondary and tertiary educational qualifications, respectively, in the study area.

A larger proportion (47.8%) of the residents rented their apartments; 46.2% were self-owners, while 3.4% and 2.7% were on leasing and transfer/inheritance types of tenure systems, respectively. Six important building types were identified in the four public housing estates. These included a duplex, a semidetached bungalow, a detached bungalow, a flat block, a boy's quarter and one bed-seater. These accounted for 7.6%, 23.7%, 16.3%, 47.4%, 4.6% and 0.4%, respectively, of the building types in the four estates. Thus, while flat blocks accounted for the greatest proportion of building types, semidetached bungalows and detached bungalows ranked second and third, respectively. The determination of residents' length of stay showed that the majority (70.8%) of the residents had lived in the study area for less than 10 years. Residents in this category were predominant, with 72.1%, 62.9%, 78.5% and 66.7%, respectively, in Bodija, Owode, Ajoda and Olubadan estates. Those who had lived for between 10 and 20 years accounted for 25.3%, residents who had spent 21–30 years accounted for 2.1%, and the smallest proportion (1.8%) had lived for between 31 and 40 years in their estates. A number of reasons were advanced by the residents for living in the estates. These included proximity to the workplace, privacy, comfort and serenity. Others included security, parental and housing affordability. Privacy was reported to be the most significant reason why the residents were living in estates, accounting for 33.8% of all the reasons in the study area.

The mean household sizes in Bodija, Owode, Ajoda and Olubadan estates were 5.32, 5.42, 5.49 and 5.07, respectively, while that of the four estates as a whole was 5.36. The minimum household size was 1, while the maximum was 12, 9, 12, and 8 in Bodija, Owode, Ajoda and Olubadan, respectively, and 12 across the estates. It was shown that 56.2%, 52.1%, 61.5% and 57.9% of the residents had small households in Bodija, Owode, Ajoda and Olubadan estates, respectively.

Residents who indicated male children accounted for 92.2%, while those without male children represented only 7.8%. Among the residents who indicated male children, the minimum was 1, and the maximum was 6. The findings in this category further revealed that 84.6% of the respondents had 1-3 male children, while only 7.6% of the residents had between 4 and 6 male children. The findings on the residents' number of female children were not significantly different from those on the number of male children because 89.4% of the respondents indicated that they had female children, while only 10.6% claimed that they did not. A total of 83.4% of the residents with female children reported having between 1 and 3 female children, while 6.0% reported having 4-6 female children. The minimum and maximum numbers of female children were 1 and 6, respectively. It was also established that the majority of the respondents indicated that they had 1-3 female children in the study area.

The majority (82.3%) of the residents' male and female children were not sleeping together in the same room, while

17.7% were sleeping together. Residents whose male and female children were not sleeping together represented 81.1%, 86.4%, 81.5% and 78.9%, respectively, of the Bodija, Owode, Ajoda and Olubadan estates. Thus, residents in this category were predominant in the Owode estate category. On the other hand, 21.1% of those whose male and female children were sleeping together were living in Olubadan estate, while 18.9%, 13.6% and 18.5% were living in Bodija, Owode and Ajoda estates, respectively.

Two types of family backgrounds were identified in the study area. The findings on family background showed that the majority (83.2%) of the residents were single-family. This category was predominant in the owode estate, with 90.7%, 80.7%, 78.5% and 86.0% in the Bodija, Ajoda and Olubadan estates, respectively. A smaller proportion (16.8%) were found to be multifamily in the study area, with 19.3% in Bodija estate and 9.3%, 21.5% and 14.0% in Owode, Ajoda and Olubadan estates, respectively. The findings on the religious affiliation of the respondents indicated that 79.6% were affiliated with the Christian religion, while 19.1% were affiliated with Islam. Those practising traditional religion accounted for just 1.2%. The ethnic background of the residents revealed that Yoruba was the predominant group in the study area at 89.4%, while Igbo and Hausa represented 8.3% and 2.3%, respectively. The predominant groups represented 90.1%, 91.4%, 86.7% and 87.7% of the Bodija, Owode, Ajoda and Olubadan estates, respectively.

Table 2. Summary of ANOVA and chi-square tests of socioeconomic and cultural characteristics of residents across the four public housing states.

Socioeconomic Attributes	ANOVA F value	P value	Chi-Square χ^2 value	P value	Remark
Gender			6.609	0.085	Not significant
Age	3.366	0.018			Significant
Marital status			29.017	0.004	Significant
Occupational status			42.540	0.000	Significant
Monthly income	2.117	0.097			Not significant
Level of education			43.206	0.000	Significant
Type of tenure system			65.634	0.000	Significant
Mode of ownership			97.829	0.000	Significant
Type of building			94.475	0.000	Significant
Length of Stay/Residency	5.208	0.001			Significant
Household size	0.665	0.574			Not significant
Number of male children	0.360	0.782			Not significant
Number of female children	1.229	0.298			Not significant
Sleeping of arrangement of Male and Female children			2.364	0.500	Not significant
Reason for living in the estate			126.344	0.000	Significant

Socioeconomic Attributes	ANOVA F value	P value	Chi-Square χ^2 value	P value	Remark
Family Background			9.131	0.028	Significant
Religion			25.918	0.000	Significant
Ethnicity			2.344	0.886	Not significant

Source: Author Field Work (2019)

4.2. Housing and Neighborhood Characteristics

The housing characteristics showed that all of the residents were provided with bedrooms (100%); the majority of the residents were provided with living rooms (97.0%), toilets (96.8%) and kitchens (95.4%), while a larger proportion were provided with dining rooms (62.3%) and entrance porch (51.7%). However, they required spaces such as guest rooms, visitor toilets, study rooms, laundry and balconies. Residents who required these spaces represented 87.3%, 82.5%, 89.9%, 94.5% and 63.4%, respectively. The residents were mostly living in three bedroom apartments, with 48.5%, 37.9%, 54.1% and 56.1% living in Bodija, Owode, Ajoda and Olubadan estates, respectively. The walls and floors of the available spaces were finished with cement screed, except for the walls of the kitchen and toilet, which were constructed with tiles.

The entrance door direction was facing the street, and the bathroom was shared by two bedrooms. Again, the bedroom, kitchen and toilet window directions faced the balcony, while the living room window direction was toward the street. The Louvre window type was predominantly utilized for the available spaces. It was also obvious that the window heights of the bedroom, living room and kitchen were normal (0.9 m), while those of the toilet were above normal (high). The window sizes of the bedroom, living room and kitchen were mostly normal; however, the window size of the toilet was small.

Regarding the modifications that had taken place in the house, a large proportion (76.5%) of the residents had actually effected one form of change or the other in their houses by adding different components to what they already had. Among this category of residents who had effected changes in their houses, the majority (23.0%) added more rooms whose floor areas were 31-40 m². Residents who had transformed their houses through the addition of more rooms represented 16.3%, 31.4%, 20.7% and 35.1%, respectively, of the Bodija, Owode, Ajoda and Olubadan estates.

In addition, open spaces such as terraces, balconies, porches and courtyards were added to the house. Generally, the changes greatly reduced the available open spaces needed for adequate circulation of air and human circulation within the immediate vicinity of the housing units. The reasons for these changes were privacy (76.6%), security (11.3%), comfort (7.2%) and aesthetics (4.9%). It was also indicated by the

majority of the residents that all the spaces in the house were burglary proofing.

The neighbourhood characteristics established that a large proportion of the residents had open spaces such as play-grounds, gardens and parks in their neighbourhood, although the spaces were observed to be distant from their housing units. These spaces were used for recreation, social, political events and religious gatherings, which accounted for 55.2%, 36.8%, 0.5% and 7.4%, respectively. The effects of these activities in the open spaces on residents' sense of privacy across the neighbourhoods were high. See Appendixes I, II and III.

4.3. Factors Influencing Residents' Perception of Privacy

The variables previously examined in sections 4.1 and 4.2 were reduced through the use of factor analysis (FA). This, in essence, was to extract the communalities of variables in the identified domains. Eigenvalues associated with linear composite factors before and after extraction and after rotation were derived. The values represent the variance (%) explained by a particular linear composite. From this analysis, variable loading and factor scores were generated, classified and named. These are explained below:

4.3.1. Suitability of the Data for Factor Analysis

The suitability of the data for factor analysis in this study was checked by using the Kaiser–Meyer–Olkin (KMO) test and Bartlett's test of sphericity. The results are presented in Table 3. The KMO for the study area was 0.683, and Bartlett's test of sphericity was significant at 0.000, indicating that the data for the study were suitable and adequate for factor analysis.

Table 3. KMO and Bartlett's Test.

Kaiser–Meyer–Olkin Measure of Sampling Adequacy.		.683
Bartlett's Test of Sphericity	Approx. Chi-Square	33732.278
	Df	3003
	Sig.	.000

4.3.2. Communalities of Variables

The seventy-eight (78) variables examined in sections 4.1 and 4.2 were imputed into the factor analysis (FA). Using principal component analysis (PCA), variables with low communality values (below 0.500) were removed from the analysis. This was important because the communality value is what indicates the amount of variance in each variable that is explained by other variables (accounted for). The variable with the highest communality value was the type of window for the kitchen. It accounted for 87.5% of the variance after extraction. Conversely, the variable with the lowest communality was the use of open space, with a 1.4% variance.

4.3.3. Variance Explained by Determinants of Residents' Perception of Privacy

Eigenvalues associated with linear composites (factors) before and after extraction and after rotation are very important in factor analysis. This is because the values associated with each particular linear composite (factor) represent the variance explained by such a composite as well as the percentage of variance explained. Before extraction, there were seventy-eight linear composites. These variables were the same as the initial/available variables. After extraction and before rotation, the variables were reduced to five (5) linear composites (factors). The eigenvalues associated with each of these five factors before and after extraction are presented in Table 4.

Table 4. Variance Explained by Determinants of Residents' Perception of Privacy.

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.780	9.974	9.974	7.780	9.974	9.974	6.233	7.991	7.991
2	6.303	8.081	18.056	6.303	8.081	18.056	5.794	7.428	15.418
3	4.667	5.983	24.039	4.667	5.983	24.039	5.670	7.269	22.688
4	3.629	4.652	28.691	3.629	4.652	28.691	4.307	5.521	28.209
5	3.615	4.635	33.326	3.615	4.635	33.326	3.991	5.117	33.326

Extraction Method: Principal component analysis.

The variance explained by factors 1, 2, 3, 4 and 5 before extraction were 9.97%, 8.08%, 5.98%, 4.65% and 4.64%, respectively. After rotation, factor 1 accounted for 7.99% of the total variance, while factors 2, 3, 4 and 5 accounted for 7.43%, 7.27%, 5.52% and 5.12%, respectively. The percentages of variance explained at the initial stage were unlike those explained after rotation. From this, it is clear that factor 1 accounted for considerably more variance than the remaining four factors before rotation. In other words, rotation had an effect on the structure of factors. These five factors explained only 33.33% of the variance both before extraction and after rotation, indicating that there were other unexplained variations that were accounted for by other factors.

4.3.4. Extracted Determinants of Residents' Perception of Privacy

Having identified the eigenvalues associated with each of the five composite factors, it is also important to itemize the variables that are loaded on each factor, name and discuss

them. There is a tendency for some variables to load high on one factor and low on others. This necessitates rotation of the matrix. Varimax rotation was used for this purpose. The rotated composite matrix of residents' responses (determinants of residents' perception of privacy) explains the structure of variables that are loaded on each factor. This rotation is very important regardless of the previous extraction. It should be noted that only variables loading above 0.50 were included in the rotated composite matrix. Likewise, only factors with at least four (4) variables that highly loaded (0.05) were identified and discussed. This implies that only factors 1, 2, 3, 4 and 5 were identified. Variables that loaded on each factor are presented in Table 5. These are also discussed below:

Component 1- Wall Building Materials

Four variables were loaded on Factor 1. These were wall finish material for the bedroom (0.817), wall finish material for the living room (0.817), wall finish material for the dining room (0.814) and wall finish material for the corridor (0.774). Variables that loaded on this factor described the wall finishing materials used for available spaces in the house. Thus, this factor was termed wall building materials.

Component 2-Residents' Social and Housing Physical Characteristics

This factor explains residents' physical social and housing attributes. These variables include age of respondent (0.580), type of building (-0.622), household size (0.563), number of male children (0.505), number of female children (0.503), type of house (-0.597) and entrance porch space (-0.501). The other variables are dining room space (-0.613), store space (-0.559) and the number of bedrooms in the house (0.614).

Component 3- Floor Finishes Material for Available Spaces

This describes how the floor finishes material for available spaces in the house. It comprises floor finish material for the bedroom (0.844), floor finish material for the living room (0.842), floor finish material for the dining room (0.780), floor finish material for the kitchen (0.857), floor finish material for the toilet (0.854) and floor finish material for the corridor (0.797).

Component 4- Window types for available spaces

Variables that described the nature of factor 4 are listed in the composite 4 column in Table 6. It comprises just four variables. There is a strong correlation between factor 4 and the type of window for the kitchen. The factor loading of this variable was 0.896. It contributed greatly to the description of

the dimensions of factor 4. On the other hand, the type of window for the bedroom, type of window for the living room, and type of window for the toilet accounted for 88.3%, 88.6% and 86.8%, respectively, of the variance in factor 4. Therefore, these variables explained types of windows for available spaces. This indicated that among the factors influencing residents' perception of privacy in the estates in Ibadan, the type of window in available space is the key factor.

Component 5: available and required housing spaces

Another factor influencing residents' perception of privacy in public housing estates in column five has five variables that are highly loaded. These are living room space (0.657), kitchen space (0.601), bedroom space (0.663), toilet space (0.658) and laundry (0.527). These variables describe available dwelling spaces and labelled available housing spaces. The rotation sums of the squared loadings for factors 1, 2, 3, 4 and 5 were 7.99%, 7.43%, 7.27%, 5.52% and 5.12%, respectively. The wall building materials factor explained 7.99% of the variance, the residents' social and housing physical characteristics factor explained 7.43%, the floor finishes for available spaces factor explained 7.27%, the types of windows for available spaces factor explained 5.52%, and the available and required housing spaces factor explained 5.12%.

Table 5. Rotated Component Matrix of the Data of the Study Area.

Factors	Resident and Housing Characteristics	Component Scores				
		1	2	3	4	5
F1	Wall finishes material for bedroom	.817				
	Wall finishes material for living room	.817				
	Wall finishes material for dining room	.814				
	Wall finishes material for corridor	.774				
F2	Age of respondent		.580			
	Type of building		-.622			
	Household size		.563			
	Number of male children		.505			
	Number of female children		.503			
	Type of house		-.597			
	Entrance porch space		-.501			
	Dining room space		-.613			
	Store space		-.559			
	Number of bedroom in the house		.614			
F3	Floor finishes material for bedroom			.844		
	Floor finishes material for living room			.842		
	Floor finishes material for dining room			.780		
	Floor finishes material for kitchen			.857		

Factors	Resident and Housing Characteristics	Component Scores				
		1	2	3	4	5
F4	Floor finishes material for toilet			.854		
	Floor finishes material for corridor			.797		
	Type of window for bedroom				.883	
	Type of window for living room				.886	
	Type of window for kitchen				.896	
	Type of window for toilet				.868	
F5	Living room space					.657
	Kitchen space					.601
	Bedroom space					.663
	Toilet space					.658
	Laundry					.527

Extraction Method: Principal component analysis.

Rotation Method: Varimax with Kaiser normalization.

a. Rotation converged in 9 iterations.

4.3.5. Evaluation of the Factors Influencing Overall Perception of Privacy

A principal component analysis was carried out using the varimax rotation with Kaiser normalization method with the criterion for convergence set at 0.00001. The factor analysis of the perception of privacy variables revealed that five key factors accounted for 33.33% of the variance in the results (Table 4). The component loadings in Table 5 show the factors that the variables represented. Table 6 indicates that the first factor of the perception of privacy assessment, which accounted for 7.99% of the variance in the data representing wall building materials, was highly loaded on four (4) variables.

The second factor, the residents' social and housing characteristics, accounted for 7.43% of the variance and loaded

highly on ten (10) factors. This factor loaded on ten resident and housing characteristics, as shown in Table 6. The third factor, Floor Finishes Material for Available Spaces, accounted for 7.27% of the variance and loaded highly on six (6) variables of housing characteristics. The fourth factor, the type of window for available spaces, accounted for 5.52% of the variance and loaded highly on four (4) factors, while the fifth factor, the availability and required housing spaces, accounted for 5.12% of the variance and loaded highly on five (5) variables of housing attributes.

The results below show that the key factors describing how residents of public housing estates perceive privacy levels are housing physical characteristics and window types for available spaces, wall building materials, residents' social characteristics, available and required housing spaces and floor finishing material for available spaces.

Table 6. Factors influencing overall perceptions of privacy in the study area.

Factors	Resident and Housing Characteristics	Factor Scores
F1: Wall Building Materials	Wall finishes material for bedroom	.817
	Wall finishes material for living room	.817
	Wall finishes material for dining room	.814
	Wall finishes material for corridor	.774
F2: Residents' Social and Housing Physical Characteristics	Age of respondent	.580
	Type of building	-.622

Factors	Resident and Housing Characteristics	Factor Scores
F3: Floor Finishes Material for Available Spaces	Household size	.563
	Number of male children	.505
	Number of female children	.503
	Type of house	-.597
	Entrance porch space	-.501
	Dining room space	-.613
	Store space	-.559
	Number of bedroom in the house	.614
	Floor finishes material for bedroom	.844
	Floor finishes material for living room	.842
	Floor finishes material for dining room	.780
	Floor finishes material for kitchen	.857
F4: Types of Window for Available Spaces	Floor finishes material for toilet	.854
	Floor finishes material for corridor	.797
	Type of window for bedroom	.883
	Type of window for living room	.886
F5: Available and Required Housing Spaces	Type of window for kitchen	.896
	Type of window for toilet	.868
	Living room space	.657
	Kitchen space	.601
	Bedroom space	.663
	Toilet space	.658
	Laundry	.527

The results of the factor analysis suggest that the factors influencing residents' perceptions of privacy levels were wall building materials, residents' social and housing characteristics, floor finishes material for available spaces, types of windows for available spaces and available housing spaces.

4.3.6. Evaluation of the Factors Influencing Perception of Privacy Across Estates

(i). Bodija Housing Estate

To examine whether there are differences in the factors influencing the perception of privacy across the four estates, a principal component analysis was carried out using the Varimax with Kaiser normalization method with the criteria for convergence set at 0.00001 across the four estates. The factor analysis of privacy perception variables in the Bodija estate showed that five key factors accounted for 37.60% of the variance in the results (Appendix VI), similar to the

overall results for estates. The component loadings in Appendix VI show the factors that the variables represented. Table 7 shows that the first factor influencing the perception of privacy, which accounted for 10.58% of the variance in the data, represented housing physical characteristics, and types of windows for available spaces loaded highly on twelve (12) housing characteristics. The second factor, which accounted for 7.38% of the variance in the data, represented Wall Building Materials and was loaded on five housing attributes.

The third factor, residents' social characteristics, accounted for 6.78% of the variance and loaded highly on nine (9) variables related to residents' characteristics. The fourth factor, the available and required housing spaces, accounted for 6.56% of the variance and loaded highly on six (6) factors, while the fifth factor, the floor finishes material for available spaces, accounted for 6.30% of the variance and loaded highly on six (6) variables of housing characteristics.

The above results show that the key factors describing how residents in Bodija estate perceive privacy levels are housing

physical characteristics and window types for available spaces, available and required housing spaces and floor finishing wall building materials, residents' social characteristics, material for available spaces.

Table 7. Factors Influencing Residents' Perception of Privacy in the Bodija Estate.

Factors	Resident and Housing Characteristics	Factor Scores
F1 Housing's Physical Characteristics and Types of Window for Available spaces	Entrance porch	-.618
	Dining room	-.743
	Store	-.683
	Entrance porch	.655
	Dining room	.729
	Store	.684
	No of bedroom in the house	.650
	Type of window for bedroom	.618
	Type of window for living room	.648
	Type of window for kitchen	.640
F2 Wall Building Materials	Type of window for toilet	.662
	Bathroom location	-.582
	Wall finishes material for Guest room	-.565
	Wall finishes material for Bedroom	.655
	Wall finishes material for Living room	.660
	Wall finishes material for Dining room	.630
	Wall finishes material for Corridor	.574
	Age at last birthday	.637
	Employment status	.546
	Occupation	.545
F3 Residents' Social Characteristics	Type of tenure status	.585
	Mode of ownership	-.583
	How long have you lived in the house	.648
	No of people in the household	.742
	No of children (Male)	.713
	No of children (Female)	.681
	Living room	.852
	Kitchen	.766
	Bedroom	.696
	Toilet	.787
F4 Available and Required Housing Spaces	Study room	.549
	Laundry	.566
	Floor finishes material for bedroom	.689
	Floor finishes material for living room	.612
	Floor finishes material for dining room	.538
F5 Floor Finishes Material for Available Spaces		

Factors	Resident and Housing Characteristics	Factor Scores
	Floor finishes material for kitchen	.773
	Floor finishes material for toilet	.771
	Floor finishes material for corridor	.654

(ii). Owode Housing Estate

For the Owode housing estate, the results of the factor analysis showed that five factors accounted for 39.00% of the variance in the data (Appendix VII). The component loadings show the factors that the variables represented. An assessment of Table 8 reveals that the first factor, which accounted for 9.05% of the variance in the available and required housing spaces, was the available dining room space in the house (0.856), available store space in the house (0.679), required dining room space in the house (0.825), required store space in the house (0.725), required balcony space in the house (0.501), number of bedrooms (0.771), bathroom location (0.584) and changes that had taken place in the house (0.554), while the second factor, which accounted for 8.16% of the variance in the results, was residents' social characteristics and types of windows for available spaces. Similar to the Ajoda estate, the second factor is loaded and represents six (6) residents and housing characteristics (Table 8). Wall building materials were the third most important factor, accounting for 7.88% of the variance, and represented four (4) housing

characteristics. The fourth factor, Floor Finishes Material for Available Spaces, accounted for 7.18% of the variance in the loaded data and represented six (6) housing characteristics. Finally, the fifth factor, the residents' social characteristics, housing physical characteristics and neighbourhood characteristics, accounted for 6.73% of the variance in the data and represented eight (8) resident, housing and neighbourhood characteristics. It is evident from this result that factors similar to those obtained for the Bodija estate describe the factors influencing the perception of privacy in the Owode estate.

Differences exist in the factor loadings and the number of characteristics represented by each of the five factors. For instance, Wall Building Materials is an independent factor in the Bodija estate but is represented by Factor 3 in the Owode estate. Similarly, available and required housing spaces are the fourth most important factor in the Bodija estate, while available and required housing spaces are represented by Factor 1 in the Owode estate. This finding suggests that respondents in Bodija and Owode housing estates interpreted the perception of privacy in closely related ways.

Table 8. Factors Influencing Residents' Perception of Privacy in the Owode Estate.

Factors	Resident and Housing Characteristics	Factor Scores
F1 Available and Required Housing Spaces	Available Dining room space	-.856
	Available Store space	-.697
	Required Dining room space	.825
	Required store space in the house	.725
	Required Balcony space	.501
	Number of bedroom	.771
	Bathroom location	-.584
	Changes that had taken place in the house	-.554
	Household size	.760
F2 Residents' Social Characteristics and Types of Window for Available spaces	Number of male children	.685
	Type of window for bedroom	.843
	Type of window for living room	.836
	Type of window for kitchen	.831
	Type of window for toilet	.813

Factors	Resident and Housing Characteristics	Factor Scores
F3 Wall Building Materials	Wall finishes material for Bedroom	.900
	Wall finishes material for Living room	.927
	Wall finishes material for Dining room	.927
	Wall finishes material for Corridor	.825
F4 Floor Finishes Material for Available Spaces	Floor finishes material for bedroom	.721
	Floor finishes material for living room	.878
	Floor finishes material for dining room	.878
	Floor finishes material for kitchen	.804
	Floor finishes material for toilet	.804
	Floor finishes material for corridor	.851
F5 Residents' Social Characteristics, Housing's Physical Characteristics and Neighbourhood Characteristics	Employment status	.579
	Occupation	.542
	Living room	.598
	Toilet	.554
	Reasons for making changes in the house	.515
	Burglary proof used in your house	.544
	Community open space in your neighbourhood	.579
	Open spaces provided in your neighbourhood	.597

(iii). Ajoda Housing Estate

The results of the factor analysis of the privacy perception variables revealed that five factors accounted for 41.60% of the variance in the Ajoda estate data. The details of the factor loadings (Appendix VIII) show the characteristics that the factors represented. Similar to what is observed in Bodija and Owode estates, Table 9 shows that the key factors influencing the perception of privacy in the Ajoda estate are Floor Finishes Material for Available Spaces, which accounted for 11.07% of the variance in the data; Available and Required Housing Spaces, which accounted for 8.59%; Wall Building Materials, which accounted for 7.70%; Housing's Physical Characteristics, which accounted for 7.61%; and Residents' Social Characteristics and Window Types for Available Spaces, which accounted for 6.64%. These five factors represented similar characteristics in Bodija and Owode estates but with different factor loadings. These five factors explained only 41.60% of the variance both before extraction and after rotation. This is an indica-

tion that there are other unexplained variations, which can be accounted for by other groups of variables/factors not identified in this analysis.

The first factor, which accounted for 11.07% of the variance in the data, was Floor Finishes Material for Available Spaces in the house, which was loaded and represented as Floor finishes material for Kitchen (0.511), Floor finishes material for bedroom (0.920), Floor finishes material for living room (0.922), Floor finishes material for dining room (0.920), Floor finishes material for kitchen (0.905), and Floor finishes material for toilet (0.899). Floor finishes material for corridor (0.906) and Floor finishes material for Toilet (0.566). The last factor, which included residents' social characteristics and types of windows for available spaces, accounted for 6.64% of the variance in the data and represented length of stay (-0.608), household size (-0.595), number of male children (0.638), type of window for bedroom (0.566), type of window for living room (0.538), type of window for kitchen (0.599) and type of window for toilet (0.585).

Table 9. Factors Influencing Residents' Perception of Privacy in the Ajoda Estate.

Factors	Resident and Housing Characteristics	Factor Scores
F1 Floor Finishes Material for Available Spaces	Floor finishes material for Kitchen	.511
	Floor finishes material for bedroom	.920
	Floor finishes material for living room	.922
	Floor finishes material for dining room	.920
	Floor finishes material for kitchen	.905
	Floor finishes material for toilet	.899
	Floor finishes material for corridor	.906
	Floor finishes material for Toilet	.566
	Available Living room space	.909
	Available Kitchen space	.662
F2 Available and Required Housing Spaces	Available Bedroom space	.909
	Available Toilet space	.760
	Required Guest room space	.551
	Required Study room space	.545
	Required Laundry space	.710
	Available community open space	.732
	Wall finishes material for bedroom	.858
	Wall finishes material for living room	.861
	Wall finishes material for dining room	.861
	Wall finishes material for corridor	.769
F3 Wall Building Materials	Wall finishes material for Toilet	.718
	Type of house	-.500
	Entrance porch	-.692
	Dining room	-.623
	Entrance porch	.763
	Length of stay	-.608
	Household size	-.595
	Number of male children	-.638
	Type of window for bedroom	.566
	Type of window for living room	.538
F4 Residents' Social Characteristics and Types of Window for Available Spaces	Type of window for kitchen	.599
	Type of window for toilet	.585

(iv). Oludadan Housing Estate

The results show that the five factors influencing the perception of privacy in the Olubadan estate account for 45.77% of the variance in the data. The figure shows the characteris-

tics of the factors represented and the loadings. A detailed examination of Table 10 reveals that the first factor, Floor Finishes Material for Available Spaces, accounted for 10.68% of the variance in the data and was loaded and presented as Floor finishes material for bedrooms (0.931), Floor finishes

material for living rooms (0.938), Floor finishes material for dining rooms (0.938), Floor finishes material for kitchens (0.871), Floor finishes material for toilets (0.871) and Floor finishes material for corridors (0.905).

Table 10. *Factors Influencing Residents' Perception of Privacy in Olubadan Estate.*

Factors	Resident and Housing Characteristics	Factor Scores
F1 Floor Finishes Material for Available Spaces	Floor finishes material for bedroom	.931
	Floor finishes material for living room	.938
	Floor finishes material for dining room	.938
	Floor finishes material for kitchen	.871
	Floor finishes material for toilet	.871
	Floor finishes material for corridor	.905
	Marital Status	.534
	Type of building provided	.647
	Type of house originally design	.647
	Entrance porch	.586
F2 Residents' Social Characteristics, Housing's Physical Characteristics and Wall Building Materials	Visitors' toilet	-.570
	Wall finishes material for bedroom	.693
	Wall finishes material for living room	.683
	Wall finishes material for dining room	.702
	Wall finishes material for Kitchen	.627
	Wall finishes material for Toilet	.604
	Wall finishes material for corridor	.751
	Reasons for making changes in the house	-.723
	Gender	-.521
	Highest level of education	.520
F3 Residents' Social Characteristics and Available and Required Housing Spaces	Household size	.649
	Number of male children	.634
	Available Store space	-.555
	Available Dining room space	.615
	Required Store space	.629
	Type of window for bedroom	.918
	Type of window for living room	.904
	Type of window for kitchen	.904
	Type of window for toilet	.864
	Available Kitchen space	-.512
F4 Types of Window for Available Spaces and Available Housing Spaces	Available Bedroom space	-.534
	Available Toilet space	.526
	Age at last birthday	.611
	Employment status	.687
	Occupation	.687
F5 Residents' Social Characteristics and Housing's Physical Characteristics		

Factors	Resident and Housing Characteristics	Factor Scores
	Type of tenure status	.575
	Mode of ownership acquisition	-.581
	Length of stay	.765
	Entrance porch	-.532
	Bathroom location	-.506

The second factor is residents' social characteristics. Housing physical characteristics and wall building materials accounted for 10.49% of the variance, and they were loaded and represented by a total of twelve (12) resident and housing attributes. The third factor, which accounted for 8.41% of the variance in the results, was Residents' Social Characteristics and Available and Required Housing Spaces, and it was loaded and represented seven (7) resident and housing characteristics. The type of window for available spaces and available housing spaces was the next factor and accounted for 8.33% of the variance in the data. The following factors are loaded and represented: type of window for bedroom (0.918), type of window for living room (0.904), type of window for kitchen (0.904), type of window for toilet (0.864), available kitchen space (-0.512), available bedroom space (-0.534) and available toilet space (0.526). The fifth factor is residents' social characteristics and housing physical characteristics, which also accounted for 7.87% of the total variance in the results. This factor is loaded and represents eight (8) resident and housing characteristics, as indicated in Table 10.

It is obvious from this result that similar factors, such as Floor Finishes Material for Available Spaces, as obtained in the Ajoda estate, influence the perception of privacy in the Olubadan estate. However, differences exist in the factor loadings and the number of characteristics represented by each of the five factors. For instance, whereas available and required housing spaces are independent factors in the Owode estate, they are represented by Factor 3 in the Olubadan estate and the fourth factor in the Bodija estate. Similarly, wall building materials are the third factor in the Ajoda estate, while wall building materials are represented by Factor 2 in the Olubadan estate. This suggests that respondents in the Ajoda and Olubadan housing estates interpreted the perception of privacy in closely related ways.

4.3.7. Comparison of Factors Influencing Perception of Privacy Across Estates

From the previous results of factor analysis across the four

housing estates, it is evident that there are similarities and differences in how residents perceive privacy. Table 11 shows the results of the factor analysis on the perception of privacy across the four housing estates. It is obvious from this result that across the four estates, residents' perceived privacy is based on wall building materials, housing social and physical characteristics, floor finishes material for available spaces, types of windows for available spaces and available and required housing spaces. There are also significant differences across the housing estates. However, in Ajoda and Olubadan housing estates, residents' perceived privacy with respect to the Floor Finishes Material for Available Spaces, and residents in Bodija and Owode estates did not appear to have perceived privacy based on this factor. Moreover, while the residents of Bodija and Olubadan estates perceived privacy based on five key factors with respect to the wall building materials, the residents of Owode and Ajoda estates perceived privacy based on the residents' social characteristics, types of windows for available spaces and available and required housing spaces. In a similar manner, the results show that only residents in the Bodija estate perceived privacy in terms of Floor Finishes Material for Available Spaces, while those in the Owode, Ajoda and Olubadan estates perceived privacy in terms of residents' social characteristics.

The findings of this section suggest that different residents and housing characteristics loaded on each of the factors identified above significantly contribute to residents' perceptions of privacy separately in each estate and jointly in all the estates. This implies that these factors can be used to explain respondents' perceptions of the level of privacy in the study area. The factors influencing residents' perceptions of privacy differ among the four estates, possibly because of the socioeconomic and cultural characteristics of the residents.

This suggests that individual priority could have also influenced how the residents perceived privacy in the study area.

Table 11. Factor Analysis on Perception of Privacy across Housing Estates.

Factors	Bodija Estate N=233	Owode Estate N=140	Ajoda Estate N=135	Olubadan Estate N=57	Overall Estates Perception of Privacy
Factor 1	Housing's Physical Characteristics and Types of Window for Available spaces	Available and Required Housing Spaces	Floor Finishes Material for Available Spaces	Floor Finishes Material for Available Spaces	Wall Building Materials
Factor 2	Wall Building Materials	Residents' Social Characteristics and Types of Window for Available spaces	Available and Required Housing Spaces	Residents' Social Characteristics, Housing's Physical Characteristics and Wall Building Materials	Housing's social and physical Characteristics
Factor 3	Residents' Social Characteristics	Wall Building Materials	Wall Building Materials	Residents' Social Characteristics and Available and Required Housing Spaces	Floor Finishes Material for Available Spaces
Factor 4	Available and Required Housing Spaces	Floor Finishes Material for Available Spaces	Housing's Physical Characteristics	Types of Window for Available Spaces and Available Housing Spaces	Types of Window for Available Spaces
Factor 5	Floor Finishes Material for Available Spaces	Residents' Social Characteristics, Housing's Physical Characteristics and Neighbourhood Characteristics	Residents' Social Characteristics and Types of Window for Available Spaces	Residents' Social Characteristics and Housing's Physical Characteristics	Available and Required Housing Spaces

5. Conclusion

The factors influencing residents' perceptions of privacy in the study area were determined. The results showed that the factors influencing residents' perception of privacy in selected public housing estates in Ibadan were wall building materials, housing social and physical characteristics, floor finishing material for available spaces, window types for available spaces, and available housing spaces. The percentage of variance explained by wall building materials, housing social and physical characteristics, floor finishing material for available spaces, window types for available spaces and available housing spaces was 7.99%, 7.43%, 7.27%, 5.52% and 5.12%, respectively. These factors explained 33.33% of the factors influencing residents' perception of privacy.

The findings from this section established that different residents and housing characteristics loaded on each of the factors identified above significantly contribute to residents' perceptions of privacy separately in each estate and jointly in all the estates. The implication of this finding is that the adoption of appropriate privacy regulating mechanisms by residents in the modification of their housing units to achieve optimum privacy level, available housing spaces, varieties of windows for available spaces, floor

finishing material for available spaces, housing social and physical characteristics and wall building materials are the basic ingredients. The implication of this is that architects involved in the design, planning and implementation of public housing estates should engage appropriate design practices in conceiving houses that meet users' privacy needs. This means that more attention should be given to these aspects of housing design in the study area. It is thus suggested that public housing providers should evolve efficient mechanisms for the provision of social spaces, varieties of windows for available spaces, floor finishing material for available spaces and wall building materials in public housing estates. Public housing providers can also design larger housing units to meet the needs of households with large families.

Author Contributions

Funmilayo Lanrewaju Amao is the sole author. The author read and approved the final manuscript.

Conflicts of Interest

The author declare no conflicts of Interest.

Appendix

Appendix I: Questionnaire

LADOKE AKINTOLA UNIVERSITY OF TECHNOLOGY, OGBOMOSO, NIGERIA.

FACULTY OF ENVIRONMENTAL SCIENCES

DEPARTMENT OF ARCHITECTURE

FACTORS INFLUENCING RESIDENTS' PERCEPTION OF PRIVACY ACROSS SELECTED PUBLIC HOUSING ESTATES IN IBADAN

Dear Respondent,

This questionnaire is designed to elicit responses on Privacy in Public Housing estates in Ibadan, Oyo State, Nigeria. It is mainly an instrument for gathering data for a Research in Architecture. All information provided will be treated confidentially and used purely for academic purposes.

Thank you for providing responses to the questions

AMAO Funmilayo Lanrewaju

INSTRUCTION: Please tick (X) or fill as appropriate

Name of Housing Estate.....

SECTION A: Socio-economic and Cultural Characteristics of Residents

1. What is your gender? (1) Male () (2) Female ()
2. What age were you at your last birthday?
3. My marital status is (1) Married () (2) Separated () (3) Divorced () (4) Widow/Widower () (5) Single ()
4. My religious background is (1) Christianity () (2) Muslim () (3) Traditional () (4) Others.....
5. What is your ethnicity? (1) Hausa () (2) Ibo () (3) Yoruba () (4) Others.....
6. What is your employment status? (1) Civil Servant () (2) Private employee () (3) Self-employed () (4) Student or unemployed () (5) Retiree ()
7. What occupation do you do for living?
8. My average monthly income is (in Naira).....
9. What is the highest level of education you have completed?
10. My type of tenure status is (1) Rent () (2) Lease () (3) Self-Ownership () (4) Transfer or Inheritance () (5) Others.....
11. If Self-Ownership, how did you acquire the ownership? (1) From Government () (2) From a Previous Owner () (3) Inheritance () (4) Others.....
12. What is the type of building you are occupying?
13. How long have you lived in this house?
14. What are the reasons for your decision to live here?
15. How many people, including yourself are there in your household?
16. How many children are there in your household? (1) Male Children () (2) Female Children ()
17. Do your male and female children sleep in the same room?
18. What is your family background? (1) Single-family () (2) Multi-family () (3) others.....

SECTION B: Housing and Neighbourhood Characteristics

INSTRUCTION: Please tick (X) or fill as appropriate

HOUSING CHARACTERISTICS

1. Types of Houses originally provided
(1) Duplex () (2) Detached bungalow () (3) Semi-detached bungalow () (4) Block of flat (apartment type) ()
Others.....
2. Identify the types of spaces provided in your house?

1	Entrance porch		3	Living room		5	Kitchen		7	Bedroom	
2	Waiting room		4	Dining room		6	Store		8	Toilet	

3. Identify as many spaces as you require that are not provided in your house?

1	Entrance porch		3	Visitors' toilet		5	Store		7	Laundry	
2	Guest room		4	Dining room		6	Study room		8	Balcony	

4. How many bedrooms are there in your house?

1		2		3		4		5	
---	--	---	--	---	--	---	--	---	--

5. Specify wall finishes materials for the following spaces in your house

	Spaces	Tiles 1	Paper2	Pop3	Wood4		Spaces	Tiles1	Paper2	Pop3	Wood4
1	Bedroom					4	Kitchen				
2	Living room					5	Toilet				
3	Dining					6	Corridor				

If others (specify).....

6. Specify floor finishes materials for the following spaces in your house

	Spaces	Tiles 1	Paper2	Pop3	Wood4		Spaces	Tiles1	Paper2	Pop3	Wood4
1	Bedroom					4	Kitchen				
2	Living room					5	Toilet				
3	Dining					6	Corridor				

If others (specify).....

7. The main entrance door is facing:

(1) Street () (2) Opposite house () (3) Courtyard () (4) Porch () Others.....

8. What types of windows do you have for the listed spaces in your house?

	Spaces	Casement 1	Louvre 2	Projected 3	Sliding 4	Wood shutter 4	Others
1	Bedroom						
2	Living room						
3	Kitchen						
4	Toilet						

If others (specify).....

9. The windows height in the house for the following spaces are:

	Spaces	Below 0.9m (1)	Normal 0.9m (2)	Above 0.9m level (3)	Others (4)
1	Bedroom				
2	Living room				
3	Kitchen				
4	Toilet				

10. The windows sizes for the listed spaces are

	Spaces	Very small	Small	Normal	Wide	Very wide
1	Bedroom					
2	Living room					
3	Kitchen					
4	Toilet					

11. The position of windows in the following spaces are facing:

	Spaces	Street	Balcony	Courtyard	Others
1	Bedroom				
2	Living room				
3	Kitchen				
4	Toilet				

12. The Bedroom Position is toward:

(1) Front view () (2) Left side view () (3) Right-side view () (4) back elevation () (5) Others

13. Where is your bathroom location?

- (1) Inside the bedroom () (2) Shared by two bedrooms () (3) Outside the house () (4) Others.....
14. What modifications have taken place in your house?
15. Which of these open spaces has been added to the original design in the house are?
- (1) Terrace () (2) Balcony () (3) Porch () (4) Courtyard () (5) Others.....
16. Why were these modifications made in the house?
17. What is the floor area of your bedroom?
- (1) <20 m² () (2) 21–30 m² () (3) 31–40 m² () (4) >40 m² () (5) Others.....
18. To what extent is the burglary proof used in your house?
- (1) All the spaces () (2) Only for the bedrooms () (3) Only for entrance area () (4) Not used ()
- NEIGHBOURHOOD CHARACTERISTICS**
19. Is there a community open spaces in your neighbourhood?
- (1) Yes () (2) No ()
20. Which of these open spaces are provided in your neighbourhood?
- (1) Playground () (2) Garden () (3) Parks () (4) Others
21. What are the uses of these open spaces?
- (1) Social events () (2) Religious gathering () (3) Recreation () (4) Political events () Others
22. How near is your house to the neighbourhood open spaces?
- (1) Immediate vicinity () (2) Fairly close () (3) Far () (4) Very far
23. To what extent do the activities in the neighbourhood open spaces greatly affect your sense of privacy?
- (1) Very high () (2) High () (3) Neutral () (4) Low () (5) Very low

Appendix II: Observation Schedule

Name and Location of Housing Estate: -----

House Number: -----

1. Housing Typology
 - (i) Single-Family Bungalow []
 - (ii) Block of flats []
 - (iii) Semi-detached Bungalow []
 - (iv) Duplex []
 - (v) Others.....
2. Walling material of your house?
 - (i) Sun dried burnt bricks []
 - (ii) Sancerre Cement Blocks []
 - (iii) Compressed Stabilized Laterite []
 - (iv) Others.....
3. Wall finishing
 - (i) Cement sand plastering []
 - (ii) Tiled []
 - (iii) Painted []
 - (iv) Others.....
4. The type of windows used in the house
 - (i) Timber []
 - (ii) Glazed aluminium []
 - (iii) Casement []
 - (iv) Glazed louvers []
 - (v) Others.....
5. The type doors used in the house
 - (i) Plywood flushed []
 - (ii) Aluminium Glazed []
 - (iii) Panelled Steel []
 - (iv) Panelled timber []
 - (v) Others.....
6. Burglary proof on windows

- (i) Yes []
- (ii) No []
- 7. Burglary proof on external doors
 - (i) Yes []
 - (ii) No []
- 8. Type of floor finish
 - (i) Cement screed []
 - (ii) Ceramic Tiles []
 - (iii) Marble []
 - (iv) PVC Tiles []
 - (v) Terrazzo []
 - (vi) Others.....
- 9. Ceiling Material(s)
 - (i) Asbestos []
 - (ii) Acoustic ceiling []
 - (iii) Polished timber []
 - (iv) Plaster of Plaster (POP) []
 - (v) PVC strips []
- 10. Type of Roofing material
 - (i) Galvanized iron []
 - (ii) Aluminium long span []
 - (iii) Villa tiles []
 - (iv) Asbestos []
 - (v) Others, specify.....
- 11. The layout of the housing estate
 - (i) Crowded []
 - (ii) Spacious []
 - (iii) Haphazard []
 - (iv) Properly planned []
- 12. Types of partition
 - (i) Curtain []
 - (ii) Wall []
 - (iii) Blinds []
- 13. Perimeter fencing
 - (i) Non-existent []
 - (ii) Low []
 - (iii) Very low []
 - (iv) Very high []
- 14. Kiosks for retail shops
 - (i) Non-existent []
 - (ii) Present []
- 15. Security post at entrance(s) to the estate
 - (i) Non-existent []
 - (ii) Present []
- 16. Location of openings
 - (i) Balconies facing directly opposite neighbours' house []
 - (ii) Balconies located indirectly from neighbours' house []
- 17. Location of Windows
 - (i) Windows facing directly neighbours' house []
 - (ii) Windows located indirectly neighbours' house []
- 18. Orientation of buildings
 - (i) Building of different heights facing each other []
 - (ii) Building of similar height facing each other []
- 19. Territorial markers
 - (i) Use of symbols []

- (ii) Use of pointers []
- (iii) Writing on the fence []
- 20. Orientation of Buildings
 - (i) Facing street []
 - (ii) Facing opposite house balcony []
 - (iii) Facing opposite garden []
 - (iv) Facing courtyard []
- 21. Arrangement of Buildings
 - (i) Arranged in rows []
 - (ii) Mirror arrangement []
 - (iii) Building facing each other []
 - (iv) Arranged around courtyard []

Appendix III: Interview Guide

Name of Estate.....

Location.....

1. What type of houses do you live in? e.g. Bungalow, Semi-detached Bungalow, Block of flats, Duplex and Boys' quarter
2. How long have you lived in this house?
3. Are you planning to move and why?
4. What type of house you would never consider living in?
5. How would you like your dream house to be like?
6. How important was privacy when you select this house?
7. How do you perceived the level of privacy in your house?
8. Can you easily see into your neighbour's interior spaces?
9. Do you have dedicated room for the guests?
10. Do you have separate rooms for boys and girls?
11. Can you hear clear conversation from my neighbour's house?
12. Does the Aroma from your kitchen reach your guests?
13. Does the odour from your bathroom transfers to other spaces in the house?
14. Is there a community open spaces in your neighbourhood?
15. Which of these open spaces are provided in your neighbourhood?
16. What are the uses of these open spaces?
17. To what extent do the activities in the neighbourhood open spaces greatly affect your sense of privacy?
18. What are the regulating mechanism that helped in providing privacy in the house and your neighbourhood?
19. Is there any space in your house that you wish to modify? Why? (What is the reason, is it only privacy or aesthetic and comfort?)
20. Were there any adjustments, addition and removal that you had to do in your current house to overcome some of the things that you didn't like? (to know and emphasize on residents' privacy regulating mechanism)
21. What modifications have taken place in your house?
22. Why were these modifications made in the house?
23. What are the factors that influenced your housing modification choices in regulating privacy or in adapting to your house if that is the case? (to know what are the influencing factors on residents' perception of privacy and their regulating mechanism)

Appendix IV: Communalities of Variables for the Study Area (Perception of Privacy)

Table 12. Communalities of Variables for the Study Area.

Communalities		
Variables	Initial	Extraction
Type of window for kitchen	1.000	.875
Type of window for living room	1.000	.854

Communalities		
Variables	Initial	Extraction
Type of window for bedroom	1.000	.847
Type of window for toilet	1.000	.817
Floor finishes material for kitchen	1.000	.750
Floor finishes material for toilet	1.000	.748
Wall finishes material for living room	1.000	.746
Wall finishes material for bedroom	1.000	.741
Wall finishes material for dining room	1.000	.738
Floor finishes material for bedroom	1.000	.733
Floor finishes material for living room	1.000	.722
Floor finishes material for dining room	1.000	.685
Wall finishes material for corridor	1.000	.666
Floor finishes material for corridor	1.000	.658
Dining room space	1.000	.610
Household size	1.000	.578
Entrance porch	1.000	.517
Entrance porch space	1.000	.497
Dining room	1.000	.496
Bedroom space	1.000	.464
Toilet space	1.000	.464
Store space	1.000	.461
Living room space	1.000	.452
Number of female children	1.000	.445
Number of bedroom in the house	1.000	.437
Number of male children	1.000	.429
Store	1.000	.411
Type of building	1.000	.410
Kitchen space	1.000	.388
Age of respondent	1.000	.384
Type of house	1.000	.381
Wall finishes material for kitchen	1.000	.366
Wall finishes material for toilet	1.000	.356
Position of bathroom	1.000	.333
Laundry	1.000	.323
Type of tenure status	1.000	.299
Study room	1.000	.298
Mode of ownership acquisition	1.000	.297
Visitors' toilet	1.000	.294

Communalities		
Variables	Initial	Extraction
Reasons for making changes in the house	1.000	.275
Position of window in toilet	1.000	.229
Length of stay	1.000	.228
Window height of toilet	1.000	.227
Balcony	1.000	.220
Guest room	1.000	.219
Open spaces provided in the neighbourhood	1.000	.219
Floor area of the bedroom	1.000	.213
Position of bedroom	1.000	.212
Average monthly income	1.000	.190
Community open space in the neighbourhood	1.000	.176
Family background	1.000	.163
Open spaces added to the original design in the house	1.000	.159
Occupation	1.000	.158
Waiting room space	1.000	.155
Employment status	1.000	.154
Effect of activities in the neighbourhood open spaces	1.000	.151
Position of window in bedroom	1.000	.140
Window size for toilet	1.000	.137
Religion	1.000	.136
Position of the main entrance door	1.000	.133
Marital Status	1.000	.126
Sleeping arrangement of male and female children	1.000	.123
Window size for bedroom	1.000	.106
Position of window in living room	1.000	.102
Window size for living room	1.000	.082
Changes that had taken place in the house	1.000	.079
Extent to which burglary proof was used in the house	1.000	.076
Proximity of your house to neighbourhood spaces	1.000	.073
Position of window in kitchen	1.000	.069
Window height of bedroom	1.000	.048
Window height of living room	1.000	.042
Highest level of education	1.000	.039
Window size for kitchen	1.000	.035
Window height of kitchen	1.000	.034
Ethnicity	1.000	.033
Gender	1.000	.029

Communalities		
Variables	Initial	Extraction
Reason for living in the current estate	1.000	.026
Uses of open space	1.000	.014

Extraction Method: Principal Component Analysis.

Appendix V: Communalities of Variables for Bodija Estate (Perception of Privacy)

Table 13. Communalities of Variables for Bodija Estate.

Communalities		
Variables	Initial	Extraction
Available Living room space	1.000	.787
Types of windows for Living room	1.000	.779
Types of windows for Kitchen	1.000	.766
Types of windows for Bedroom	1.000	.743
Types of windows for Toilet	1.000	.687
Household size	1.000	.673
Dining room space	1.000	.645
Floor finishes materials for Toilet	1.000	.642
Toilet space	1.000	.634
Kitchen space	1.000	.631
Floor finishes materials for Kitchen	1.000	.631
Dining room space	1.000	.585
Floor finishes materials for Dining room	1.000	.577
Number of male children	1.000	.576
Wall finishes materials for Living room	1.000	.563
Number of female children	1.000	.556
Wall finishes materials Dining room	1.000	.544
Required Entrance porch space	1.000	.539
Wall finishes materials for Bedroom	1.000	.538
Age of respondent	1.000	.536
Available Store space	1.000	.527
Floor finishes materials Bedroom	1.000	.524
Required Study room space	1.000	.509
Available Bedroom space	1.000	.505
Required Store space	1.000	.499
Available Entrance porch space	1.000	.498

Communalities		
Variables	Initial	Extraction
Floor finishes materials for Corridor	1.000	.494
Number of bedroom in the house	1.000	.488
Type of building	1.000	.483
Type of house	1.000	.482
Wall finishes materials for Corridor	1.000	.482
Required Guest room space	1.000	.463
Required Laundry space	1.000	.458
Floor finishes materials for Living room	1.000	.440
Position of bathroom	1.000	.430
Length of stay	1.000	.425
Type of tenure status	1.000	.424
Employment status	1.000	.412
Occupation	1.000	.396
Wall finishes materials for Kitchen	1.000	.395
Mode of ownership acquisition	1.000	.383
Required Visitors' toilet space	1.000	.379
Religion	1.000	.367
Wall finishes materials for Toilet	1.000	.355
Marital Status	1.000	.352
Windows sizes for Bedroom	1.000	.333
Average monthly income	1.000	.265
Family background	1.000	.257
Windows height for Toilet	1.000	.248
Required Balcony space	1.000	.238
Bedroom position	1.000	.233
floor area of bedroom	1.000	.230
Open spaces added to the original design in the house	1.000	.225
Available Waiting room	1.000	.215
Windows height for Kitchen	1.000	.203
Windows sizes for Living room	1.000	.203
Windows sizes for Toilet	1.000	.202
Effect of activities in the neighbourhood open spaces	1.000	.185
Position of windows Toilet	1.000	.183
Position of the main entrance door	1.000	.173
Reason for living in the current estate	1.000	.157
Extent to which burglary proof was used in the house	1.000	.146
Position of windows Bedroom	1.000	.145

Communalities		
Variables	Initial	Extraction
Sleeping arrangement of male and female children	1.000	.140
Windows sizes for Kitchen	1.000	.138
Position of windows for Living room	1.000	.135
Reasons for making changes in the house	1.000	.135
Position of windows for Kitchen	1.000	.131
Windows height for Living room	1.000	.119
Highest level of education	1.000	.078
Gender	1.000	.077
Uses of these open space	1.000	.075
Proximity of your house to neighbourhood spaces	1.000	.072
Changes that had taken place in the house	1.000	.067
Open spaces provided in your neighbourhood	1.000	.064
Ethnicity	1.000	.063
Community open space in your neighbourhood	1.000	.014

Extraction Method: Principal Component Analysis

Variance Explained by Determinants of Residents' Perception of Privacy in Bodija

Table 14. Rotated Component Matrix of Data in Bodija Estate.

Total Variance Explained ^a									
Comp-o nent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumula- tive %	Total	% of Variance	Cumula- tive %	Total	% of Variance	Cumula- tive %
1	9.074	11.785	11.785	9.074	11.785	11.785	8.149	10.584	10.584
2	6.203	8.056	19.841	6.203	8.056	19.841	5.683	7.380	17.964
3	5.139	6.674	26.515	5.139	6.674	26.515	5.217	6.775	24.739
4	4.657	6.048	32.563	4.657	6.048	32.563	5.049	6.557	31.295
5	3.876	5.033	37.597	3.876	5.033	37.597	4.852	6.302	37.597

Method: Principal Component Analysis. a. Housing Estate = Bodija

Rotated Component Matrix of Data in Bodija Estate

Table 15. Principal Component Analysis for Bodija.Estate.

Factors	Resident and Housing Characteristics	Component				
		1	2	3	4	5
F1	Entrance porch	-.618				
	Dining room	-.743				
	Store	-.683				
	Entrance porch	.655				
	Dining room	.729				
	Store	.684				
	No of bedroom in the house	.650				
	Type of window for bedroom	.618				
	Type of window for living room	.648				
	Type of window for kitchen	.640				
	Type of window for toilet	.662				
	Bathroom location	-.582				
	Wall finishes material for Guest room		-.565			
F2	Wall finishes material for Bedroom		.655			
	Wall finishes material for Living room		.660			
	Wall finishes material for Dining room		.630			
	Wall finishes material for Corridor		.574			
	Age at last birthday			.637		
F3	Employment status			.546		
	Occupation			.545		
	Type of tenure status			.585		
	Mode of ownership			-.583		
	How long have you lived in the house			.648		
	No of people in the household			.742		
	No of children (Male)			.713		
	No of children (Female)			.681		
F4	Living room				.852	
	Kitchen				.766	
	Bedroom				.696	
	Toilet				.787	
	Study room				.549	
	Laundry				.566	
	Floor finishes material for bedroom					.689
F5	Floor finishes material for living room					.612
	Floor finishes material for dining room					.538
	Floor finishes material for kitchen					.773

Factors	Resident and Housing Characteristics	Component				
		1	2	3	4	5
	Floor finishes material for toilet					.771
	Floor finishes material for corridor					.654

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Appendix VI: Communalities of Variables for Owode Estate (Perception of Privacy)

Table 16. Communalities of Variables for Owode Estate.

Communalities		
Variables	Initial	Extraction
Wall finishes materials for Living room	1.000	.895
Wall finishes materials for Dining room	1.000	.895
Wall finishes materials for Bedroom	1.000	.859
Floor finishes materials for Living room	1.000	.802
Floor finishes materials for Dining room	1.000	.802
Types of windows for Bedroom	1.000	.802
Types of windows for Living room	1.000	.791
Types of windows for Kitchen	1.000	.789
Types of windows for Toilet	1.000	.763
Wall finishes materials for Corridor	1.000	.748
Floor finishes materials for Corridor	1.000	.743
Available Dining room space	1.000	.742
Floor finishes materials for Kitchen	1.000	.710
Floor finishes materials for Toilet	1.000	.710
Required Dining room space	1.000	.695
Number of bedroom in your house	1.000	.680
Household size	1.000	.668
Number of male children	1.000	.584
Floor finishes materials for Bedroom	1.000	.565
Available Store space	1.000	.555
Required Store space	1.000	.552
Available Entrance porch space	1.000	.544
Age at last birthday	1.000	.501
Community open space in your neighbourhood	1.000	.487
Bathroom location	1.000	.478
Position of windows for Living room	1.000	.428

Communalities		
Variables	Initial	Extraction
Required Entrance porch space	1.000	.425
Required Balcony space	1.000	.420
Employment status	1.000	.413
Open spaces provided in your neighbourhood	1.000	.410
Occupation	1.000	.386
Reasons for making changes in the house	1.000	.385
Position of windows Toilet	1.000	.378
Changes that had taken place in the house	1.000	.378
Mode ownership acquisition	1.000	.359
Required Visitors' toilet spaces	1.000	.329
Extent to which burglary proof was used in the house	1.000	.329
Position of windows for Kitchen	1.000	.324
Windows height for Toilet	1.000	.287
Effect of activities in the neighbourhood open spaces	1.000	.276
Number of Female children	1.000	.274
Position of windows Bedroom	1.000	.271
Type of tenure status	1.000	.263
Type of building	1.000	.257
Windows sizes for Living room	1.000	.247
Family background	1.000	.246
Average monthly income	1.000	.245
Bedroom position	1.000	.228
Available Waiting room space	1.000	.225
Wall finishes materials for Toilet	1.000	.225
Windows sizes for Toilet	1.000	.223
Required Study room space	1.000	.220
Sleeping arrangement of male and female children	1.000	.219
Windows sizes for Kitchen	1.000	.215
Required Guest room space	1.000	.210
Available Kitchen space	1.000	.195
Available Bedroom space	1.000	.194
Marital Status	1.000	.193
Uses of these open space	1.000	.193
Type of house	1.000	.191
Windows sizes for Bedroom	1.000	.182
Open spaces added to the original design in the house	1.000	.177
Highest level of education	1.000	.176

Communalities		
Variables	Initial	Extraction
Gender	1.000	.167
Wall finishes materials Kitchen	1.000	.159
Required Laundry space	1.000	.154
Length of stay	1.000	.150
Position of the main entrance of the door	1.000	.146
Proximity of your house to neighbourhood spaces	1.000	.146
Floor area of the bedroom	1.000	.130
Available Living room space	1.000	.129
Ethnicity	1.000	.117
Religion	1.000	.099
Available Toilet space	1.000	.099
Windows height Kitchen	1.000	.096
Reason for living in the current estate	1.000	.094

Extraction Method: Principal Component Analysis

Variance Explained by Determinants of Residents' Perception of Privacy in Owode

Table 17. Rotated Component Matrix of Data in Owode Estate.

Total Variance Explained									
Comp-o nent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Vari- ance	Cumula- tive %	Total	% of Vari- ance	Cumula- tive %	Total	% of Vari- ance	Cumula- tive %
1	8.987	11.825	11.825	8.987	11.825	11.825	6.877	9.048	9.048
2	6.648	8.748	20.573	6.648	8.748	20.573	6.202	8.161	17.209
3	5.871	7.724	28.297	5.871	7.724	28.297	5.991	7.883	25.092
4	4.368	5.748	34.045	4.368	5.748	34.045	5.458	7.182	32.274
5	3.767	4.957	39.002	3.767	4.957	39.002	5.113	6.728	39.002

Extraction Method: Principal Component Analysis.

a. Housing Estate = Owode

Rotated Component Matrix of Data in Owode Estate

Table 18. Principal Component Analysis in Owode Estate.

Factors	Variables	Component				
		1	2	3	4	5
F1	Available Dining room space	-.856				
	Available Store space	-.697				
	Required Dining room space	.825				
	Required store space in the house	.725				
	Required Balcony space	.501				
	Number of bedroom	.771				
	Bathroom location	-.584				
	Changes that had taken place in the house	-.554				
F2	Household size		.760			
	Number of Male children		.685			
	Type of window for bedroom		.843			
	Type of window for living room		.836			
	Type of window for kitchen		.831			
F3	Type of window for toilet		.813			
	Wall finishes material for Bedroom			.900		
	Wall finishes material for Living room			.927		
	Wall finishes material for Dining room			.927		
	Wall finishes material for Corridor			.825		
F4	Floor finishes material for bedroom				.721	
	Floor finishes material for living room				.878	
	Floor finishes material for dining room				.878	
	Floor finishes material for kitchen				.804	
	Floor finishes material for toilet				.804	
F5	Floor finishes material for corridor				.851	
	Employment status					.579
	Occupation					.542
	Living room					.598
	Toilet					.554
	Reasons for making changes in the house					.515
	Burglary proof used in your house					.544
	Community open space in your neighbourhood					.579
	Open spaces provided in your neighbourhood					.597

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Rotation converged in 6 iterations.

Appendix VII: Communalities of Variables for Ajoda Estate (Perception of Privacy)*Table 19. Communalities of Variables for Ajoda Estate.*

Communalities		
Variables	Initial	Extraction
Floor finishes materials for Dining room	1.000	.881
Floor finishes materials for Living room	1.000	.879
Floor finishes materials for Bedroom	1.000	.875
Available Living room space	1.000	.864
Available Bedroom space	1.000	.864
Floor finishes materials for Kitchen	1.000	.858
Wall finishes materials for Living room	1.000	.856
Wall finishes materials for Dining room	1.000	.856
Wall finishes materials for Bedroom	1.000	.849
Floor finishes materials for Toilet	1.000	.847
Floor finishes materials for Corridor	1.000	.837
Wall finishes materials for Corridor	1.000	.748
Types of windows for Kitchen	1.000	.748
Types of windows for Toilet	1.000	.747
Required Entrance for porch	1.000	.746
Types of windows for Bedroom	1.000	.680
Types of windows for Living room	1.000	.657
Available Toilet space	1.000	.632
Wall finishes materials for Kitchen	1.000	.591
Available Entrance porch space	1.000	.590
Required Dining room space	1.000	.576
Wall finishes materials for Toilet	1.000	.575
Community open space in your neighbourhood	1.000	.573
Household size	1.000	.553
Available Store space	1.000	.544
Required Laundry space	1.000	.539
Available Dining room space	1.000	.536
Windows height Toilet	1.000	.524
Number of female children	1.000	.466
Open spaces provided in your neighbourhood	1.000	.453
Required Store space	1.000	.446
Available Kitchen space	1.000	.441
Required Guest room space	1.000	.435
Number of female children	1.000	.434

Communalities		
Variables	Initial	Extraction
Required Study room space	1.000	.432
Position of windows Toilet	1.000	.418
Reasons for making changes in the house	1.000	.380
Length of stay	1.000	.379
Type of building	1.000	.375
Type of house	1.000	.374
Position of the main entrance door	1.000	.324
Required Visitors' toilet	1.000	.302
Position of windows Bedroom	1.000	.298
Required Balcony	1.000	.290
Windows sizes Bedroom	1.000	.286
What is the floor area of your bedroom	1.000	.262
Position of windows Living room	1.000	.253
Reason for living in the current estate	1.000	.251
Proximity of your house to neighbourhood spaces	1.000	.249
Number of bedroom in the house	1.000	.248
Employment status	1.000	.245
Occupation	1.000	.245
Windows height for Kitchen	1.000	.245
Windows sizes for Living room	1.000	.245
Open spaces added to the original design in the house	1.000	.239
Available Waiting room space	1.000	.223
Bathroom location	1.000	.219
Sleeping arrangement of male and female children	1.000	.200
Effect of activities in the neighbourhood open spaces	1.000	.198
position of windows Kitchen	1.000	.187
Windows height for Living room	1.000	.175
Windows sizes for Toilet	1.000	.174
Gender	1.000	.170
Extent to which burglary proof was used in the house	1.000	.170
Age at last birthday	1.000	.164
Uses of these open space	1.000	.164
Ethnicity	1.000	.161
Bedroom position	1.000	.160
Windows height for Bedroom	1.000	.148
Religion	1.000	.146
Mode of ownership acquisition	1.000	.141

Communalities		
Variables	Initial	Extraction
Kitchen	1.000	.127
Highest level of education	1.000	.125
Type of tenure status	1.000	.109
Family background	1.000	.080
Average monthly income	1.000	.071
Changes that had taken place in the house	1.000	.060
Marital Status	1.000	.036

Extraction Method: Principal Component Analysis

Variance Explained by Determinants of Residents' Perception of Privacy in the Ajoda

Table 20. Rotated Component Matrix of Data in the Ajoda Estate.

Total Variance Explained ^a									
Comp-o nent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumula- tive %	Total	% of Vari- ance	Cumula- tive %	Total	% of Variance	Cumula- tive %
1	9.389	12.037	12.037	9.389	12.037	12.037	8.633	11.068	11.068
2	8.146	10.443	22.480	8.146	10.443	22.480	6.697	8.586	19.654
3	5.966	7.649	30.129	5.966	7.649	30.129	6.006	7.699	27.353
4	5.020	6.436	36.565	5.020	6.436	36.565	5.935	7.609	34.962
5	3.928	5.036	41.601	3.928	5.036	41.601	5.179	6.640	41.601

Extraction Method: Principal Component Analysis.

Housing Estate = Ajoda

Rotated Component Matrix of Data in the Ajoda Estate

Table 21. Principal Component Analysis for Ajoda Estate.

Factors	Variables	Component				
		1	2	3	4	5
F1	Floor finishes material for Kitchen	.511				
	Floor finishes material for bedroom	.920				
	Floor finishes material for living room	.922				
	Floor finishes material for dining room	.920				
	Floor finishes material for kitchen	.905				

Factors	Variables	Component				
		1	2	3	4	5
F2	Floor finishes material for toilet	.899				
	Floor finishes material for corridor	.906				
	Floor finishes material for Toilet	.566				
	Available Living room space		.909			
	Available Kitchen space		.662			
	Available Bedroom space		.909			
	Available Toilet space		.760			
	Required Guest room space		.551			
	Required Study room space		.545			
	Required Laundry space		.710			
F3	Available community open space		.732			
	Wall finishes material for bedroom			.858		
	Wall finishes material for living room			.861		
	Wall finishes material for dining room			.861		
	Wall finishes material for corridor			.769		
F4	Wall finishes material for Toilet			.718		
	Type of house				-.500	
	Entrance porch				-.692	
	Dining room				-.623	
	Entrance porch				.763	
F5	Length of stay					-.608
	Household size					-.595
	Number of male children					-.638
	Type of window for bedroom					.566
	Type of window for living room					.538
	Type of window for kitchen					.599
	Type of window for toilet					.585

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 8 iterations.

Appendix VIII: Communalities of Variables for the Olubadan Estate (Perception of Privacy)*Table 22. Communalities of Variables for Olubadan Estate.*

Communalities		
Variables	Initial	Extraction
Floor finishes materials for Living room	1.000	.896
Floor finishes materials for Dining room	1.000	.896
Floor finishes materials for Bedroom	1.000	.885
Types of windows for Bedroom	1.000	.877
Types of windows for Living room	1.000	.863
Types of windows for Kitchen	1.000	.863
Floor finishes materials for Kitchen	1.000	.852
Floor finishes materials for Toilet	1.000	.852
Floor finishes materials for Corridor	1.000	.837
Types of windows for Toilet	1.000	.783
Wall finishes materials for Corridor	1.000	.749
Wall finishes materials for Living room	1.000	.690
Wall finishes materials for Bedroom	1.000	.687
Wall finishes materials for Dining room	1.000	.677
Length of stay	1.000	.665
Required Entrance porch space	1.000	.665
Type of building	1.000	.633
Type of house	1.000	.633
Extent to which burglary proof was used in the house	1.000	.596
Reasons for making changes in the house	1.000	.595
Age at last birthday	1.000	.594
Available Dining room space	1.000	.589
Employment status	1.000	.570
Occupation	1.000	.570
Required Guest room space	1.000	.557
Number of bedroom in the house	1.000	.540
Available Entrance porch space	1.000	.517
Number of male children	1.000	.505
Position of windows for Kitchen	1.000	.497
Type of tenure status	1.000	.495
Required Store space	1.000	.488
Household Size	1.000	.483
Available Waiting room space	1.000	.477
Mode of ownership acquisition	1.000	.476

Communalities		
Variables	Initial	Extraction
Available Store space	1.000	.470
Number of female children	1.000	.465
Reason for living in the current estate	1.000	.458
Windows sizes for Bedroom	1.000	.452
Required Dining room space	1.000	.444
Wall finishes materials for Kitchen	1.000	.413
Windows sizes for Toilet	1.000	.408
Wall finishes materials for Toilet	1.000	.398
Highest level of education	1.000	.381
Required Visitors' toilet space	1.000	.375
Position of the main entrance door	1.000	.375
Bathroom location	1.000	.373
Position of windows for Toilet	1.000	.367
Changes that had taken place in the house	1.000	.362
Windows height for Kitchen	1.000	.361
Marital Status	1.000	.343
Family background	1.000	.322
Windows sizes for Living room	1.000	.314
Gender	1.000	.312
Open spaces provided in your neighbourhood	1.000	.305
Windows sizes for Kitchen	1.000	.299
Open spaces added to the original design in the house	1.000	.258
Required Balcony space	1.000	.227
Ethnicity	1.000	.216
Sleeping arrangement of male and female children	1.000	.208
Religion	1.000	.196
Available Living room space	1.000	.196
Position of windows for Bedroom	1.000	.188
Windows height for Toilet	1.000	.176
Average monthly income	1.000	.163
Position of windows for Living room	1.000	.157
Available Bedroom space	1.000	.137
Floor area of your bedroom	1.000	.122
Bedroom position	1.000	.117
Required Study room space	1.000	.116
Effect of activities in the neighbourhood open spaces	1.000	.101
Proximity of your house to neighbourhood spaces	1.000	.100

Communalities		
Variables	Initial	Extraction
Required Laundry space	1.000	.096
Uses of these open space	1.000	.083

Extraction Method: Principal Component Analysis

Variance Explained by Determinants of Residents' Perception of Privacy in Olubadan

Table 23. Rotated Component Matrix of Data in the Olubadan Estate.

Total Variance Explained									
Com-po nent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Vari- ance	Cumula- tive %	Total	% of Vari- ance	Cumula- tive %	Total	% of Vari- ance	Cumula- tive %
1	8.852	12.126	12.126	8.852	12.126	12.126	7.798	10.682	10.682
2	8.160	11.179	23.304	8.160	11.179	23.304	7.660	10.493	21.174
3	6.023	8.251	31.556	6.023	8.251	31.556	6.138	8.408	29.582
4	5.472	7.497	39.052	5.472	7.497	39.052	6.077	8.325	37.907
5	4.906	6.721	45.773	4.906	6.721	45.773	5.742	7.866	45.773

Extraction Method: Principal Component Analysis.

a.housing Estate = Olubadan

Rotated Component Matrix of Data in the Olubadan Estate

Table 24. Principal Component Analysis.for Olubadan Estate.

Factors	Variables	Component				
		1	2	3	4	5
F1	Floor finishes material for bedroom	.931				
	Floor finishes material for living room	.938				
	Floor finishes material for dining room	.938				
	Floor finishes material for kitchen	.871				
	Floor finishes material for toilet	.871				
	Floor finishes material for corridor	.905				
F2	Marital Status		.534			
	Type of building provided		.647			
	Type of house originally design		.647			

Factors	Variables	Component				
		1	2	3	4	5
F3	Entrance porch		.586			
	Visitors' toilet		-.570			
	Wall finishes material for bedroom		.693			
	Wall finishes material for living room		.683			
	Wall finishes material for dining room		.702			
	Wall finishes material for Kitchen		.627			
	Wall finishes material for Toilet		.604			
	Wall finishes material for corridor		.751			
	Reasons for making changes in the house		-.723			
	Gender			-.521		
	Highest level of education			.520		
	Household size			.649		
	Number of male children			.634		
	Available Store space			-.555		
	Available Dining room space			.615		
	Required Store space			.629		
	Type of window for bedroom				.918	
	Type of window for living room				.904	
F4	Type of window for kitchen				.904	
	Type of window for toilet				.864	
	Available Kitchen space				-.512	
	Available Bedroom space				-.534	
	Available Toilet space				.526	
	Age at last birthday					.611
f5	Employment status					.687
	Occupation					.687
	Type of tenure status					.575
	Mode of ownership acquisition					-.581
	Length of stay					.765
	Entrance porch					-.532
	Bathroom location					-.506

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 8 iterations.

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