

Urban Dwelling and Environmental Quality Indicators: An Editorial

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Abstract This special issue of *Architecture Research* centres on the quality of urban spaces in Nigeria. The theoretical underpinning focuses on buildings as small cities and cities as big buildings, the duo being dwelling spaces. In view of the significance of housing in the trio of living, working and recreation spaces in the urban places, five of the six papers in the issue focus on the quality indicators of housing. Consequent upon the established literature on housing where general housing environmental quality have been implicated on socio-economic variables, the five papers are on the poor and middle income groups who in particular are at the lowest ends. While one of these five papers investigates dwelling quality like others, it does on a broader environmental context. The last paper is purely on the quality of urban public places. All the papers are generally on urban dwelling and environmental quality indices. Therefore, this editorial firstly sets out the overall scope of the issue; secondly it appraises the literature on the theme and thirdly discusses the key results and recommendations of each paper. It concludes with recommendations on urban policy implication on dwellings that are common to the results of the studies and future challenges.

Keywords Cities, Dwellings, Environment, Indicators, Urbanization

1. Introduction

The quality of dwelling spaces and their environmental settings in urban centres is a major concern in Urban Design Studies. As forces of urbanization continue to have negative implications on the urban dwellers at geometric rates [1, 2], research efforts have been focused on the housing quality for the urban poor and their middle-income counterparts who are suffering the major brunt especially in the developing nations including Nigeria [1, 3, 4]. In furtherance to many of these discrete studies, this special issue of *Architecture Research* aims to holistically evaluate the dwelling and environmental quality of housing for the poor in some selected cities in Nigeria towards suggesting policy implications. The cities have been selected to cover the three major classes of very high urban, high urban and urban status although not for comparative purpose.

The tripartite purpose of this editorial to the special issue is to briefly discourse the overall scope of the issue, appraise the literature on the quality indices of dwellings and urban environments and summarize the key results of each paper.

2. Dwelling and Environmental Quality Indicators

Urban quality of life has been linked with quality of urban dwellings and the total urban environments where the dwellings are located [5, 6, 7]. This makes the understanding of the quality indicators very important in Urban Design Studies. Therefore, throughout the history of research on housing and urban environments, there have been attempts to describe neighbourhoods with summary measures of their overall quality [8, 9, 10]. There are limited studies concerning the housing environments in developing countries. One of them is the study of Potter [11] on the perception of migrants of their rural house and urban squatter in Ankara. Another one is the study of Türkoğlu and her colleagues [12] on the respondents' satisfaction of housing environments in Istanbul, Turkey. This understanding of the influence of environmental quality on quality of life can aid urban policy, planning and design [7]. Accordingly, the densities of household, housing units, people in the rooms and the rooms for each family [13] are important dwelling quality indicators. According to Bryne et al [14], structural condition, density of occupants and possession of basic amenities, location and environment of dwelling, size of garden (if any), safe outdoor playing spaces for families with children and air pollution are important variables of quality indicators which varies from one cultural and physical environment to the other.

In another study, Chenoweth [15] established that poor quality housing can impact health, especially on children. According to Kahlmeier et al [16] housing environmental quality indicators can be factored as follow: air quality; noise from neighbours; cleanliness of the surroundings; comfort of

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the apartment (size, facilities); level of the rent or mortgage; suitability of the apartment referring to users' needs; condition of the apartment; location of the building referring to users' needs (central or quite, green surroundings, etc); relationship with neighbours; facilities for daily shopping needs close by; medical supply, hospitals, pharmacies; institutionalised day care; clubs/associations in the surroundings regarding users' needs; supply and security of pavements. These, along with others, have been grouped into six categories of indicators by Alkay [17] as social, economic, accessibility, perceived problems of the housing environment, the satisfaction from the housing environment, and the dwelling characteristics.

These notable studies are foreign. On the Nigerian scene, dwelling and environmental quality indicators have been earlier studied based on different mixes of the enumerated indicators. A few studies conducted locally have focused on the perception of residential quality in selected neighbourhoods [18, 19] while others addressed the socio-cultural dimensions, patterns of housing quality and house type [20, 21, 22, 23]. Further to the earlier listed indicators, on the Nigerian scene, the study by Ebong [24] acknowledged aesthetics, ornamentation, sanitation, drainage, age of building, access to basic housing facilities, security measures, spatial adequacy, noise level within neighbourhood, sewage and waste disposal, air pollution and ease of movement, among others, as relevant quality determinants in housing. With the review, work of Lawrence [25] and others on the factors implicated the evaluation of different dwellings, including numerous management, physical, social and psychological factors associated with residents. Amole [26, 27] evaluated dwelling facilities for students and discovered that "bedroom quality and social density"; "the floor level", "the furniture", access, "overall design" and "sanitary facilities" were the dimensions found to represent spatial and physical aspects of the environment while the other social and psychological aspects were subsumed within these named indicators.

The indicators have been studied at the macro level of the Nigerian cityscapes by a limited number of researchers. For instance, Fadamiro [28] applied the quality indicators as architectural principles to the study of dwellings and their total environmental context, as well as outdoor spaces and landscape qualities [29] while Adedeji and Fadamiro [30] studied them in relation to dwellings and their open spaces. Other related studies such as those on diverse areas of urban infrastructure, residents' indicators of urban housing habitability have also been carried out based on different levels of conceptualisations of the indicators [31, 32].

3. The Papers

The Special Issue contains six papers written by different authors across Nigeria. The first paper on "Residential Housing Satisfaction of the Urban Poor in Calabar

Metropolis, Nigeria" was written by Sylvester Inah and others. The study "undertakes a differential evaluation in residential housing satisfaction of two subgroups within the urban poor" using cross-sectional survey of sampled households "cutting across different urban poor socio-economic strata". Analysis of the data revealed that the urban poor have low housing satisfaction with variation existing between subgroups with the policy implication that there is need to "review the old tenement structures and include the normative housing needs" like infrastructures and amenities.

Chinwe Okpoechi's paper focused on the middle-income group with the aim of determining important functional requirements and provide empirical basis for the design of mass housing for the group. In the study, housing characteristics were categorized into: indoor; outdoor; and quality of facilities in housing units. Results showed that "design and quality of the housing unit, estate infrastructure and its maintenance as well as services were important requirements for good housing design among the middle-income group". The author argues that "application of these results will ensure that the housing design process is holistic, incorporating all aspects of the housing system."

The third paper on trends in urbanization focused on the low-income group and their housing delivery in a high urban city of Lagos. The authors, Akunaya and Opkopo, submit that "basic infrastructure and services are rarely provided as urban growth proceeds haphazardly with severe threats to the well-being of the people and society" in cities of the developing countries like Lagos. The review paper identified "rapid population growth and changing demographic structure; poverty and unemployment; difficulties in accessing housing delivery inputs; and lack of adequate capacity on the part of government" and the consequential effects on housing. The authors argue that "urbanization of developing cities if properly managed should bring about economic and social development." In view of this, the paper recommends that tackling of urbanization and housing challenges will require good knowledge of the characteristics of the people accessing the city including "accurate projections of future urban growth".

In view of the strategic position of Lagos in the social, economic, political, and cultural systems of Nigeria, the fourth paper in the issue by Adebayo and Iweka was on evaluation of dwelling space deficit in the city. The aim here is to establish thresholds "at which occupants of mass housing prototype apartments in Lagos megacity are likely to experience dwelling space deficits". Case study methodology was employed through purposive sampling of five selected low-income prototype designs. These were "analyzed to determine the rated capacity or estimated intensity of occupancy, using three established standards". Results suggest that "two bedroom category" and "three bedroom apartments" have higher and highest capacity rating in terms of occupancy respectively. These designs and their variants were discovered to have capacities to "improve

the spatial efficiency and habitability of future mass housing stock” in the city and therefore recommended.

The fifth paper in the issue on “Spatial Implications of Street Trading in Osogbo Traditional City Centre, Nigeria” was written by the guest editors for the issue, Fadamiro and Adedeji. On a broader spatial scale, their study investigated space quality in urban public open spaces. The authors noted that “the effects of street trading on accessibility in city centres have transformed them into contested places for incompatible functions”. The aim of the study was to “analyze the characteristics of street trading and its implications on urban open spaces vis-a-vis the landscape and accessibility in the city centre”. Findings show that “the activity has: serious negative impacts on accessibility, erection of illegal structures, traffic congestion, solid waste generation, auto-accidents and deface of urban aesthetics.” While control option favours “inclusive principles of postmodernism in the landscape design of streets and streetscapes as public infrastructure”, the study concludes with “recommendations on urban renewal strategies to ameliorate street trading in Osogbo and approach that could be adopted in other cities of developing countries at large.”

The sixth paper of the issue titled “The Value of Housing among the Poor in Ilesa, Nigeria” by Ayoola and Amole emphasizes the need to understand the values of housing among the urban poor. Through a survey approach, the authors noted the importance of “the application of appropriate development strategies that could enhance optimum utilization of existing resources for effective housing delivery.” Descriptive and inferential results indicated that family well being ranked as the highest housing value followed by economy while personal/social expression ranked lowest. Home ownership was the preferred tenure and results favour self contained bungalow of rooming apartment with preference for “few numbers of rooms in their houses due to financial constraints.” These values were judged by the authors as essential basis for design criteria.

4. Conclusions

We are highly pleased to serve as Guest Editors for this special issue of *Architecture Research*. The papers in the issue have demonstrated again the role of the multidisciplinary endeavour termed “Urban Design”, being the Architecture of Cities, in understanding theoretical underpinnings of urban places to enhance a synergy between theory and practice towards achieving livable cities. The results and recommendations of the papers suggest the need for more focus on the low and middle income group in urban housing supply and general urban environmental governance policy formulations. It is hoped that these studies will not only extend the frontiers of knowledge on the theme of the special issue but also serve as thresholds for further studies. For instance, both longitudinal and cross-sectional studies of the impact of political variables

(dependent) on the measurement of dwelling and environmental quality (independent) using the indicators with enlarged study areas and wider samples can be carried out for more robust results. Lastly, it can be asserted that the interdisciplinary approach engaged in the generation of the thoughts in the issue is worthwhile and demonstrates the possible results of collaborative efforts in research endeavours.

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