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A Review of Adequate Residential Housing Provision for Enhanced Occupants' Work Performance

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Abstract

Adequate housing provision for the workforce ensures their maximum contribution to the fulfilment of the organisational goals and objectives; it ensures the comfort and security of the workers, thereby enhancing their work ethics, which results in increased efficiency and enhanced overall productivity. Housing is an essential contributor to a man's quality of life, as people spend a significant portion of their lives in their residential homes. Hence, the adequacy of residential housing has a significant influence on the occupants' quality of life and work output. Therefore, it is important to improve the quality of residential housing to the satisfaction of the occupant. Thus, this study aims to present a literature review on the provision of adequate housing to increase workers' performance. Several literature sources are used to identify related studies that shed light on the relationship between adequate housing and occupant workers' productivity. The study revealed the conceptual dimensions of residential housing adequacy and occupants' work performance, which include the physical conditions of the house, the suitability of facilities in the house for its occupants, and the affordability of the house in terms of occupation. The study further revealed that good quality and appropriate facilities in a house are essential for the occupant's physical and mental well-being, whereas unhealthy homes can negatively affect the occupant's work performance and overall productivity. Therefore, to improve home dwellers' work performance, stakeholders like owners, architects, estate managers, urban planners, builders, and construction engineers should prioritise the occupants' general well-being and implement housing systems that promote high performance.

Keywords: Adequate housing, amenities, housing attributes, housing standards, occupants, work performance

1.0 INTRODUCTION

International human rights law recognises everyone's right to an adequate standard of living, including adequate housing. Despite the importance of this right within the framework of the international legal system, over a billion people on Earth lack adequate shelter. According to Human Rights Fact Sheet 21, millions of people around the world live in life- or health-threatening housing conditions, such as in overcrowded slums and informal settlements, or in other adverse conditions, that do not uphold their human rights and their dignity and which affect their efficiency at the workplace, hence affecting their overall performance in the workplace. The universal right to adequate housing should be seen as the right to live somewhere in security, peace, dignity, and freedom. It is essential to review studies on the relevance of adequate housing provision to occupants's work performance. Hence, this paper aims to explore the literature on the contributions of adequate residential housing to occupants' work performance.

One of the fundamental human requirements is a living environment that allows people to perform their work optimally, and under comfortable conditions. Residential housing adequacy is an indicator of housing quality characteristics that influence the overall occupants' quality of life and living (Adeosun, 2017). Housing adequacy is defined as the degree of satisfaction and pleasure that an occupant derives from the existing housing situation (Akashah et al., 2015). Mbazor et al. (2022) suggest that providing housing that adequately satisfies the occupants and enhances their work performance is essential to adequately support the quality of life of the citizenry, enhance viable economic growth and productivity, and promote social cohesion among people.

The concept of adequate housing has been differently defined and interpreted by authors and researchers. Eggers and Moumen (2013) define housing adequacy as the absence of physical, spatial, and service anomalies within the dwelling unit and its immediate surroundings. According to Ibem and Alagbe (2015), adequate housing is a residential environment that is qualitatively and quantitatively suitable for fulfilling users' needs, desires, expectations, and aspirations. Ibem et al. (2012) also said that to objectively judge housing adequacy, one must look at all of the housing services and management practices that are available or not available, as well as the basic

social infrastructures and the physical and spatial features of housing units. The UN Committee on Economics and Cultural Rights (1992) stated that housing deficiencies would not be solved by expanding the quantity, but should embrace qualitative adequacy and accessibility.

Qualitative adequacy of housing entails moderate design, adequate space, sizeable rooms, legal occupancy, adequate security, access to social infrastructural facilities (roads, water, electricity, schools, hospitals), places of work, and markets (Omwenga, 2013; Atati, 2014). Nonetheless, the UN-Habitat (2006) argued that what constitutes adequate housing differs from one place to another and depends on existing social-cultural, environmental, political, and economic norms. These studies imply that a multiplicity of factors determine the divergent construct of housing adequacy. Therefore, in real terms, adequate housing for one may be inadequate for another, depending on the perception of an individual.

A greater part of people's lives is spent in their residential houses (Sedaghatnia et al., 2013), suggesting that residential housing characteristics have a significant influence on people's quality of life and their overall work performance. There are human-established and non-measurable functions and activities that affect the sense of residential adequacy. Xiaolong et al. (2016) identified public facilities, housing policies, housing amenities, internal design, indoor quality and safety, the building's external design and landscape, housing affordability, and facility management styles as the components that determine residential housing adequacy. Further, Kitila (2019) identified accessibility, services, facilities, and quality management as the key challenges to residential housing adequacy. Similarly, Esruq-Labin et al. (2014) have identified four (4) dimensions of housing; the first dimension is social, which consists of social interactions among members and non-members of a family. The second dimension of residential housing is the 'activity pattern', which plays a crucial role in creating the necessary space for development. The third material dimension of residential housing is the 'physical location' of the residence. This includes the residence itself as well as all of the material objects found inside. These materials can have value for their uses or as a result of emotional attachment to the items inside the residence. The fourth dimension is the time dimension. Time is necessary in understanding the meaning given to residence. This paper presents and discusses a diverse range of concepts and ideas that address the human need for residential housing and its impact on occupants' work performance.

This review provides an understanding of the influence of adequate residential housing on occupant workers' performance and justifies residential housing characteristics as an important determinant of workers' performance. The study represents a significant contribution to understanding the residential environment and its impacts on occupant performance because the nature of residential housing will influence the working ability of employees. Consequently, this current study aims to review the impact of residential housing adequacy on occupant workers' performance. Firstly, housing concepts, types and facility adequacy, and standards in residential housing are discussed. Secondly, the main attributes of residential housing that influence efficient work performance are also highlighted. The study aspires to contribute to the existing literature by providing information specific to adequate residential housing performance for the enhancement of occupant performance at the workplace. The study may have implications for policy-making decisions, funding, and regulatory agencies, as well as facility design and management decisions.

■2.0 METHODOLOGY

The main aim of this study is to present literature reviews and some published studies on adequate residential housing provision for enhanced occupants' work performance. Relevant secondary data on adequate residential housing were collected from literature reviews to identify past publications and research relevant to the subject. Specifically, the literature used for this study is drawn from multidisciplinary sources such as architecture, sociology, anthropology, psychology, science, and engineering. Similarly, adequate residential housing was defined through a critical review of extant literature. This article is based on the position of Mathur and Stein (2005), who maintained that "the emerging literature on residential amenities seems to indicate that one of the most effective ways to attract knowledge workers in a region and promote economic development and productivity is the creation of functional amenities in residential housing." The essence is to identify the relationship between adequate housing and work performance, thereby justifying that residential housing characteristics as key factors influencing effective work performance.

■3.0 AN OVERVIEW OF RESIDENTIAL HOUSING

3.1 Concept of Housing

Generally, there is a lack of a unified definition for housing. It had been defined as the process of providing safe, comfortable, attractive, functional, affordable, and identifiable shelter in a good location within a neighbourhood, supported by continuous maintenance of the environment for the daily living activities of individuals and families within the community while reflecting their socio-economic and cultural aspirations and preferences (National Housing Policy, 2012). Housing, according to Ansell (2019), plays a significant role in shaping contemporary political preferences, both as a direct measure of individuals' wealth and welfare and as a proxy for the relative fortunes of different places.

The World Health Organization (WHO) describes housing as "a residential environment that consists of the physical structures used for shelter and all necessary services, facilities, equipment, and devices needed or desired for the physical and mental health and social wellbeing of the family and individuals" (Jolaoso, 2001; Abosede, 2006). From the foregoing, it can be inferred that housing provides the physical framework in which human social, economic, political, and cultural resources are realised, enriched, and integrated. Further, Omole (2009) asserts that housing is essential and comprises vital services and facilities, which constitute the physical environment that connects individuals with the community in which they evolve and live.

The role of housing cannot be overemphasised. Housing, which is an enclosure, ensures that humans have a place to live, rest, and, in some cases, work, whether it is in the form of a home or some kind of physical structure for dwelling, lodging, or shelter. Housing includes a variety of options, ranging from permanent apartments or buildings to temporary shelters and emergency accommodations. Access to safe, affordable, and sustainable housing is essential for the occupant's health, safety, and well-being. Housing can impact an occupant's economic, social-political, and cultural advantages, as it provides access to education, employment, healthcare, and social networks. In several countries, both developed and developing, housing programmes have been developed to resolve the challenges associated with affordability, quality, and quantity and to ensure that access to decent and affordable housing is in place.

A healthy, prosperous, and egalitarian nation is largely determined and measured by the level of a healthy housing system in such a nation (Leaver et al., 2007). Housing is one of the most important life components, giving shelter, safety, and warmth, as well as providing a place to rest with all desired facilities in place (Henilane, 2016). In the words of Abrams (1964), a study on housing stated that housing is not only a shelter but also part of the fabric of neighbourhood life and the whole social setting. It touches on many facets of economic activity and development. Thus, housing provides social contacts, a good image, a sense of belonging, and an indicator of social status. Aroni (1978) argued that to an individual or a family, housing connotes shelter, a symbol of status, a means of physical protection, a psychological identity of economic value, and a foundation for self-respect. Similarly, Kicklighter and Kicklighter (1986) defined housing as a structure that is more than just a dwelling but also includes all that is within and around the dwelling.

In the view of Ozo (1987), housing is seen as a home, a resting place that enables man to fulfil his fundamental purpose on earth. The study further stated that housing provides the means of shelter, symbols of physical protection, and means of psychological identity and economic value. Ezeigwe (2015) noted that housing represents an extended womb during the formative years of a child's physical, psychological, educational, and emotional development. Ezeigwe's view suggests that housing is a creator of human dignity and determines the accomplishment of man in life. Studies have shown that one's environment has a great impact and effect on his or her personality. For instance, Olotuah (2002) observed that housing provides the framework for meeting man's need for shelter and is an all-encompassing phenomenon of the environment in which man grows, lives, and ends.

Housing is further described as a significant constituent of any human settlement. It is believed to be the second human need after food and renders vast services to humankind. The World Health Organization (WHO) Committee on Public Aspects of Housing observed, "A house is a physical structure that man uses for shelter, and the environs of that structure include all the necessary services, facilities, equipment, and devices required for the physical, mental, health, and social well-being of the family and individual."

Jinadu (2007), on the other hand, viewed housing as a bundle of services or a basket of produce consisting of the physical structure itself, the subsidiary facilities and services within and around it, as well as the general environmental conditions and amenities that surround the building. In summary, the World Health Organisation (WHO) described housing as a broad concept involving four interrelated elements: the home, the dwelling, the community, and the neighbourhood (Ormandy, 2009). The home is the social, cultural, and economic structure created by the household. The dwelling (house or flat) is the physical structure providing shelter and the necessary space, facilities, and amenities for the household. Any unsatisfactory condition of the dwelling may lead to one or more physical and/or mental health effects and interfere with the creation of the home. The community is the social, cultural, and economic structure built by those living, working, and serving within the neighbourhood. The neighbourhood is the physical infrastructure, including public services, shops, schools, health centres, places of worship, greenery, playgrounds, and walking areas.

From the foregoing, it can be said that housing is the physical environment in which the family and society's basic units must develop. It is an enclosure that people use for lodging, living, and/or working, which helps man enhance his performance ability in an organisation given the availability and functionality of facilities.

Notwithstanding the significant roles played by housing and the level of commitment given to its production, Madden and Marcuse (2016) observed that there are great manifestations and symptoms of housing crises everywhere. These symptoms, according to the study, manifest in families being squeezed due to the cost of living: a rise in the rate of homelessness, high levels of tenant evictions, and foreclosures. These identified housing crises have a global outlook, including the crisis in Lagos in Nigeria, Mumbi in India, London in Great Britain, Shangai in China, Sao Paulo in Brazil, and New York in the United States of America. The housing crisis is seen nearly everywhere, particularly in all major cities around the globe. These cities face various shares of residential housing challenges, which include but are not limited to land grabs, forced ejections, displacements by natural occurrences, and expulsions.

3.2 Residential Housing Types

Several diverse classifications of housing have been suggested. For example, Genworth (2016) outlined the following in the context of residential housing:

3.2.1 Condominiums

Condominiums are a form of ownership that can apply to almost all types of housing. While condominiums are generally found in apartment buildings, other types of properties, for example, townhouses, may also have a condominium ownership model. Buyers may own a unit, or "condo," except for the land that is built on or any common space outside the unit. Owners are charged monthly "condo fees" to maintain indoor and outdoor common areas shared by the condo owners, including parking areas, elevators, carpets, front entrances, and any recreation facilities. These monthly fees can vary widely and are in addition to the mortgage payments. Each condominium property has rules that the owners of each unit must follow. Condominium owners form a "condo corporation," or members association, and elect members to their Board. This condominium corporation's committee members or Board meet to decide on issues related to the building and its unit owners, for example, whether or not the units can be rented out to non-members and if pets are welcome.

3.2.2 Detached House

This house stands on its own. It is often referred to as a 'detached' home and tends to be the most expensive type of home to purchase due to the land costs. Buyers own both the house and the land it is on. When the house needs repair or maintenance, the owner must pay for it. House owners must also pay the monthly bills for water and heat, as well as their other bills (like telephone and cable television). Owners are free to make changes to their houses, inside and out, but they must obey local bylaws and apply for renovation and building permits when necessary. Single houses appeal to a wide array of people, including families with children, and generally provide more space and privacy than other unit types.

3.2.3 Townhouse

A townhouse is a unit attached to a row of other units. Each unit shares a wall with another unit on either side. Often, especially in cities, there may be a smaller unit above each townhouse, so there could also be someone living above or below the unit. Townhouses (sometimes called row houses) are usually two or three levels tall (each level is called a 'storey').

3.2.4 Semi-detached house

One side of this home connects to another. Owners are only responsible for the care and maintenance of their side, just like a detached house. Owners of semi-detached homes on their side of the property, including the land it is on, are responsible for its care and maintenance, according to local bylaws. Semi-detached houses appeal to people who want to own their own house, as well as the land it is on. Semi-detached houses are usually less expensive than fully detached houses, although, like all real estate, this depends on the area.

3.2.5 Duplex/Triplex

A duplex or triplex is a building divided into multiple units. Like semi-detached houses, each household has its own separate entrance and is responsible for caring for its unit. Typically, you would buy the entire property and rent a unit to help offset your mortgage payments. Types of homes that are 'duplexes' or divided into two or more separate living units may be detached homes, semi-detached homes, or even row houses.

On the other hand, Olawunmi et al. (2012), in a study on user satisfaction with residential facilities in Nigerian private universities, identified the types of housing to include luxury apartments, terraced suites, detached houses, and flats. However, Henilane (2016) categorised housing types differently in a study that examined the concept and analysis of housing in Latvia. The research adopted a comparative research method, and results and findings revealed that housing types were classified in the following ways: by type, size, amenities, location, group of the population living in the house, type of ownership rights, construction period of the house, energy efficiency indicators; construction materials used in the exterior wall of the housing, and by other features. The study presented a broader classification of housing types, as shown in Table 1 below:

Table 1 shows various housing types and their classification
(Source: Henilane, 2016)

Type of housing classification	Characteristics
By housing type	Room in the apartment Apartment in a multi-apartment residential building or non-residential Building Multi-apartment residential building Family house Other
By housing size	One-room, One-room apartment, Two-room apartment, Three-room apartment, and more, Family house, Other
By housing amenities	Housing with all amenities, Housing with part of amenities, Housing without amenities
By housing location	Housing in a city, Housing in a rural territory
By group of population living in the housing	Any resident, Persons with low-income or other social group at risk
By type of housing ownership rights	State-owned housing, Municipality-owned housing, Natural person's owned housing, Legal person's owned housing, Other
By the construction period of the housing	Housing built before World War II, Housing built from 1945 to 1990 Housing built from 1990 until now
By energy efficiency indicators of housing	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, Other
By construction materials used in the exterior wall of the housing	Brick wall, Wood, Brick/panel, Reinforced concrete / Lightweight concrete, Wood/masonry, Other.

Residential housing types, as stated in Table 1, depending on the location, design, fittings, and fixtures, can deliver wide-reaching real and potential benefits to occupants. According to Paevere (2008), these benefits can be economic as well as intangible in nature and may include:

- An enhanced individual and organisational work performance
- Reduced occupants' illness and unwarranted absenteeism from work

Generally, housing types can influence work performance in some ways. For instance, factors such as commute time to and from work, living conditions, and the nature of neighbourhood amenities can induce stress levels and the overall well-being of the occupant worker, all of which can affect performance at the workplace. For example, a shorter commute from a comfortable home (a house with all amenities) might result in less stress and lead to better focus at work. In addition, living in a neighbourhood with access to recreational facilities and green spaces (state or municipal types of houses) can improve mental health and lead to higher work performance. On the other hand, living in crowded or noisy environments, such as multi-family houses, may disrupt adequate sleep, rest, and concentration, thereby negatively affecting work performance. In general, the type of housing can directly or indirectly affect work performance by influencing the occupant's daily activities, stress levels, and overall quality of life.

In contrast to the views expressed by Olawuni et al. (2006) and Henilane (2016), Osumanu et al. (2016) surveyed residential housing in Ghana's low-income urban areas. The research aimed to examine the housing conditions of households in residential units within Ghana's Wa Municipality. The study employed interviews and focus group discussions, with a questionnaire survey as a complementary technique, drawing on concepts of households' demand for housing. The study's findings revealed that apartment houses, L-shaped houses, and compound houses are the most commonly developed types and classifications of houses. The study's analysis further reveals that factors such as income, rent values, available facilities, and the nature of the residential area influence households' choice of living spaces. Additionally, Mbazor (2018) classified housing into tenement buildings, blocks of flats, bungalows, and detached houses. However, Bunker et al. (2019) noted that the most critical actions for promoting the health of housing occupants are addressing the housing location, the house design, indoor temperature and air quality, insulation, heating, and ventilation. Improving housing standards is critical to boosting occupants' performance, which further drives supply for better-quality housing (Bunker et al., 2019).

From the foregoing, it is evident that people use various terms to describe different types of housing. Sometimes they use more than one term to describe the same housing type. It can get very confusing. This further implies that the physical materials used in construction or finishing, like cement, mud, thatch, aluminium, wood, or glass, can determine the type of housing. Overall, we can conclude that the type of housing a worker occupies can influence their concentration, induce stress and energy levels, and enhance their work performance.

■4.0 FACILITY ADEQUACY AND STANDARDS IN RESIDENTIAL HOUSING

The concept of "adequate residential housing" refers to housing that satisfies minimum structural, heating, lighting, ventilation, sanitary, occupancy, and maintenance standards that align with applicable building and housing codes. Its purpose is to verify the sufficiency of the facilities provided for families and individual occupants and to ascertain whether each category of occupants can afford such housing types. In realising the right to adequate housing, Hafez et al. (2021) identified seven key aspects of the right to adequate houses, and they include legal security of tenure, availability of services, construction materials, facilities, and infrastructure; affordability, habitability, accessibility, location, and cultural adequacy. Adequacy of housing facilities up to the required standard and quality is essential for improving the performance and productive efforts of all categories of the workforce. It is essential to note that workers' housing needs must not only be adequately provided for, but they must also be able to satisfy their needs if the best is to be achieved for them. Hence, Hassanain (2007) confirmed that universities worldwide have realised the contributions adequate facilities and infrastructure make towards achieving their overall goals of retaining faculty staff. According to the study, campus housing facilities, including residential housing, serve as an integral component of the university, contributing to the achievement of its corporate vision. The world's urban centres are experiencing rapid urbanisation, posing multi-dimensional challenges across various residential housing spheres (Olatunji et al., 2020). These challenges, according to the study, manifest in diverse ways, including mass urban poverty, gross inequality, and high rates of unemployment. The study further identified crowded housing, the proliferation of slum and squatter settlements, and the deterioration of the environment as key challenges of urbanisation.

Existing literature shows that numerous factors contribute to determining housing quality and standards across continents. A substantial part of this relates to housing, environmental, and neighbourhood factors. For instance, Mohit et al. (2010) observed that residential satisfaction has high positive correlations with dwelling unit features, social environment, support services, and public facilities. Turner (1979), in a study on "Does neighbourhood matter?" highlighted the issue of the value of housing to occupants. The study argued that the housing problem arises because of the mismatch between people's socio-economic and cultural situations and the housing process and products. The study emphasised that housing problems arise when housing facilities and services fail to meet users' needs and support their work processes.

Ibem et al. (2015) investigated the differences and similarities in residents' perceptions of housing adequacy and satisfaction. The study collected data from 517 residents of public housing estates in Ogun State, Nigeria, and employed descriptive statistics, categorical analysis, and factor regression for analysis. The results revealed that the respondents evaluated housing adequacy based on four (4) key components: security, utilities, and neighbourhood facilities; the ambient condition of interior spaces; social infrastructure; and the size of the activity area. The implication of this is that to improve the living conditions of residents of public housing, policymakers around housing need to pay serious attention to the needs of the residents, irrespective of their category. When such attention is given to the housing needs of the residents, it creates room for more productivity.

Soen (1979) examined habitable housing in terms of occupant needs and dwelling satisfaction. A series of factors, including engineering, social, behavioural, and other factors, influence housing quality, which varies according to circumstances. Consequently, the study demonstrated that a multi-dimensional perspective provides a better understanding of housing quality, especially in terms of its ability to meet human needs. In the same vein, Osuide and Dimuna (2005), in their research on the effects of population growth on urbanisation and the environment, posit that "having a safe place to live in is one of the fundamental elements of human dignity, physical

and mental health, and overall quality of life, which enhances human growth and development." Having a comfortable and quality dwelling place enhances the overall well-being and increases the work efficiency and overall performance of its occupants. Past studies have revealed that the condition of one's housing environment has a significant influence on the occupant's personality and perception. Jiboye (2010), for instance, examined the pattern of residential quality in Nigeria using Oshogbo town as a case study. The study revealed that residential quality varies in pattern from one area to another. The study suggested implementing appropriate policies and strategies to enhance the quality of housing in various residential areas of Nigeria. Olotuah (2010) researched housing development and environmental degeneration in Nigeria. The study's findings reveal that mostly sand-crete (cement) blocks and sun-dried or burnt bricks were used for wall construction, and some of the buildings are either dilapidated or require major repairs, rendering them unfit for safe habitation and unable to meet the housing needs of the occupants. Further, Xiaolong et al. (2019) assert that public rental housing (PRH) programmes are the most effective strategy for providing adequate housing in both developed and developing countries. The study identified components such as neighbourhood environment, housing unit, and affordability as the top three factors influencing overall housing adequacy (Xiaolong et al., 2019). Factors such as family income, age range of occupants, housing types, family size, and length of occupation have significant effects on overall housing adequacy (Mbazor, 2018). Adequate housing provision helps in attracting and retaining high talents in an organisation, which consequently results in the overall high productivity of the occupants.

Similarly, Babalola (2016) assessed the housing quality of selected residential estates in Lagos, Nigeria. The study assessed the housing quality of selected residential estates to identify how to improve housing quality in government and public-private partnership initiatives (PPP). The study's results indicated that high-income housing estates outperformed middle- and low-income residential estates in terms of housing quality.

Housing, which is an enclosed component or structure, provides services that support human comfort and existence. Deller et al. (2001) noted that occupants of houses pay greater value to amenities and related services that contribute to the quality of life and enhance work performance. These services or facilities are numerous, some of which include kitchens, toilets, refuse disposals, road networks, electricity supply, telecommunications, and other facilities (All Answers Ltd., 2017).

According to the Nigeria Federal Ministry of Housing and Environment (1982), housing facilities include electricity supply, road accessibility, security, health and educational facilities, as well as spaces for washing and drying of clothes, while sanitary facilities include toilets, bathrooms, kitchens, water supply, and refuse disposal systems. In a similar vein, Glass (2017) linked eight variables of well-being to housing, which include housing as a "home", neighbourhood quality, health, education, employment, income, environmental sustainability, and community safety.

One cannot overemphasise the importance of the housing services provided to the occupant. Drawing from the Public Health Laws of Nigeria (1959), Abiodun and Segun (2005) identified the conditions expected for residential housing in Nigeria. Section 6 of this law explains nuisance conditions, the presence of which renders housing units unsanitary and unsafe. It stipulates that houses should not be damp, ill-ventilated, littered with refuse, or lack essential sanitary facilities. Housing units should be accessible by road, have a good drainage system, adequate waste management facilities, and regular and safe sources of water supply, among other things.

Regulatory and advisory bodies have produced quantifiable and objective recommendations, claiming they can determine the essential elements of housing standards and adequacy. For example, the Housing Corporation (the regulatory body for housing associations in England), supported by the DETR, has imposed a set of housing quality indicators on all newly developed buildings (Housing Corporation/DETR, 1999). The 10 indicators are as follows: Site: location; Site: visual impact; Site: layout and landscaping; Site: routes and movement; Unit: size and layout; Unit: noise, light, and services; Unit: accessibility; Unit: energy, green, and sustainability issues; and Performance in Use. Strict adherence to these prescribed standards will enhance the effective work performance of an occupant.

Measuring housing affordability has become necessary in housing studies and other housing issues, such as housing policy formulation. However, the challenge has always been how to appropriately measure the affordability and suitability of residential housing. For decades, this has occupied a central place in the minds of housing researchers. To discuss suitability and affordability concepts concerning housing, it is important to have a thorough understanding of the definition of affordable and suitable housing. Esruq-Labin et al. (2014) define housing affordability as a systematic approach to defining socioeconomic and development environments in a country, to determine if the houses provided for people are affordable to the targeted group. Housing affordability also refers to the cost of housing services and shelter—both for renters and owner-occupiers—relative to a given individual's or household's disposable income (Bieri, 2014). Affordable housing is also defined in multiple terms, which are a measure of expenditure on housing relative to the household's income (Zamri et al., 2022). According to Gopalan and Venkataraman (2015), affordable housing refers to any housing that meets some form of affordability criterion, which includes the family's income level, the size of the house, or the ratio of the house price to annual household income. Zamri et al. (2020) defined affordable housing as housing that caters to the needs of households whose incomes are insufficient to secure suitable housing without any form of assistance.

Other than the housing affordability issues, another important aspect of housing that needs adequate attention is the suitability issue. The demand criterion is one of the critical aspects that come to the fore while defining housing suitability. Zyed et al. (2016) identified house price, household income, housing choice in the housing market, and the limitations of affordable housing as some of the key factors influencing housing suitability in a particular location. It is worth noting that housing affordability has a direct relationship with society's demographic attributes, in which case citizens of varying demographic backgrounds show different levels of housing affordability. The demographic characteristics have a direct bearing on housing affordability, and they include marital status, size of households, monthly household income, educational level, and age of the occupants (Zamri et al., 2022). On the other hand, factors such as location, accessibility, house type, cost of owning over renting, and service of facilities become one of the criteria for choosing a suitable house (Henilane, 2016; Zainon et al., 2017). Esruq-Labin et al. (2014) and Zamri et al. (2020) developed a framework from which they identified four indicators to assess the suitability level of affordable housing. These indicator characteristics are the physical environment, social environment, location and public facilities, and location and transportation (Zamri et al., 2020). From the foregoing, it can be inferred that housing that is located in a suitable environment will be adequate for the effective performance of the occupant worker.

■5.0 RELATIONSHIP BETWEEN HOUSING, AMENITIES AND WORKERS PERFORMANCE

One of the fundamental human requirements is a living environment that allows people to perform their work optimally and under comfortable conditions (Mbazor, 2018). Sillince (2014), in a book titled Housing Policies in Eastern Europe and the Soviet Union, observed that the Soviet research on housing and productivity identified positive correlations between improvements in housing conditions on the one hand and increases in labour performance and productivity on the other. Therefore, quality housing affords the individual the opportunity to renew his strength and rest well so that, in the final analysis, it raises labour productivity. Social infrastructure and amenities are crucial to creating sustainable communities. In a housing context, an amenity is described as something considered to benefit a property and, in so doing, increase its value (Carmichael, 2003).

Field and Field (2017) stated that amenities can include the number and nature of guest rooms and the provision of facilities such as lifts, wifi, restaurants, parks, communal areas, swimming pools, golf courses, health clubs, facilities, party rooms, theatre or media rooms, and garages, while intangible amenities can include aspects such as well-integrated public transport, a pleasant view environment, nearby activities, and a low crime rate. Within the context of environmental economics, an environmental amenity can include access to quality air, constant power supply and availability of clean water, or the quality of any other environmental good that may reduce adverse health effects for residents or increase their economic welfare. Gyu-Bae et al. (2022) conducted a comparative field study on the relationship between indoor environment quality and work productivity across various job types. The study found a correlation between workers' productivity and a well-lit, thermally comfortable, and sound environment. The study further revealed significant differences in the effect of indoor environmental quality (IEQ) evaluation on work performance between different housing occupants. Similarly, Frontczak et al. (2012) found that the size, appearance, and workspace provided in the house influence the correlation between occupants' satisfaction with buildings and IEQ.

Mulligan and Carruthers (2011), in a study on Amenities, Quality of Life, and Regional Development, stated that “amenities are keys to understanding the quality of life because they are precisely what makes some places attractive for living and working, especially relative to other places that do not have them and/or are burdened with their opposites, dis-amenities." Mathur and Stein (2005) also confirmed that "the emerging literature on amenities seems to indicate that the creation of amenities is one of the most effective ways to attract knowledge workers in a region and promote economic development and productivity." In accordance with economic reasoning, Rappaport (2008) asserted that the accessibility and convenience of amenities enhance the quality of urban life experiences.

In 2015, Allen et al. did a study on understanding how important urban amenities are. They looked at the issue by reporting on the main findings of 57 in-depth interviews with people who live in medium-density housing in four Auckland suburbs: Takapuna, Kingsland, Botany Downs, and Te Atatu Peninsula. Findings revealed the trade-offs resident workers make when choosing to live in medium-density housing typologies, how they value the urban amenities in their neighbourhood, and the role they think these amenities play in their location satisfaction. Steven et al. (2001) also stated that there are predictable relationships between amenities, quality of life, and local economic and organizational performance. However, Knox and Smith (2007) agreed that there are clear linkages between the provision of amenities and the changing lifestyles and aspirations of the residents. This shows that a key element in the transition to more urbanised environments is related to the extent to which urban amenities have a role in resident perceptions of quality of life.

The above studies clearly show that a variety of factors, including the nature of the worker's work, individual preferences for amenities, and the worker's overall well-being, can influence the relationship between housing amenities and worker performance. This suggests that providing adequate and comfortable housing with amenities such as proximity to the workplace, adequate indoor quality, noise control measures, and easy access to recreational facilities can have a far-reaching impact on the worker, resulting in improved performance at the workplace.

■6.0 INFLUENCE OF HOUSING FACILITIES ON WORKERS’ PERFORMANCE

The process of attracting appropriate talents in companies, institutions, and organisations requires the recruitment of many workers to reach a high level of productivity (Calder, 2007). However, choosing appropriate talents is not the only factor needed to achieve high work performance. Hamid and Hassan (2015) claimed that preparing proper work and living places to support, assist, and motivate workers are crucial factors that cannot be omitted. Consequently, it is important to consider the facilities apparatus in the residential place of workers. One of the inexpensive ways to motivate, retain, and enhance workers’ performance and productivity is to make them feel included in the organisation. This can be achieved through the advantages of the workplace itself. Firstly, to make people feel included, organisations need to satisfy the accommodation needs of their workers.

Research indicates that the relationship between residential housing facilities (RHF), indoor air quality (IEQ), and the productivity of occupants is complicated. A range of housing facilities and indoor factors such as electricity, water, sanitation, internet, thermal, visual, acoustic, and chemical can affect the productivity of the occupants (Apte et al., 2000; Jantunen et al., 1998; WHO, 2002). These relationships could often be very complex and have both short-term and long-term impacts on individuals (Babisch, 2008; Fisk et al., 2007; Lewtas, 2007). Issues such as epileptic power supply, sick building syndrome (SBS), building-related illness, and pollutants impact the overall productivity of the residential occupant. Studies have linked mental health and illnesses that are not easily noticeable in the short term but could be major problems in the long term (e.g., cardiovascular diseases, asthma-related issues, and obesity) to poor housing and indoor environmental quality (Jaakkola et al., 2013).

The concept of quality residential housing brings together three key aspects: the physical conditions of the house, the suitability of facilities in the house for its occupants, and the affordability of the house in occupation. The nature of home facilities is a significant determinant of health and performance at work. Good quality and appropriate facilities in a house are essential for the occupant's physical and mental well-being. Unhealthy homes can greatly affect performance and overall productivity in many ways. Houses with poor

facilities and repairs increase the risk of occupant injury (Keall et al., 2015). Similarly, Howden-Chapman (2009) observed that cold, damp, and moldy homes are associated with illnesses such as asthma and respiratory infections, which result in the affected occupant's unproductivity or non-performance. Indoor temperatures, according to Isaacs et al. (2006), increase the risk of acute cardiovascular events when it is cold. However, Mason et al. (2013) argued that the presence of hazardous substances in a home can affect the health and productivity of its inhabitants in both the short and long term.

On the other hand, Baker et al. (2013) noted that household crowding with inadequate facilities increases the risk of infectious disease transmission. We can conclude from the foregoing that crowded houses, cold, damp conditions, and other poor housing facilities can negatively impact occupants' mental health and productivity. Conversely, having functional housing facilities and housing that enable easy connection with the workplace promotes and supports mental well-being, social interaction, and increased productivity. Furthermore, Wakuma (2019) revealed in a study on factors affecting housing adequacy and accessibility that there is inadequate housing when all housing attributes are considered. The study found that the most significant housing attributes influencing occupants' perceptions of housing adequacy are available services, facilities provided, accessibility, and quality of management. Marnane and Greenop (2023) identified the nature of the dwelling site, dwelling design and construction, and the characteristics of the shared open spaces as the most significant factors influencing housing inadequacy among residents.

Similarly, Wyon (2004) noted that the first experiment on indoor quality was carried out in 1999 by researchers at the International Centre for Indoor Environment and Energy (ICIEE) at the Technical University of Denmark (DTU). The study indicated that indoor pollution might cause a reduction in the performance of office tasks by workers, thus revealing a new mechanism by which indoor air pollution may reduce productivity. According to Antikainen et al. (2008), indoor air can affect productivity through many different routes due to several indoor elements in the office and at home (physical, chemical, and biological) that may cause health effects such as respiratory, skin, nausea, and nasal among housing occupants and lead to a decrease in a decrease in the occupant's motivation to work.

■7.0 CONCLUSION AND RECOMMENDATION

How people evaluate adequate housing that offers optimum performance for the occupant in the workplace has been revealed in several studies. The study shows that housing attributes influence the way residential occupants perceive and evaluate adequacy, which has a direct relationship with occupants' overall performance at the workplace. One cannot separate the occupants' satisfaction with their housing conditions from the impact these conditions have on them.

The concept of adequate residential housing brings together three key aspects, which are the physical conditions of the house, the suitability of facilities in the house for its occupants, and the affordability of the house in occupation. The nature of home facilities is a significant determinant of health and performance at work. Good quality and appropriate facilities in a house are essential for the occupant's physical and mental well-being. Unhealthy homes can greatly affect performance and overall productivity in many ways. However, while the physical state of residential housing is essential, it is not sufficient on its own to achieve the best work performance at the workplace. Rather, the interaction between occupants and their houses is fundamental for enhancing work performance. The study found that housing in a suitable environment with functional facilities will be adequate for the occupant worker's effective performance. Therefore, to ensure high performance at the workplace and to improve quality of life, it is recommended that housing stakeholders such as owners, architects, urban planners, builders, construction, and estate managers consider the general well-being of the occupants above other things by paying greater attention to the nature of facilities and amenities provided in a residential house. It is further recommended that further research with a practical approach be conducted by considering all the residential housing attributes identified in this current study. This current article complements previous studies with a strategic view of adequate residential housing provision for occupants' work performance. Decision-makers in formulating development policies aimed at improving residential housing suitable for the occupants and enhancing greater work performance can use the information contained in this paper.

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