RESIDENTS' COMPLIANCE WITH BUILDING SETBACKS IN IBADAN NORTH LOCAL GOVERNMENT AREA OF OYO STATE, NIGERIA

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ABSTRACT
Housing standards violation in cities of Nigeria is worrisome particularly in urban centers where activities of planning authority should be effective. The nexus between the socioeconomic characteristics of residents and the desire to violate the standards despite their inherent benefits is yet to be unraveled. This study, therefore, examines the residents' compliance with housing setback standards in Ibadan North Local Government Area, Oyo State. The cross sectional research design was used. Both primary and secondary information were sourced. A total of 327 copies of pretested questionnaire were administered to residents of Ibadan North Local Government Area, especially building owners in three randomly selected communities representing high, medium and low residential densities. Issues that were investigated include, the extent of compliance to the building setback and the rate of conversion of the setbacks to other uses. Findings revealed that majority of residents who complied with setbacks standard were males (55.6%), Yoruba (84.9%) and graduates (62.5%). The sum of 30.3% and 34.9%, respectively, complied to the rear and front view setbacks of their buildings. More than half of the residents (50.8%) did not comply with 30meters setback between septic soak away and well/borehole location. The majority of the setbacks that were converted to other uses in low residential areas was used for security post (81.6%) while the largest proportion (35.4%) in medium and high-density areas (15.7%) were used for shop construction. Among all socioeconomic variables considered, the contribution of education (χ^2=19.650) to the residents' level of compliance with building setback was the highest. There was no association between income (r=-0.273) and the level of compliance with setback standards in

the study area. Therefore, the study suggests community-based public enlightenment on the benefits of adherence to housing standards by the planning authority while the authority should be equipped for effective monitoring and development control.

1. Introduction

Housing is a word that has been misconstrued to mean the physical structure comprising the brick and mortar together with the roof which provides shelter for man. Therefore, housing has been commonly used interchangeably with shelter. Housing, however, is more than the four walls and the roof. Housing includes all the facilities, utilities and services, the surrounding of the house, the neighbourhood environment together with the people living within the house and around the neighbourhood. This implies that housing is more than the physical structure, but encompasses the immediate physical environment of man, especially the man-made environment, within which man lives out his lifetime (Agbola, 2005). Housing is one of the basic needs of man, the others being food and clothing, thus it should be adequate to support healthy living. One of the key elements of adequate housing is habitability, where there must be provision for adequate space or ventilation within the housing surrounding among others.

provisions that will protect against factors that may pose a threat to the health of inhabitants (UNHR, 2023). Adequate housing is, therefore, important for the physiological and psychological comfort of man (Muhammad et al., 2014) as well as his social and mental well-being.

Achieving a balance in the physiological, psychological, social and mental well-being of man, therefore, requires that man must comply strictly to the minimum required standards for housing. Non-compliance to these standards may result in overcrowding, pollution (air, water and noise), slums, squatter settlements, pressure on the available housing stock, urban decay (Adedeji and Arayela, 2018, cited in Omollo, 2020) and uncoordinated urban sprawl (Fuladlu, 2019, cited in Omollo, 2020). The resultant effect of non-compliance may have direct or indirect health implication on man. Problems, like poor lightened and lack of access to roads pose risk to building in case of fire incidence and sometimes result in on-street parking, which leads to unsightly city growth (Raji and Attah, 2017). Where necessary setback between two buildings is not adequately provided, either of the building is at risk if one of them is dilapidated and should be demolished because of the close distance. Therefore, provision of adequate setback and airspace is beneficial both buildings beside each other.

In practice, non-compliance with housing standards has been found to be a common phenomenon among developers regardless of social status, religion, level of education, etc. The setback, especially, has been found to be one of the most violated of the planning standards (Arimah and Adeagbo, 2000; Alnsour and Meaton, 2009; Aluko, 2011; Omollo, 2019; Jimoh and Olagunju, 2022). The significance of setbacks between buildings and within a building compound is crucial to urban planning regulation, not only influences aesthetic value of cities but also plays a vital role in ensuring safety, accessibility, and creating harmonious coexistence between structures and their surroundings. The setbacks from access road, stream or river, other buildings and fence must be maintained for the safety of the building in question and immediate adjourning structures in case the building is affected by any natural or man-made disaster. These setbacks are essential to provide ventilation, better air quality, protect from noise elements, ensure easy access to buildings and provide parking space. The shortage of setbacks in many residential buildings and conversion of available setbacks to some other uses is worrisome and of great concern because of its indescribable consequences. The violation of prescribed setbacks by building developers have been attributed to corruption of planning authority and failure of enforcement capacity and lack of adequate monitoring within the government agencies (Okafor, 2020). The violation of setbacks may have implications for adequate ventilation, encouraging choking environment, increased growth of slum areas which impact on health of the inhabitants. Therefore, the need to know the exact uses of the setbacks, reasons for the use, and their possible health implications is

imperative. The study, thus, examined the socio-economic characteristics of the residents against the actual use of the setback and the possible discomforts and effects of such housing standard violations on the residents.

2. Conceptual Clarification on Housing Setback Violation

The concept of development control provides explanation for this study particularly the violation and adherence to housing setback. Development under section 109, Lagos State Urban And Regional Planning Law, 2005 (repealed) and section 102 of 2010 law refers to;"the carrying out of any building, mining or other operation in, on, over or under any land; the making of any material change in the use of land building structure, or conversion of land, building structure from its established or approved use, and/or including the placing or display of advertisement and urban furniture on the land, building or structure, the making of any environmentally significant change in the use of any or demolition of building including felling of trees" (Aluko, 2011). SID (2021) elucidated development as a process that creates growth, progress, positive change or the addition of physical, economic, environmental, social and demographic components to the environment. The objective of development is to enhance the quality of life of the people, and the creation or expansion of local regional income and employment opportunities, without damaging the resources of the environment. However, some developments have produced contrary outcome to the society. The possible negative effects or outcome of development necessitated functional development control.

Development control, therefore, refers to activity carried out by planning authority in order to ensure compliance with the approved development plan to ensure orderliness (Aluko, 2011). Kecha (2021), while noting that development control is the backbone for urban planning, views development control as the process of ensuring that development applications conform with policy guidelines, planning regulations, standards, approved physical development plans, local authority by-laws as well as other relevant planning and regulatory rules.This implies that building approval must be sought from the appropriate town planning authority, before any form of development takes place on land or, before any building is erected. For any additional development, such as the construction of a well/borehole, sewage system, soak away system, adjoining buildings or any demolition work, approval must be sought from the development control unit of the appropriate town planning authority. Apart from approval or development permit issued by town planning authority, development monitoring is another function that the planning authority performs through the development control unit. The unit ensures that what is constructed or built is what was approved. This goal makes monitoring an imperative aspect of building development process to ensure that building standards are complied with during the construction stage. Constant monitoring from the appropriate department of the town planning authority helps to ensure control of development of buildings and its ancillary facilities.

The purpose of development control in locating building auxiliary facilities is to ensure that these facilities conform tobuilding standards set by the town planning authority so that the negative effects that accompany physical development are minimized (Obabori et al., 2017). At the construction stage, development control is important to ensure that housing standards are complied with and also ensures that standards set are strictly adhere to.

3. Study Area

Ibadan North Local Government Area was created in 1991, from the sub-division of Ibadan Municipal Government (IMG). It is located between longitude 3°53¹ and 3°56¹ East of Greenwich meridian and latitude 7°23¹ and 7°29¹. It is an urban area bounded in the north by Akinyele local government, in the east by Ibadan north east local government and in the west by Ido local government. Having its headquarters at Agodi, it covers an area of 145.58km². The population of the people according to the 2006 census was put at 308,119 while the projected population for the year 2022 was put at 440,400 at a 2.3% annual population change (Brinkhoff, 2022).

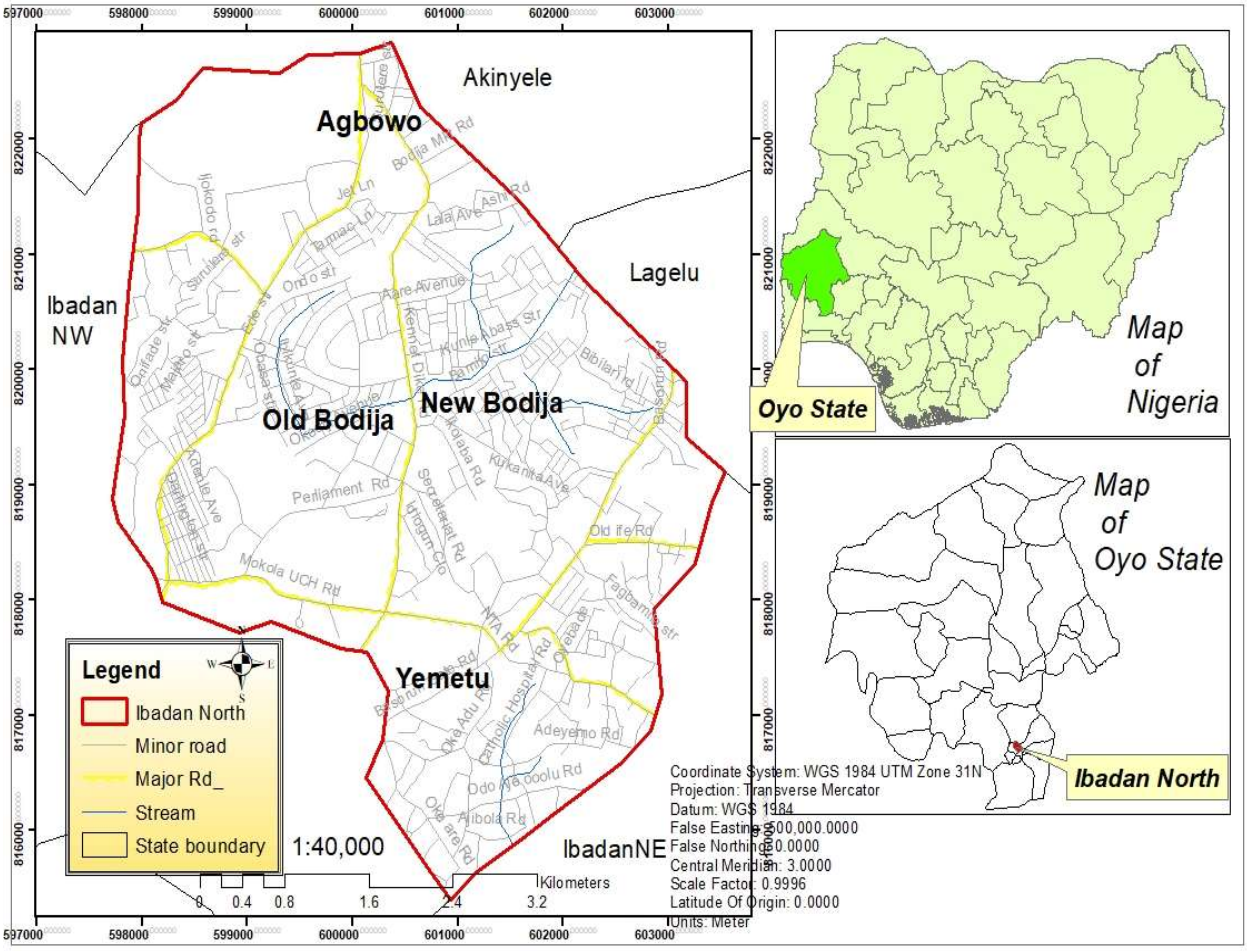


Figure 1: Study area in the context of Ibadan North, Oyo state and Nigeria.

4. Methodology

A combination of cross-sectional research and observation method were adopted to generate data for the study.A multi-stage sampling technique was used. Ibadan North Local Government Area was delineated into three residential density zones (low, medium and high). Then Yemetu, Agbowo and Bodija were randomly selected representing high-, medium-and low-density areas respectively. Using a google earth imagery, the entire buildings in the selected density areas were ground-truth and a total of 5,148 residential buildings, comprising of 1,469, 759 and 2,915 in Yemetu, Agbowo and Bodija, respectively. Therefore, 10% of the entire sample frame was selected, which comprised of 146 in Yemetu,76 inAgbowoand 291 in Bodija Estate. The sample was systematically selected in each residential density and analysed with both descriptive and inferential statistics.

5. Findings and Discussion

5.1 Socio-economic characteristics of the respondents

The socio-economic characteristics of the respondents, such as sex, religion, educational attainment, primary occupation and monthly income were examined. The study revealed that majority (51.4%) of the respondents were male. However, the distribution across the residential density areas showed that there were more males (64.5%) and (54.6%) in the low density and medium density residential areas respectively, while the high-density area had more (60.3%) female population. However, the study showed

a marginal difference (3%) between the male and female residents which aligns with the report of the population census provided by the National Bureau of Statistics (NBS, 2006) where the trend has always been that there are more males than females in Oyo state. Investigation into the religious distribution revealed that Christians constituted the highest (61.8%) percentage in the low and medium density (54.6%) residential areas, while Muslims (52.9%) constituted the majority in high density residential area. The revelation is a true image of Ibadan city settlement population characteristics where more Muslims reside in the high-density areas. This area is characterized by less educated people who engage in petty trading around their residential homes. Some of these traders are house wives who are religiously discourage to do white collar job but the husband have to build retail shop on setbacks to have source of livelihood.

The educational attainment of the residents revealed that in all 49.8% had tertiary education. More importantly, most of the residents 85.5% and 55.4% in the low and medium density areas respectively have tertiary education while only 21.5% of the residents have tertiary education in the high-density area. The presence of free education in Ibadan, before and after political independence up till date (Onajete, 2006) may have accounted for the high percentage of people with western education in the study areas. Spatial disproportion still exists in educational level of respondents which is largely determine their occupation. The implication of this is that the more educated the people are, the more they are likely to be aware of housing setbacks and airspace through the various media of information and the more they may comply with housing setbacks and airspace.

The study revealed that the self-employed group among the respondents, constituted the highest percentage in all the residential density areas accounting for 28.9%, 53.8% and 56.2% in the low, medium and high-density residential areas respectively. This may be due to the unavailability of white-collar jobs for majority of the citizens hence taking up self-employment. The revelation may not be unconnected to the religion practices of residents especially in high density areas. Analysis of the monthly income revealed that those earning less than one hundred thousand naira (<₦100,000) have the highest percentage in medium density and high density residential areas, accounting for 63.1% and 59.5% respectively; while those earning from one hundred thousand naira to four hundred and ninety nine thousand, nine hundred and ninety naira (₦100,000-₦499,999) constituted the highest percentage in the low density residential area, accounting for 47.4% (759614.3±1346786.1). The implication of this for compliance with housing setbacks and airspace is that the more the income of an individual, the more he is likely to comply with setback and airspace standards. Conversely, the lower the income, the less likely an individual will comply with setback and airspace standards. This is premised on the findings of Offiong et al. (2018), which revealed a strong positive relationship between income and compliance. It further revealed that a unit increase in income would increase the level of compliance. Atamewan (2019) also recognized poor income level as a factor for non-compliance.

Table 1: Socio-economic characteristics of respondents

Variable		Total		Low density		Medium density		High density	
		Freq	%	Freq	%	Freq	%	Freq	%
Sex	Male	168	51.4	49	64.5	71	54.6	48	39.7
	Female	159	48.6	27	35.5	59	45.5	73	60.3
Religion	Christianity	171	52.3	47	61.8	71	54.6	53	43.8
	Islam	148	45.3	28	36.8	56	43.1	64	52.9
	African traditional	8	2.4	1	1.3	3	2.3	4	3.3
	No formal education	11	3.4	0	0.0	4	3.1	7	5.8

Highest educational attainment	Primary education	42	12.8	4	5.3	10	7.7	28	23.1
	Secondary education	111	34.0	7	9.2	44	33.8	60	49.6
	Tertiary education	163	49.8	65	85.5	72	55.4	26	21.5
Primary occupation	Civil servant	65	19.9	30	39.5	16	12.3	19	15.7
	Self employed	160	48.9	22	28.9	70	53.8	68	56.2
	Retiree	17	5.2	9	11.8	6	4.6	2	1.7
	Private sector worker	22	6.7	9	11.8	10	7.7	3	2.5
	Student	50	15.3	6	7.9	27	20.8	17	14.0
	Artisan	13	4.0	0	0.0	1	.8	12	9.9
Monthly income	No income	66	20.1	6	7.9	23	17.7	37	30.6
	<100,000	160	49.0	6	7.9	82	63.1	72	59.5
	100,000-499,999	72	22.0	36	47.4	25	19.2	11	9.1
	500,000-899,999	11	3.4	11	14.5	0	0.0	0	0.0
	900,000 and above	18	5.5	17	22.4	0	0.0	1	.8

Source: Field Survey, 2023

5.2 Nexus between the Socio-Economic Characteristics of Respondents and their Level of Compliance

The Chi-square result on Table 2 reveals that at residential density level of analysis, none of the socio-economic characteristics under consideration (sex, religion, and education) has a significant relationship with the residents' level of compliance with housing setback and airspace. This suggests that the sex, religion or education of residents does not necessarily result in compliance with housing setback and airspace standards. However, the overall result reveals that only education (χ^2=19.650) has a significant influence on the residents' level of compliance with housing setback and airspace standards. This suggests that education (formal and informal) plays a vital role in disseminating information about housing setback and airspace standards to the citizen and in more probability would influence their decision on compliance or otherwise. This finding is synonymous with the outcome of Arimah and Adeagbo (2000) which revealed that education reinforces the understanding and adherence to information.

Table 2: Chi-square test of relationship between socio-economic characteristics of respondents and compliance with housing setback and airspace standard

Variable	Low			Medium			High			Overall		
	X^2	Df	P	X^2	Df	P	X^2	Df	P	X^2	Df	P
Sex	0.186	1	0.666	1.019	1	0.313	0.150	1	0.698	2.349	1	0.125
Religion	2.565	2	0.277	0.255	2	0.880	1.428	2	0.490	2.169	2	0.338

Education	0.739	2	0.691	2.107	3	0.550	0.982	3	0.806	19.650*	3	0.000

Source: Field Survey,2023

However, Pearson Product Moment Correlation result shows (Table 3) that income (r=-0.273) is inversely correlated (i.e. as income increases, the compliance level decreases) with the level of compliance with housing setback and airspace standards in the study area.

Table 3: Pearson's Product Moment Correlation (PPMC) analysis of residents' socio-economic characteristics and compliance with housing setback and airspace standard

Variable	**Low**		**Medium**		**High**		**Overall**	
	R	**P**	**R**	**P**	**R**	**P**	**R**	**P**
Income	0.125	0.304	0.090	0.357	-0.008	0.944	-0.273*	0.000

Source: Field Survey, 2023

5.3 The Use to which Setbacks/Airspaces were converted

The finding revealed that the commonest use to which setbacks/airspaces were converted to,was gatehouse, particularly in the low-density areas accounting for 18.4%. In the medium and high-density areas, 35.4% and 15.7% of the sampled residential buildings respectively converted the setbacks to shops. The low percentage of shops in the low-density area may be attributed to the high-income level of the residents and awareness of the benefits of the setbacks through the level of their education. Conversely, the high percentage of shops in the medium density (35.4%) and high-density (15.7%) areas may be attributed to the inadequate income of the residents, and quest for other sources of livelihoods/income. This revelation may imply that there is high preference for commercial activity among the residents. This discovery is synonymous with the results of the study carried out by Arimah and Adeagbo (2000) where most of the use of the violated airspaces were for commercial activities thereby rendering such a residential building to mixed use residential building. Except for low density residential area where setbacks were not used for poultry, some house owners in all residential zones likewise converted setbacks/airspaces to poultry, dog pen and boys' quarters (Table 4). The implication of this for residential zoning is that a lot of residential zones are changing to mixed use zones (residential/commercial zones).

Table 4: Uses of setbacks and airspaces in each of the residential density areas

	Total		**Low Density**		**Medium Density**		**High Density**	
Variable	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**
	Freq. (%)	**Freq. (%)**	**Freq. (%)**	**Freq. (%)**	**Freq. (%)**	**Freq. (%)**	**Freq. (%)**	**Freq. (%)**

Gatehouse	295 (90.2)	32 (9.8)	62 (81.6	14 (18.4)	118 (90.8)	12 (9.2)	115 (95. 0)	6 (5.0)
Place of worship	316 (96.6)	11 (3.4)	74 (97.4	2 (2.6)	128 (98.5)	2 (1.5)	114 (94.2)	7 (5.8)
Shops	253 (77.4)	74 (22.6)	67 (88.2	9 (11.8)	84 (64.6)	46 (35.4)	102(84.3)	19 (15.7)
Poultry	325 (99.4)	2 (0.6)	76 (100.0)	0 (0.0)	129 (99.2)	1 (0.8)	120 (99.2)	1(0.8)
Boys' quarters	319(97.6)	8 (2.4)	74 (97.4	2 (2.6)	125 (96.2)	5 (3.8)	120(99.2)	1 (0.8)
Dogs pen	313(95.7)	14 (4.3)	74 (97.4	2 (2.6)	124 (95.4)	6 (4.6)	115 (95.0)	6 (5.0)

Source: *Field survey, 2023*

5.4 Relationship between socio-economic characteristics and the use of setbacks and airspaces

The study revealed that the female population (27.7%) had a higher percentage in the use of their setbacks/airspaces for shops. Residents with no formal education (27.3%) and the private sector workers (36.4%) constituted the highest percentage of people who used their setbacks/airspaces as shops while those who earn less than one hundred-thousand-naira (<100,000) as monthly income (26.9%) constituted the highest set of owner-occupiers(respondents) who used their setbacks/airspaces as shops. Overview of the Table 5 shows that the commonest use of the setback /airspaces in the study areas is shop.

Furthermore, the study revealed that a proportion of the male respondents (14.3%) used the setback/airspace for gatehouse which was commonly observed in low density residential areas. The civil servants (18.5%) are mostly found among the proportion of people who used setback/airspace for gatehouse. The use of setback/airspace for dog pen is noticeable in the study area.

Table 5: Socio-economic characteristics and the use of setback/airspace

Variable		**Gatehouse**	**Place of worship**	**Shop**	**Poultry**	**Boss Quarter**	**Dogs pen**
		Freq (%)	**Freq (%)**	**Freq (%)**	**Freq %**	**Freq %**	**Freq %**
Sex	Male	24 (14.3)	8 (4.8)	30 (17.9)	2(1.2)	4(2.4)	1(0.6)
	Female	8 (5.0)	3(1.9)	44(27.7)	0(0.0)	4(2.5)	13(8.2)
Religion	Christianity	14 (8.2)	2(1.2)	41(24.0)	1(0.6)	4(2.3)	10(5.8)

	Islam	18 (12.2)	8(5.4)	32(21.6)	1(0.7)	4(2.7)	4(2.7)
	African traditional	0 (0.0)	1(12.5)	1(12.5)	0(0.0)	0(0.0)	0(0.0)
Highest educational attainment	No formal education	0 (0.0)	1(9.1)	3(27.3)	0(0.0)	0(0.0)	0(0.0)
	Primary education	7(16.7)	3(7.1)	9(21.4)	0(0.0)	1(2.4)	2(4.8)
	Secondary education	8(7.2)	3(2.7)	24(21.6)	1(.9)	4(3.6)	8(7.2)
	Tertiary education	17 (10.4)	4(2.5)	38(23.3)	1(.6)	3(1.8)	4(2.5)
Primary occupation	Civil servant	12 (18.5)	2(3.1)	12(18.5)	1(1.5)	1(1.5)	1(1.5)
	Self employed	13 (8.1)	6(3.8)	38(23.8)	0 (0.0)	5(3.1)	10(6.3)
	Retiree	0 (0.0)	1 (5.9)	3(17.6)	0(0.0)	1(5.9)	0(0.0)
	Private sector worker	2 (9.1)	0(0.0)	8(36.4)	0(0.0)	1(4.5)	1(4.5)
	Student	4 (8.0)	1(2.0)	9(18.0)	1(2.0)	0(0.0)	1(2.0)
	Artisan	1(7.7)	1 (7.7)	4(30.8)	0(0.0)	0(0.0)	1(7.7)
Monthly income	No income	7(10.6)	3 (4.5)	16(24.2)	0(0.0)	0 (0.0)	2(0)
	<100,000	8 (5.0)	5 (3.1)	43(26.9)	2 (1.3)	6 (3.8)	9(5.6)
	100,000-499,999	8 (11.1)	3 (4.2)	15(20.8)	0(0.0)	2 (2.8)	3(4.2)
	500,000-899,999	4 (36.4)	0(0.0)	0(0.0)	0(0.0)	0 (0.0)	0(0.0)
	900,000 and above	5 (27.8)	0(0.0)	0(0.0)	0(0.0)	0 (0.0)	0(0.0)

***Source**: Field survey, 2023*

5.5 The Motivator of the Use of Setback and Airspace

Investigation on who initiated the idea of conversion of the setbacks to other uses revealed that, respondents who were indifferent consisted the majority (56.0%), comprising of relatively 59.2% in low density, 51.5% in medium density and 58.7% in high density. This was closely followed by

Husband accounting for 21.4% shared relatively with 25.0%, 21.5% and 21.0% for low, medium and high density respectively. Meanwhile, the proportion of the respondents whose wife masterminded the conversion of the airspace accounted for 16.2% with low, medium and high-density accounting for 15.8%, 20.0% and 12.4% respectively. Others generally include friends/relatives (3.7%), joint decision of husband and wives (6.6%). The variation across the study area is contained in Table 6. Overall, above information showed that the husband was mostly instrumental to the use of the airspace. This may be attributed to the patriarchal nature of the society where the husband is regarded as the head of the family who should spearhead most of the decisions taken in the family. Also, the husband is known for the ownership of the building except for few cases where both husband and wife claim ownership of building. This study corroborates the work of Arima and Adeagbo (2000) where most of the airspaces converted into shop for commercial purposes

Table 6: Masterminder of the use of Airspace

	Total		Low density		Medium density		High density	
Variable	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
No idea	183	56.0	45	59.2	67	51.5	71	58.7
Husband	70	21.4	19	25.0	28	21.5	23	19.0
Wife	53	16.2	12	15.8	26	20.0	15	12.4
Friends/relatives	12	3.7	0	0.0	8	6.2	4	3.3
Husband and wife decision	9	2.7	0	0.0	1	.8	8	6.6

***Source**: Field Survey, 2023*

5.6 Reasons for Violation of Setback

Focused Group Discussion (FGD) was conducted to elicit information on the reasons why some owner occupiers converted setbacks into different uses. It was evident that a proportion of the residents did not have clear understanding of the benefits of setbacks. Therefore, the space was converted into different uses due to low understanding about the reason for the open spaces around the building. Similarly, the discussion revealed that some have to use the space for commercial purposes such as erection of kiosk/shop where commercial activities can take place to cushion current economic hardship. Some of the shops were built to create job for housewives. It was equally gathered among the residents of low residential area where setbacks are commonly used for gatehouse and dog pen that the conversion of the space is imperative because of the security of the building and residents. Some home occupier converted the space into Boy's quarter in order to house some members of the family where there was shortage of space while some built for letting to generate income. Among other reasons for conversion of setbacks for other uses is low effective performance of the planning authority. It was disclosed by 65.1% of the respondents that there is no sanction from the planning authority due to low monitoring as

well as fear of non-approval (37.3%) by planning authority encourage illegal conversion. Similarly, 67.9% of the respondents disclosed that high cost of planning approval has compelled them to embark on the conversion of airspace for other uses. It was evident that none among those who have converted the space into other uses sought approval/permit from the planning authority.

5.6 Effect of the Airspace Conversion to other uses

Investigation on the effect of the use of the setback/airspaces for other purposes on the comfort of the residents. While the highest percentages (10.5%) and (34.7%) in the low density and high-density areas respectively cited noise pollution as the effect of the airspace utilization as high as 28.5% of the residents in the medium density area cited inadequate ventilation as another effect of the airspace conversion. Of all the respondents, a few percentages of the respondents (38.8%) admitted that the airspace conversion into other uses have effects on their comfort of residents. A significant proportion (61.2%) were unaware of the effects of the use of airspace on their comfort. This may be due to habituation, whereby majority of the residents are accustomed to the negative health effect of the utilisation of the airspaces. The major effect of airspace conversion is the gradual development of slum environment which will result to urban decay and blighted community. Where setbacks are converted into different uses, airflow will be impeded and this may consequently result into respiratory problems for the residents.

Table5.8: Effect of the setback conversion

Variable	Total		Low density		Medium density		High density	
	No	Yes	No	Yes	No	Yes	No	Yes
	Freq%	Freq%	Freq (%	Freq%	Freq%	Freq%	Freq%	Freq%
Inadequate ventilation	277(84.7)	50(15.3)	74(97.4)	2(2.6)	93(71.5)	37(28.5)	110(90.9)	11(9.1)
Noise pollution	249 (76.1)	78(23.9)	68(89.5)	8(10.5)	102(78.5)	28(21.5)	79(65.3)	42(34.7)
Air pollution	276 (84.4)	51(15.6)	76(100.0)	0 (0.0)	112(86.2)	18(13.8)	88(72.7)	33(27.3)

Source: Field survey, 2023

6. Conclusion and Recommendation

The study revealed that building airspace conversion into different uses is a usual occurrence in every part of residential areas of Ibadan, particularly Ibadan north local government area. No residential density can be exonerated from the menace. However, the study showed that the use of airspace or setbacks is more common in high and medium residential density. Except for education of residents, socio-economic attributes do not determine the compliance to housing setback/airspace. Most of the setbacks were used to build shops where commercial activities take place. The husband was identified as the major person who was instrumental to the use of these setbacks/airspace.

The study recommended a regular public enlightenment on benefits of housing setback /airspace. The enlightenment process would popularize the importance of planning standard, provision of adequate setback/airspace and benefits of compliance with setback/airspace standards. The study suggests the adoption of

both formal and informal means of communication to disseminate the enlightenment. In addition, development control section of the local planning authority should be more proactive and adequately empowered with monitoring gadgets such as vehicles, surveillance equipment and qualified personnels. Non-compliance and illegal development should attract penalty where and when it is apprehended. Development control should be given a strong recognition and accorded with high importance with adequate facilities for effective performance. Preservation of open space, airspace and setbacks should be considered as major struth of sustainable development.

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