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## **ASSESSING THE EFFECT OF HOUSING QUALITY ON RESIDENTIAL OCCUPANCY DURATION IN MINNA NIGERIA**

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### **ABSTRACT**

*One of the essential requirements of life aside food and consumer goods is shelter that protects world from the tough components of weather; provide a way of non-public security and privacy. United Nations Sustainable Development Goals as well as other International Organisations' treaties some as far back in the 1940's recognised the human right to adequate and affordable housing. The study assesses Effect of Housing Quality on Residential Occupancy Duration in Minna, Nigeria. The study adopts both quantitative and qualitative research approach and data collected for the study was through open and close ended questionnaire. A convenient sampling method was use to select 861 household within the neighbourhood with 229 for F-Layout, 343 for Tunga and 289 for Sabongari. A simple random sampling technique was use to administer the questionnaire. Data collected where analysed using descriptive table and charts while a spearman's correlation was used to test the relationship housing quality and tenancy duration. Findings reveal that physical condition and socio environmental conditions are the major predictors of tenancy choice while an upward progression of housing quality. The study reveals a positive correlation between housing quality predicting occupancy duration. In conclusion, the need for quality housing cannot be overlooked as this must be considered while making choice of housing, therefore it is recommended that physical, social and environmental conditions of household should be considered topmost when carrying out any*

*construction/improvements. Also, it is recommended that the need for owners of properties/developers and users be educated on the importance of providing basic infrastructure and sustainable maintenance culture.*

**Keywords:** *Assessing, Effect, Housing, Quality, Residential Occupancy.*

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## INTRODUCTION

The food, shelter and cloth that are man's basic necessities have direct connections to Land. Housing which is otherwise known as shelter is as prominent to man for as long as man keeps existing because it is critical to his existence (Omole, 2010). According to the (WHO) World Health Organization, which describes housing as that residential environment which includes the physical structure used for shelter, all necessary services, facilities, equipment and devices needed or desired for the physical and mental health and social wellbeing of the family and individuals. The essences of housing are to meet basic needs, such as for shelter from weather conditions, and to offer a sense of personal security, privacy and personal space (Balestra and Sultan, 2013). But not limited to these factors alone, housing is the totality of the surroundings and infrastructural facilities that offer human comfort, improve the quality of human health and productivity as well as enable them to sustain their psycho-social or psycho-pathological balance in the environment where they find themselves (Ankeli, 2015).

However, housing quality is a priority most times for housing choices that is why Olayiwola, (2006), Anantharajan (1983) and Adewoye, (2015) as cited see quality as a product of subjective judgment which arises from the overall perception which individual holds towards what is seen as the significant elements at a particular point in time. Among these qualities include aesthetics, ornamentation, sanitation, drainage, age of building, access to basic housing facilities, burglary, spatial adequacy, noise level within neighborhood, sewage and waste disposal, air pollution and ease of movement. Meteyka and Marlay (2009), says social and economic characteristics are associated with tenancy duration. As they further stressed that age could certainly be an important variable to consider, as mobility tends to decrease dramatically among those over age 60. Both marital status and the presence of children could serve as disincentives to move, as coordinating jobs and school changes are difficult.

Education and income are essential variables, but they tend to function differently for predicting duration than for predicting tenure. Individuals with more education and higher incomes are more likely to move, presumably for job opportunities. In line with the above background view my study intends to assess the effect of housing quality on residential occupancy duration in Minna, Niger state, Nigeria.

Like every other developing country, housing quality problems has been a predominant issue majorly in urban centers and major cities. These problems are seen around both residential settlements and other uses. Some of these areas, have little or no efficient infrastructural provision e.g. sewage system, drainage systems, poor waste disposal technique thereby affecting the natural and built environment which also affect the occupancy period for residential accommodations. However, the effort to reduce these problems has by authorities responsible has not so much yielded any result and it is of these challenges the study intends to assess housing quality effect on occupancy duration in Minna, Niger state, Nigeria. The study will therefore develop residential housing quality index to measure the occupancy duration with view to determine the extent to which housing quality dictates the tenancy duration of a sitting tenant. This paper will at the following: to assess the nature of housing quality in the Selected Areas, to also assess the tenancy duration structure of residential household in the Selected Areas.

### **Literature review**

Housing all over the world has remained an interdependent phenomenon that affects every facets of mankind and it represents one of the most basic human needs which no doubt has a profound impact on the health, welfare and productivity of every individual irrespective of socio-economic status, colour or creed (Okafor, 2016). Furthermore, Okafor (2016) elucidated that Nigeria as a nation has rolled out various development programmes to address the housing debacles with varying time frames all with the aim of fashioning out a robust development profit towards sustainable pattern of housing growth. Agbola (1998) as cited by Adeleye (2014), describes housing as an issue that touches on the life of individuals as well as that of a nation. As such, he ascribes great importance to the role played by housing in endangering human comfort by both nature and society. In addition, he stresses that housing which is a combination

of characteristics provides a unique home within any neighbourhood, describing it as an array of economic, social and psychological phenomena. “If the concept of housing is understood to represent the aforementioned expressions, then, housing designs and planning consideration should involve not only the physiological responses to the enclosed environment, but also the socio-cultural responses emanating from the socio-economic and cultural norms of the users (Jiboye, 2004).

The classification of housing depends on the number of rooms, existing comfort, form and the place where found (Adeleye, 2012). Similarly, Henilane (2014) opined that, housing is classified by the housing type, size, housing amenities, location, group of population living in the housing, type of ownership rights, construction period of the housing, energy efficiency indicators; construction materials used in the exterior wall of the housing and by other features. However, the developed types of classification of housing, by classifying them according the different characteristics, are only some of the main classifications of housing and could be supplemented by other classifications (Henilane, 2014).

**Table 1.1 Housing Classification and Characteristics**

Housing Classification	Characteristics
<b>By Housing Type</b>	Room in the apartment, Apartment in multi-apartment residential building or non-residential building, Multi-apartment residential building, Family house and Others
<b>By Housing Size</b>	One room, One-room apartment, Two-room apartment, Three-room apartment, and more, Family house and Others
<b>By Housing Amenities</b>	Housing with all amenities, Housing with part of amenities and Housing without amenities
<b>By Housing Location</b>	Housing in a city and Housing in rural territory
<b>By Group of Population Living in the Housing</b>	Any resident, Persons with low-income or other social group at risk

<b>By Type of Housing Ownership Rights</b>	State-owned housing, Municipality-owned housing, Natural person's owned housing, Legal person's owned housing and Others
<b>By Construction Period of the Housing</b>	Housing build before World War II, Housing built from 1945 to 1990 and Housing built from 1990 until now
<b>By Energy Efficiency Indicators of Housing</b>	Minimum regulatory energy performance level allowed for new buildings, Minimum regulatory energy performance level allowed for reconstructed or renovated buildings, Almost zero energy consumption housing and Others
<b>By Construction Materials Used in the Exterior Wall of the Housing</b>	Brick wall, Wood, Brick/panel, Reinforced concrete / concrete, Lightweight concrete, Wood/masonry and Other.

Source: Authors Compilation (Henilane, 2016)

Housing functionality has been defined as the degree to which the design, construction, and location of housing support the specific physical, cultural, and social needs of individuals, families and communities. Housing functionality may vary according to cultural background, family situation, and physical, spiritual, and emotional needs. Housing functionality covers elements of housing that play a role in reducing the limitations of disabilities. This is especially important within the context of an ageing population. It is also important to consider not just the physical needs of people living in a house but also their visitors (the concept of 'visitability'). Saville-Smith and Saville (2012).

### **Methodology**

The targeted population for the study covers residential household population of selected neighbourhood of low to high density in Minna, Niger state. However, this neighbourhood includes F- Layout, Tunga and Sabongari household population. Sampling frame is a list of the total units of household

population under study. Therefore, the sample frame for the study was the published list of household population by National Population Commission (NPC) in 2006. According to National population commission, the household population in F-layout, Tunga and Sabongari were 822, 1990 and 713 respectively.

Thereafter, the sample size for the study is determined by model developed by Kothari (2004) as follows:

$$n = \frac{Z^2 * N * \sigma^2}{(N-1) e^2 + Z^2 \sigma^2} \dots\dots \text{Equation 1}$$

Where n is the sample size, Z is the standardized normal value and for this study it is taken as 1.96 for a 95% confidence interval, σ is the standard of deviation which was put at 0.5 depicting a safe decision enhancing large enough samples, N is the household population and e is the margin of error put at +/- 5%.

**Data Analysis Techniques**

The study adopts descriptive and inferential statistical techniques for data analysis.

**Descriptive Analytical Techniques**

1. **Objective One:** To assess the nature of housing Quality in the study area, a simple descriptive that determine the mean score and housing quality index was also determined as follows

**Mean Score:** The mean was used to determine average responses of the respondents toward the question posed and it is a weighted mean of the data. the value assigned to various responses ranged from 10(Absolute Perfect condition), 7(perfect condition) 5(Not perfect but fair) and 1(not perfect and poor or not exist all), and the mean condition housing quality attributes is calculated thus:

$$\bar{X} = \frac{\sum(FW)}{N} \dots\dots 3.1$$

Where  $\bar{X}$  = Mean Score, F- is the frequency, W- weight

**Housing Quality Index (HQI):** this was also called Relative Important Index (RII). It was adopted to determine the level of quality of housing attributes. This was calculated thus:

$$ROI = \frac{\text{mean score}}{\text{maximum score}} \quad 3.2$$

**Objective Two:** to assess the tenancy duration structure of residential household in the Study Area. the utilized descriptive mean to determine the average occupancy duration. This mean calculated thus

$$Mean = \frac{\sum fx}{\sum f} \quad 3.3$$

**Analysis of variance (F – test):** this was used to examine the significance of variation in occupancy duration of the respondent. It was also adopted in regression analysis to the significance of the model and it at discovering if the explanatory variable  $X_1$ , actually have any significant influence on the dependent variable Y. this test was adopted for objective two and three.

$$F - ratio = \left( \left( \frac{\sum (X)^2}{n} - \frac{(\sum X)^2}{N} \right) \div (K - 1) \right) \div \left( \left( \sum X^2 - \frac{(\sum X)^2}{N} \right) \div (N - K) \right) \quad 3.4$$

**Correlation:** the strength of relationship between tenancy duration (variable X) and elements of housing quality (variable Y) was determined using the correlation model as follows:

Pearson's Correlation.

$$r = \frac{N\sum XY - [\sum X](\sum Y)}{\sqrt{[N\sum X^2 - (\sum X)^2][N\sum Y^2 - (\sum Y)^2]}} \quad 3.5$$

Where, N = number of pair of score.

$\sum XY$  = sum of products of paired scores.

$\sum X$  = sum of x scores.

$\sum Y$  = sum of y scores.

$\sum X^2$  = sum of squared x scores.

$\sum Y^2$  = sum of squared y scores.

## Results and Discussions

In order to assess the nature of housing quality across the neighbourhood the study went on to access those quality considered to be elements that constitute housing quality in the three zones (F-layout, Tunga and Sabongari) that represent the study area. However, to do so data was collected from the field and analysed to show how this quality assessed vary from one location to another.

**Table 1.2 descriptive Analysis of Housing Quality Attributes F-layout**

Variable	Min	Max	N	Mean	Quality index
Air quality	1	10	205	9.56	0.956
Landscaping	1	10	205	8.49	0.849
Ventilation	1	10	205	7.32	0.732
Design	1	10	205	6.54	0.654
Size of building	1	10	205	7.54	0.754
Roofing	1	10	205	6.69	0.669
Floor finishing	1	10	205	7.55	0.755
Wall-fence	1	10	205	6.45	0.645
Burglary proof	1	10	205	7.94	0.794
Water source	1	10	205	5.73	0.573
Kitchen facilities	1	10	205	7.49	0.749
Toilet facilities	1	10	205	7.91	0.791
Bathroom	1	10	205	8.51	0.851
Access road	1	10	205	9.65	0.965
Electricity	1	10	205	6.32	0.632

### Author field survey

The descriptive analysis of housing quality attributes in F-layout is presented in Table 1.2. the result showed the mean quality of housing attributes measured by assigning values ranges between 1(minimum value) and 10(maximum value). The assigning values is based on quality condition of the housing attributes as at time of survey. And the result of quality index of housing attributes revealed that quality of access road, air quality, bathroom and landscaping had the best



quality index indicating that a very good road condition, non-polluted air good bathing accessories and esthetics surrounding respectively than other housing attributes. Toilet facilities, wall-fence, kitchen facilities, building size and ventilation also had good quality index indicating a better condition of the attributes than the remaining attributes with lower quality index.

**Table 1.3 descriptive Analysis of Housing Quality Attributes in Tunga**

<b>Variable</b>	<b>Min</b>	<b>Max</b>	<b>N</b>	<b>Mean</b>	<b>Quality index</b>
<b>Air Quality</b>	1	10	299	6.46	0.646
<b>Landscaping</b>	1	10	299	5.46	0.546
<b>Ventilation</b>	1	10	299	6.36	0.636
<b>Design</b>	1	10	299	7.55	0.755
<b>Size of building</b>	1	10	299	7.77	0.777
<b>Roofing</b>	1	10	299	8.59	0.859
<b>Floor finishing</b>	1	10	299	7.43	0.743
<b>Wall-fence</b>	1	10	299	5.85	0.585
<b>Burglary proof</b>	1	10	299	8.05	0.805
<b>Water source</b>	1	10	299	6.57	0.657
<b>Kitchen facilities</b>	1	10	299	5.45	0.545
<b>Toilet facilities</b>	1	10	299	6.55	0.655
<b>Bathroom</b>	1	10	299	7.54	0.754
<b>Access road</b>	1	10	299	6.55	0.655
<b>Electricity</b>	1	10	299	6.55	0.655

**Author field survey**

The analysis housing quality attributes in Tunga is carried out using descriptive mean as presented in Table 1.3. The result revealed the mean average of assigned values to various conditions of housing quality attributes ranging 1 to 10. The mean condition of housing attributes was computed and quality index was further determined. The result of quality index of housing attributes revealed that four attributes maintained the highest quality index such that burglary proof, building size, bathroom, floor finishing and design were found to have high quality index among others. this therefore indicates that these

attributes had the best quality index which means that they were in their best quality condition as at time of survey, and they are found to be relatively better condition than others. Other attributes such as air quality, ventilation, water source, toilet facilities, access road and electricity also have an index little above average indicating good condition and better attributes than the remaining attributes with index lesser than the average.

**Table 1.4 descriptive Analysis of Housing Quality Attributes in Sabongari**

<b>Variable</b>	<b>Min</b>	<b>Max</b>	<b>N</b>	<b>Mean</b>	<b>Quality index</b>
<b>Air Quality</b>	1	10	201	4.55	0.455
<b>Landscaping</b>	1	10	201	3.46	0.346
<b>Ventilation</b>	1	10	201	4.46	0.446
<b>Design</b>	1	10	201	5.55	0.555
<b>Size of building</b>	1	10	201	6.23	0.623
<b>Roofing</b>	1	10	201	3.88	0.388
<b>Floor finishing</b>	1	10	201	5.45	0.545
<b>Wall-fence</b>	1	10	201	5.85	0.585
<b>Burglary proof</b>	1	10	201	6.55	0.655
<b>Water source</b>	1	10	201	5.57	0.557
<b>Kitchen facilities</b>	1	10	201	6.44	0.644
<b>Toilet facilities</b>	1	10	201	4.55	0.455
<b>Bathroom</b>	1	10	201	3.57	0.357
<b>Access road</b>	1	10	201	3.65	0.365
<b>Electricity</b>	1	10	201	5.55	0.555

**Author field survey**

The study assessed housing quality attributes in Sabongari using descriptive mean to determine quality index as presented in Table 1.4. The result revealed the mean average of assigned values to various conditions of housing quality attributes ranging 1 to 10. The mean condition of housing attributes was computed and quality index was further determined. The result of quality index of housing attributes revealed that four attributes maintained the highest quality index such that burglary proof, building size, and kitchen facilities were found to have high quality index among others. This therefore indicates that these

attributes had the best quality index which means that they were in their best quality condition as at time of survey, and they are found to be relatively better condition than others. Generally, there are low quality housing attribute in Sabongari as majority of the attributes were found to have an index that is below the average, thereby indicating a poor quality of housing attributes.

**Table 1.5 Descriptive Analysis of Occupancy Duration**

Study areas	N	Minimum	Maximum	Mean	Std. Deviation	Variance
<b>F-LAYOUT</b>	205	1	20	9.16	4.954	24.544
<b>TUNGA</b>	299	1	20	8.40	5.132	26.334
<b>SABONGARI</b>	201	2	20	11.82	4.871	23.728
<b>Valid N (listwise)</b>	201					

**Author field survey**

The result of descriptive analysis of occupancy duration in residential properties in selected study areas is presented in Table 1.5 the minimum and maximum indicating the least duration a sitting tenant (respondent) had stayed in occupation while maximum indicate the highest of duration of the tenant's occupation in the properties. In F-layout and Tunga, the study recorded minimum duration occupancy duration at 1year and maximum occupancy duration of 20years, Sabongari recorded minimum duration 2years and maximum occupancy duration at 20year, this therefore indicates that the sampled respondents had been in occupation for 20years with minimum 1year, and 2years only in Sabongari. The average occupancy duration sampled respondents F-layout is approximately 9years, in Tunga is 8years and Sabongari is approximately 12years.

**Table 1.6 Significance of Variation in Occupancy Duration across the Study Area**

Model	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1463.781	2	731.891	29.192	.000
Within Groups	17600.196	702	25.072		
Total	19063.977	704			

**Author field survey**

The study further tested for significance of difference in occupancy duration across the study and the result is presented in Table 4.7. The result of analysis of variance revealed that F-statistics at 29.192 at p-value of 0.000 is statistically significant as the p-value is less than 0.05 level of precision, therefore the occupancy duration across the selected areas is significantly difference, in other word there is statistically significant difference in duration of occupancy of respondents across the study areas.

The study therefore further determine the selected area that had highest occupancy duration, this is done through post hoc test called Honesty Significant Difference (HSD). The result of HSD is therefore presented in Table 1.7.

**Table 1.7 Multiple Comparisons in Occupancy Duration across the Study**

	(I) FACTORS	(J) FACTORS	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
<b>Tukey HSD</b>	F-LAYOUT	TUNGA	.758	.454	.218	-.31	1.82
		SABONGARI	-2.665*	.497	.000	-3.83	-1.50
	TUNGA	F-LAYOUT	-.758	.454	.218	-1.82	.31
		SABONGARI	-3.423*	.457	.000	-4.50	-2.35
	SABONGARI	F-LAYOUT	2.665*	.497	.000	1.50	3.83
		TUNGA	3.423*	.457	.000	2.35	4.50

\*. The mean difference is significant at the 0.05 level.

The result of Tukey HSD presented in Table 1.7 revealed the selected area that had highest occupancy duration. The result revealed that Sabongari maintained significant difference in occupancy duration with F-layout and Tunga at p-value (0.000) less than 0.05 level of precision, this thereby suggests that Sabongari constitutes the bulk of different thereby in other word the people stayed more in occupation in Sabongari than F-layout and Tunga. This may be attributed to relative proximity to several places and low rental values that enjoy in the areas due poor housing attributes.

### Conclusion

The quality of housing attributes is not only a determinant occupancy duration but also good health condition of the environment. The quality of housing necessitates the condition of living of the occupants. Therefore the important of study housing quality cannot be over emphasized in housing studies. It is on this basis that this study examine the effect of housing quality on occupancy duration, it is therefore clear that tenants tend to stay in accommodation whenever the quality of housing attributes is improved upon. The intrinsic value of residential housing is therefore hinged on various condition of environmental attributes or housing attributes which peradventure influence the occupancy duration of the sitting tenants.

### References/Bibilography

- Adeleye, O. (2012). "Residents' perception of the effect of development control activities on Housing Qualities in Ife Central Local Government, Ile-Ife, Nigeria" in *Journal of Social Science*. (1)24, 1- 12.
- Afon A (2000). Use of Residents Environment Quality Indicator (EQI) Data in a residential Housing improvement, In *Effective Housing in the 21st century*, Nigeria. The Environmental Forum, F.U.T.A pp.115-122.
- Agbola T (1998). *The Housing of Nigerians; A Review of policy Development and Implementation*. Research Report 14, Development Policy Centre, Ibadan, Nigeria.
- Agbola, T. (1998). *The Housing of Nigerians; A Review of policy Development and Implementation*. Research Report 14, Development Policy Centre, Ibadan, Nigeria.
- Akinloye, O. A. (2009). *Problems of Public Housing Estate in Nigeria*. Research Report, Development Policy Centre, Ibadan.
- Akubueze, C. O. (2004). *Land Administration and Infrastructure Management for Urban Development*, Estate Surveyor and Valuer 27 (1) 8 – 14.
- Anantharajan, T. (1983). *Evaluation of Residential Development Through Users' Rating and Rating of Environmental Attributes*. Proceedings of IAHS Congress of Housing, Miami, Florida.

- Ankeli A., Dabara, D. I., Oyediran, O., Guyimu J., Oladimeji and Eyitayo (2015). Housing Condition and Residential Property Rental Values in Ede Nigeria. *Conference of the International Journal of Arts & Sciences*,08(01), pp. 53–61, 2015. Available at SSRN: <https://ssrn.com/abstract=2784479>
- Aribigbola, A (2000). *Conceptual Issues in Housing Provision in Nigeria*. In: Akinbamijo OB, Fawechinmi AB, Ogunsemi DR and Olotuah A (ed). *Effective Housing in the 21st Century Nigeria: Environmental Forum FUTA, Nigeria*.
- Asikhia, M.O., Eghagha, N.W. and 2\*Eyakwanor, A.A. (2016) Effect Of Housing Facilities On Rental Values Of Residential Properties In Benin City *Research Journal of Engineering and Environmental Sciences* 1(1) 2016 pp. 162-169
- Babarinde, Z. A. (1998). Analysis of Industrial Relocation in relating to Housing and Infrastructural Services in Metropolitan Lagos. *The Lagos Journal of Environmental Studies* 1 (1) pp 97 – 108.
- Balestra, C. and Sultan, J. (2013). "[\*Home Sweet Home: The Determinants of Residential Satisfaction and its Relation with Well-being\*](#)," [\*OECD Statistics Working Papers\*](#) 2013/5, OECD Publishing.
- Boarne, L. S. (1981). *A Geography of Housing*, Edward Arnold, London.
- Bonaiuto, M., Fornara, F., and Bonnes, M., (2003). "Indexes of Perceived Residential Environment Quality and Neighborhood Attachment in Urban Environments: A Confirmation Study on the City of Rome", *Landscape and Urban Planning*, (65), pp.41-52.
- Canter and Rees (1982). A Multivariate Model of Housing Satisfaction' [\*Applied Psychology\*](#) 31(2)pp 185 – 207 DOI: [10.1111/j.1464-0597.1982.tb00087.x](https://doi.org/10.1111/j.1464-0597.1982.tb00087.x)
- Deng, Y. (2002). "[\*Duration of Residence in the Rental Housing Market\*](#)," [\*The Journal of Real Estate Finance and Economics\*](#), Springer, vol. 26(2-3), pp 267-285.
- Diaz-Serrano, L. (2006). *Housing Satisfaction, Homeownership and Housing Mobility: A Panel Data Analysis for Twelve EU Countries*.
- Donald, C. S. (1974): *Professional Education in Public Works/Environmental Engineering Administration* 5th ed. Chicago American Public Works and Association.
- Ebong, M.O. (1983). The Perception of Residential Quality: A case study of Calabar, Nigeria. *Third World Planning Review*, 5(3) pp 273-284.
- Eldredge HW (1967). *Housing and Community in Tanning Megalopolis* Vol. I. Anchor\Books edition.
- Fox, W. F. (1994). Strategic Options for Urban Infrastructure Management; *Urban Management Programme (UMP)* Paper 17. The World Bank, 7.
- Galster, G. (1987). *Identifying the Correlates of Dwelling Satisfaction: An Empirical Critique*. Standard publishing new Jessy USA.
- Hanmer L, Booth D, Lovell E (2000). Poverty and Transport, A Report prepared for the World Bank in collaboration with DFID, Overseas Development Institute.
- Henilane, I. (2014). The Evaluation of housing situation in Latvia. In XVI Turiba University International Conference "Towards Smart, Sustainable and Inclusive Europe: Challenges for Future Development," pp. 93–106. Riga, Latvia. ISSN 1691-6069.
- Hester, R.T. (1975). *Neighborhood Space*, Dowden, Hutchinson & Ross.
- Kamp, I. V., Leidelmeijer, K., Marsman, G., and Hollander, A., (2003). "Urban Environmental Quality and Human Well-Being Towards a Conceptual Framework and Demarcation of Concepts; A Literature Study", *Landscape and Urban Planning*, (65), pp.5-18.

- Kurian and Thampuran (2011). Assessment of Housing Quality Institute of Town Planners, *India Journal* (8)2, pp74 - 85, April - June 2011.
- Lawrence, J. R. (1995). "Housing Quality: An Agenda for Research", *Urban Studies*, (32)10, pp.1655-1664.
- Listokin, D. and Burchill, R. (2007). *Housing (Shelter)*. Microsoft student (DVD) Redmond. W.A. Microsoft Corporation. [April, 5, 2009].
- Mateyka and Marlay (2009). *Residential Duration by Tenure, Race, And Ethnicity*. 2011 Annual Meeting American Sociological Association Las Vegas, NV
- Mattika, L. M. (2001). Service Oriented Assessment of Quality of Life of Adults with Intellectual Disabilities. Dissertation of Finnish Association of Mental Retardation (Electronic version), from <http://acta.uta.fi> [09.03.2015.]
- Meng, G., Hall, G.B and Roberts, S (2006). "Multi-group segregation indices for measuring ordinal classes", *Computers, Environment and Urban Systems*, 30, 275–299.
- Mesch, G. S., and Manor, O. (1998). Social ties, environmental perception, and local attachment. *Environment and Behaviour*, (30), 504–519.
- Ndubueze, O. (2001) Problem of Public Housing Estate in Nigeria. *Journal of the Nigeria Institute of Town Planners*, (10)4, pp 11-23
- Neilson M (2004): Scottish housing quality Standard (SHQS), Scottish Executive Development Department.
- Okafor, B. N. (2016). The residential housing problem in Anambra State (a case study of Onitsha metropolis). *International Journal of Civil Engineering, Construction and Estate Management* Vol.4, No.2, pp.22-39, May 2016
- Okewole and Aribigbola (2006). Housing Affordability as a Factor in the Creation of Sustainable Environment in Developing World: The Example of Akure, Nigeria in *Journal of human ecology (Delhi, India)* 35(2) · August 2011 DOI: 10.1080/09709274.2011.11906397
- Okusipe, M. O. (1999). Environmental Quality and Urban Planning: A case of Metropolitan Lagos, Nigeria. *The Lagos Journal of Environmental Studies* 2 (1), pp 53 – 63.
- Oladapo and Aedleye (2014). Effects of Housing Facilities on Residents' Satisfaction in Osogbo, Osun State, Nigeria. *Covenant Journal of Research in the Built Environment (CJRBE)* (2)2, pp 45-56.
- Olayiwola, L.M., Adeleye, A. and Jiboye A.D. (2006). "Effect of Socio-cultural factors on Housing quality in Osogbo, Nigeria". International Symposium on Construction in Developing Economies: New issues and challenges. Santiago, Chile. January, 18-29.
- Olotuah, A. O. and Taiwo, A. A. (2015). Housing Strategies and Quality of Housing in Nigeria: what lessons from Wales? *Journal of international sharing platform* (5)16.
- Olujimi, J.A.B. and Bello, M.O. (2009). Effects of Infrastructural Facilities on the Rental Values of Residential Property. *Journal of Social Sciences*, 5, pp. 332-341
- Omole, K. (2010). An Assessment of Housing Condition and Socio-Economic Life Styles of Slum Dwellers in Akure, Nigeria. *Contemporary Management Research*, 6(4). <https://doi.org/10.7903/cmr.2980>
- Onaiwu D.N (2015) Assessing The Quality Of Housing In Emerging Auchi Urban Region, Edo State *Journal of the Environment*, Vol. 9, No. 1, 42-53
- Onaiwu, D.N. (2015). Assessing the quality of housing in emerging Auchi urban region, Edo state. *Journal of the Environment*, (9)1, September 2015.
- Onibokun, A.G. (1974). Evaluating Consumer's Satisfaction with Housing: An Application of a System Approach. *Journal the America Institution of Planners* 40(3) pp189-200.

- Oseland, N. (1993). The evaluation of space in homes: A facet study *Journal of Environmental Psychology* (13)3, pp 251-261
- Owolabi B.O (2019)Assessment Of Housing Quality In Osun State, Nigeria *European International Journal of Science and Technology Vol. 8 No. 5* 69-99
- Rapoport, A. (2001). 'Theory, Culture and Housing', Housing, *Theory and Society*, (17), pp345-376.
- Saville, K. and Saville-Smith, J. (2012). Getting Accessible Housing: Practical Approaches to Encouraging Industry Take up and Meeting Need Report Prepared for the Office for Disability Issues and Building & Housing Group, Ministry of Business, Innovation and Employment Centre for Research Evaluation and Social Assessment.
- Soliman, A. M. (2004). A possible way out: Formalizing housing informality in Egyptian cities. *University Press of America*, pp. 312.
- Yoade, A., Adeyemi, O. And Yoade, O. (2018). Assessment of Housing Quality in Ede, Nigeria. *Asian Themes in Social Sciences Research* (1)2, pp. 76-83 DOI 10.33094/journal.139.2018.12.76.83