



The concept of spatial quality and its challenges on exercised affordable housing design typology in Dar es Salaam – Tanzania



Buberwa M. Tibesigwa^{*}, Long Hao, Benson V. Karumuna

Faculty of Architecture and Urban Planning, Chongqing University, 400045, Shapingba District, Chongqing, China

ARTICLE INFO

Article history:

Received 12 March 2016

Received in revised form

1 August 2016

Accepted 17 November 2016

Keywords:

Affordable housing

Design typology

Spatial quality

Design quality indicators

Quality characteristics

Dar es Salaam

ABSTRACT

This study explores the influence of affordable housing design typologies on the spatial quality of the exercised schemes in Dar es Salaam City. Through a questionnaire survey, the study uses a systematic stratified sampling method to obtain 185 (26.8%) respondents out of 690 households from three spatially diverse affordable housing schemes. Two-factor without replication analysis of variance (ANOVA) and descriptive statistics were adopted to analyze the data. Based on eight (8) quality indicators, the findings revealed 66.5% and 33.5% of the respondents were moderately and above average satisfied respectively with their overall housing spatial quality, but had low satisfaction about certain aspects. This shows that the housing spatial quality varies among the three housing schemes. To validate the direct link and significance level, the ANOVA Test P-value is 0.004175 and 7.88E-05 for columns and rows respectively (significant at 0.05), which indicates that housing design typologies significantly influences post-occupancy housing satisfaction in 3 estates. This assessment provides the feedback to design/production process on the relationship between housing satisfaction and housing quality attributes. The study highlights the justification for variables to be considered for appropriate affordable housing design approach to improve spatial quality for dwellers' well-being in future projects.

© 2016 Published by Elsevier Ltd.

1. Introduction

Tanzania government through public housing agencies has focused into delivering affordable housing units to house the low and medium income earners since 1962 (Nnkya, 2014). But this program faces the challenges of both indoor and outdoor spatial quality that prolong to undermine desirable housing development programs in the country (Lupala, 2002). The house need doesn't limit itself to the accessibility of a structurally stable unit to live in but must be located and designed to afford amenity, convenience, health as well as accessing community social life (Kurian & Thampuran, 2011). In its policy to deliver adequate shelter to all citizens government has instituted various programs to address the problems resulting from urbanization trends and increase in population (URT, 2000; Komu, 2011). Soon after independence (1960's), Tanzania established the National Housing Corporation (NHC) to oversee and administer housing development in the country (Komu, 2011). Early program of eradication of all slums that

had existed in strategic locations of the city and replaced them with multi-storey blocks of flats that were made of industrial materials (Ibid), reveals the existence of high quality housing concept in government policy since after independence. But the government withdrew from direct housing financing due to financial limitations leading to public agencies relying on rents to manage available units while the own built houses by individuals emerging around the city leading to poor quality housing (Mushumbusi, 2011). In the established affordable housing program, some of residents are adjusting their units to fulfill their needs or sometimes to maximize and improve the units to suit their family sizes (Komu, 2011). This is an experience that for a long time has been the concentration of several acknowledged literature pointing towards the policy stakeholders on changing the delivery approach to satisfactory quality affordable housing direction (Diang & Hayangah, 2011, pp. 1–20).

It is argued that, a good planning is complemented by a good design for a good quality affordable housing product, where the low design quality leads to dwellers' dissatisfaction, defects in housing units and un-programmed maintenance (Afaq et al., 2015). Spatial quality concept is developed from the general concept of space (Frank, Jan, & Barbara, 2011). The quality of space has different

^{*} Corresponding author.

E-mail addresses: btibesigwaezra@hotmail.com (B.M. Tibesigwa), longhao@cqu.edu.cn (L. Hao), karumunabenson@gmail.com (B.V. Karumuna).

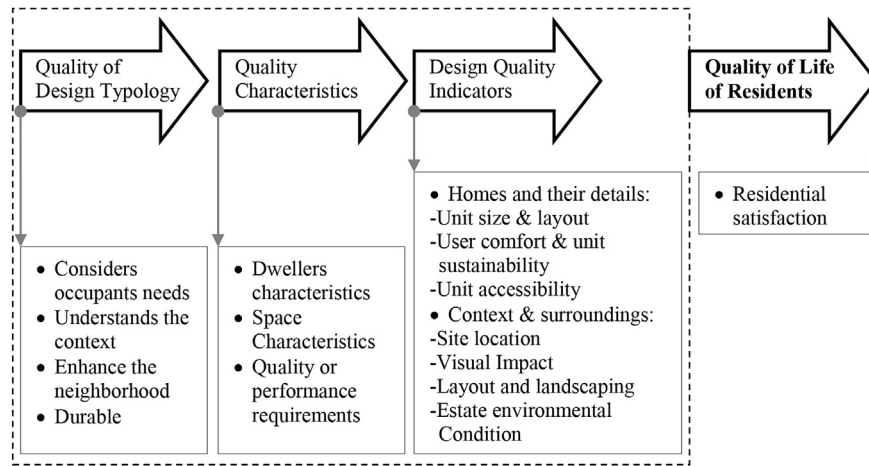


Fig. 1. The study conceptual framework approach in assessment of design quality.

interpretations according to the perception on a judged space since it has varied interpretations too (Ibid). As space is understood differently from an identified specific culture to another by human as an interpreter, any reasonable assessment on spatial quality should be related with use of such space (Lawson, 2001). Space characteristics and qualities of any housing design contribute to residential satisfaction (Ahsen, Nur, Vildan, & Gulcin, 1996). This study finds logical to evaluate the housing design quality of the existing affordable housing typologies in Dar es Salaam by assessing dwellers' satisfaction with their housing spatial quality.

2. Conceptual framework

This paper is taking the concept of better design as an effective option that can improve the quality as well as quantity of affordable housing in developing countries like Tanzania where the funds for housing delivering are limited, scarcity of land for housing and construction costs are escalating, and regulations for administering affordable housing development are not clearly established (Deane & Jody, 2004; Deane, 2014). A good designed housing product is perceived in this concept as the best cost-effective approach to deliver the good spatial quality, improve the value of the asset, as well as delivering affordable housing product that improve quality of life of residents (Fernanda & Annemie, 2015). Poorly designed affordable housing projects impose costs on their dwellers, neighbors and society in its lifetime (CABE, 2006). The intended housing design quality for best cost-effective is not for a luxury housing product but basically housing environment where residents can fill comfortable to raise their children, invite relatives to visit and spend less to live in. This is associated with access and quality of basic amenities, quality of materials, energy reliability, water quality & reliability, utility factors, social spaces, materiality, space category, and space representation (Frank et al., 2011; Aderamo & Ayobolu, 2010).

The good quality of any 'design typology' leads to a 'good affordable housing scheme' with the following features; (1) it is considered to meet the needs of the residents and commit the physical design of that community by considering its demographic, abilities and disabilities of people, and appropriate spatial requirements by different age groups; (2) the design understands and links to the physical context of the scheme by considering the quality of access roads, landscape, harmony with neighboring building components, and quality of communal/public spaces so as to come up with responsive design not only to its individual context

but also enhancing the neighborhoods in which the project belong; (3) the design product is expected to last long by using materials which are not only durable but also easy to maintain as well as energy efficient, (Deane & Jody, 2004; Fernanda & Annemie, 2015).

The definition of housing quality embraces many factors which include the physical condition of the building and other facilities and services that make living in a particular area conducive. The quality of housing within any neighborhood should satisfy minimum health standards and good living standard, but also should be affordable to all categories of households (Lanrewaju, 2012). The 'quality characteristics' involve users' and developed physical environment characteristics based on; dwellers characteristics, space characteristics and performance requirements. In this case, Frank, et al., 2011 argues that, "space uses receive its meaning through different interactions with space for particular and collective purpose". This leads to consideration of space characteristics as the basic quality parameters. These characteristics include; organization of space, hierarchy, aesthetics, relationship on space functions, and space flexibility (Ahsen et al., 1996).

The quality of spaces (both indoor and outdoor) of any housing design typology can be evaluated with regard to residents' satisfaction with their housing environment (Ahsen et al., 1996). The conceptual framework is categorized into four sections as shown in Fig. 1. Apart from physical observation, the study uses users' experience over time on their housing environment quality values to analyze spatial quality of the three affordable housing design typologies through the quality indicators developed in Tables 2 and 3. These indicators are the resultants of 'housing design quality determinants for affordable housing' proposed for Karachi (Afaq et al., 2015), 'housing quality indicators' for United Kingdom (Homes and Communities Agency, 2011), 'design quality indicators as a tool for thinking' (David et al., 2003), and quality indicators proposed for Vietnam (Le, Ta, & Dang, 2016). They are tools used in the case study to provide an approximation of real situation in which the study addresses the parameters to be improved or altered for future high quality product.

The design of housing involves a 'home as a unit and its design details', and 'home's context and surroundings' (Homes and Communities Agency, 2011). Therefore, adapted quality indicators are strategically distributed into two categories. 'Unit and design details' creates awareness on how residents want to use their homes and surroundings. The home's context and surroundings indicate the shared quality values that can be stated by users as their experience of the estate environment overtime (Ahsen et al.,

Download English Version:

<https://daneshyari.com/en/article/5114698>

Download Persian Version:

<https://daneshyari.com/article/5114698>

[Daneshyari.com](https://daneshyari.com)