Research Article

EVALUATING THE IMPACT OF AGE ON URBAN SPONTANEOUS PHYSICAL HOUSING TRANSFORMATION IN ABEOKUTA, NIGERIA

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Abstract

Spontaneous physical housing transformation, SPHT, occurs when physical alterations are carried out on housing without recourse to building regulations by different age groups. This housing phenomenon is rampant among the informal housing sector of the study area. The study thus examines the impact of age on spontaneous physical housing transformations, SPHT, carried out among the informal housing in Abeokuta. Descriptive research design was employed using a survey questionnaire as an instrument for the data collection. A total of 400 structured questionnaire samples were randomly administered to the residents of the study neighbourhoods. A total of 185 samples were retrieved and 118 samples valid, representing a 64% response rate. The valid data were analysed by descriptive and one-way ANOVA statistical analyses. The results indicate statistical significance of SPHT within the age groups examined. A further Tukey's post hoc test conducted on the data revealed that SPHT occurred across the age groups examined. However, SPHT is significantly higher among the age groups of 25-55years. The transformation diminishes among the age groups of 56-75 years. These findings show that age group is a demographic factor influencing SPHT in urban informal housing of Abeokuta. There is the need to incorporate demographic factor, age, in urban SPHT policy formulation to accommodate the transformation need of the age groups Need for planned housing transformations needed for health and quality built environment required for sustainable built environment. The study concludes that there is a need for urban SPHT policy for urban housing sustainability in line with SDG Goal 11.

Keywords: Housing Alterations, Informal Housing, Sustainable Environment.

INTRODUCTION

The indiscriminate housing alterations carried out on building without recourse to planning regulations is spontaneous physical housing transformation. The SPHT is a physical phenomenon that affects the primary functions of the urban housing fabrics (Alagbe and Aduwo, 2014; Abdulrahman, 2018a). The SPHT has been observed to be reactionary to households changing need as it's arise with great impact on housing habitability (Kalabamu and Balaane, 2014; Adedayo and Zubairu, 2016). The importance of housing has established in the 1948 universal declaration of housing rights defines adequate housing as one that guarantees the occupants' security of tenure, functional services, affordability, habitability, accessibility, location and cultural adequacy. Access to adequate housing is a global challenge consequential to unprecedented urbanisation (UN-2018). Informal urban housing has been on the increase due to affordability challenges (Fahria, 2014; UN-2018). Many urban poor and vulnerable groups are living in precarious conditions, addressing their housing needs informally and vulnerable to isolation from livelihood opportunities (Asian Development Bank, ADB, 2013). The Urban SPHT phenomenon is gradually becoming unsustainable even among public housing given its spread among developing nations (Ilesanmi, 2010). The concept of housing sustainability is highly desirous in SPHT due largely to teeming populations.

The sustainability as defined by the World Commission on Environment and Development, WCED (1987) has a development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Therefore, unregulated SPHT could lead to excess physical development of urban space that could inhibit housing habitability need of future generations. This is possible when adequate framework policy for regulating the activity of SPHT is put in place. This would allow the housing to function for its primary purposes. The population growth places serious demand on the available stock (Faith, 2014). Consequently, over crowdedness, slums and congestions manifest due to indiscriminate development of physical structures built of substandard building materials, characterised the urban neighbourhoods (Ibem, 2010).The urban housing transformation activities have attracted research attention in recent times and different aspects of it have been examined. Most of such studies on urban physical housing transformations have established its impact on the socioeconomic activity of the urban residents (Alagbe and Aduwo, 2014; Aduwo and Ibem, 2017; Abdulrahman, 2018a). Socioeconomic factors are combinations of social, economic and demographic factors (Gifford and Nilsson, 2014;Cabrita *et al.,* 2017). None of these studies defines in clear terms the contribution of each of these factors of socioeconomic separately. Demographic and Economic variables are socioeconomic variables. Therefore, the goal of this study is to evaluate the impact of a demographic factor, age on urban SPHT activity in the study area. This would be achieved by examine the transformed houses and the age of the occupants using the transformed space in the informal urban housing

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neighbourhoods of Abeokuta. The result of the study could enhance informal housing growth and management through inclusive urban housing transformation policy that pay critical attention to how age groups change over time influence the SPHT phenomenon. This is necessary as many factors that hinder the success of policy and strategy delivery have been linked to the inharmonious working relationships among the urban key stakeholders (Howes *et al.,* 2017; Momoh *et al.,* 2018). The need to regulate urban SPHT activity especially among the urban informal housing is becoming urgent given the danger posed by housing congestions, over crowdedness, increase in slums and pollutions which expose urban residents to health risks especially contagious risks like Covid-19, Tuberculosis and diarrhea (Breckenkamp *et al.,* 2015; Tinson and lair, 2020.).The urban informal housing sector has been complimentary to urban housing provisions (Abdulrahman, 2018a). The importance of this urban housing sector cannot be ignored. Therefore, investigating the impact of age groups on SPHT to regulate the phenomenon for health and comfort of urban residents is imperative.

Urban and Urbanisation Trend in Nigeria

Urbanisation has been described as concentration of people, goods and services in an area (Opoko and Oluwatayo, 2014; Igwe *et al.,* 2017; Mwaniki, 2018). An urban centre is a spatial concentration of people whose lives are organised around non-agricultural activities (Avis, 2016). It is an agglomeration of 20,000 and more inhabitants where 75 per cent of the economic activity is non-agricultural (Centre of expertise for urban planning, CEUP, 2016). Different countries of the world used varying population sizes ranging from 5,000-50,000 inhabitants to define areas that can be regarded as an urban centre (Dijkstra, *et al.,* 2018). The Nigeria definition is based on population growth and legal or administrative criteria in addition to 20,000 populations (National Urban Development Policy, NUDP, 2006). However, in developed countries like Europe and North America, the population size of a place does not describe it as an urban centre (CEUP, 2016). Urban centres in developed countries must be administrative, educational, service, commercial and industrial centres. The inhabitants in these developed countries are the heterogeneous populations who are predominantly service providers. Densely agrarian homogeneous populations are not considered urban centres in developed countries. Thus, urban centres are heterogeneous populations of people with diverse cultural backgrounds whose means of livelihoods are also diverse but predominantly non-agriculture. Therefore, in defining an urban centre, population is critical in Nigeria and African as a whole. As Population increases lands expand with built-up areas of settlements for human activities (Breckenkamp *et al.,* 2015). In the first case urbanisation can be understood to be dynamic rather than being static due to population and other developmental growth second, it influences rapid change in social, economic, environmental, culture and means of livelihood of the people, third the population increase is driven by the concentration of social, economic, infrastructure, security and technological growth in addition to natural increase by birth. This makes urban areas as the centre of civilisation (Sheuya, 2009). All these development required physical structure for accommodation and informal housing sector takes the lead in providing affordable accommodations in urban centres. The 21st century would witness more city development (UN-Habitat, 2018; UN-DESA, 2019; Dijkstra *et al.,* 2018). This is due to rapid expansions of cities with human activities into the

peri-urban areas surrounding the core parts of the city. In 2014 it was observed that 55% of the world population lived in urban areas (UN-DESA, 2019). This shows that the majority of the world population now lives in towns or cities. About 0.5% of the world's land is occupied by cities and the cities account for about 70% of economic activity, 60% of energy consumption, 70% of global waste and 70% of greenhouse gas emissions (Avis, 2016). This rapid urbanisation exerts pressure on urban lands, housing and infrastructure with many types of risk converging in urban areas (UN-Habitat, 2021). In addition, future increases the world's urban population are expected to be highly concentrated in just few countries (Avis, 2016). The projected population growth of India, China and Nigeria will account for between 35-37% of the world projected population by 2050 (Avis, 2019). By 2050, it is expected that India will have added 416 million urban dwellers, China 255 million and Nigeria 189 million the report further projected. Therefore, the rapid expansion of the urban areas and large informal settlements would pose significant challenges for urban administrations.

The Nigeria housing deficit was put between 15-17 million housing units (NHP, 2006). This projection requires annual public housing provisions between 700,000 – 100,000 housing units for the next 50 years for the target to be met. The recent population was projected at 227 million (Figure1.0)with housing deficit of 28 Million (Vanguard Newspaper, 6th July, 2022). The urban housing need therefore, has gone beyond what public housing provisions could address. The urban public housing provisions deficit is complemented by the informal housing sector (Olatubara, 2007). The uncontrolled population increase is a source of concern in Nigeria especially the youth population group (Fox and Gandhi, 2021). All these justify this investigation.
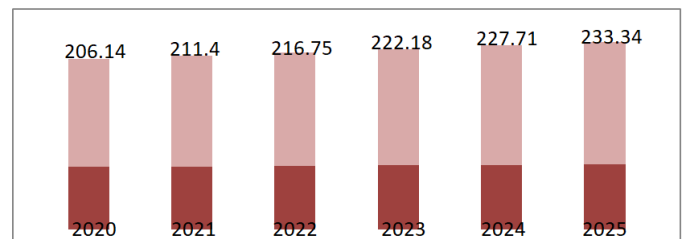
Source: Plancher: 2020

Figure 1. Nigeria projected population from 2020-2025

The projected annual population of Nigeria between 2020-2025 is shown in figure 1.0. The annual population increase is put at 5million (Figure 1.0). The chart shows a steady population increase of about 5 million annually for Nigeria. The rapid population increase is responsible for urban transformations and housing deficits in Nigeria.

LAND ACCESSIBILITY AND INFORMAL HOUSING

Access to urban land is a key factor to housing development (Rakodi**,** 2005; Shahzad *et al.,* 2022). Availability of land is a prerequisite for satisfactory housing in urban areas. The housing development is problematic with population growth due to difficulty in secured land accessibility (Odum and Ibem, 2011). The urban poor have weak financial and political supports to access land at suitable locations of choice within the city**(**Pattison, *et al.,* 2011;Kopko *et al.,* 2021). A similar study conducted on the impact of tertiary institutions on house

rental value in Ogbomosoby Akinyode *et al.,* (2015) revealed that accessibility to lands and finance are the major factors militating against the quest to own a house. As a result, many urban residents are forced to carry out adjustments to their houses for more spacious accommodation as the need unfolds for economic survival. A developing country like Nigeria there are three types of housing settlements: Organic, informal and formal housing development (Pugh, 1994). Organic housing is a cluster of houses developed without much infrastructure and planning inputs. This category of housing is usually inhibited by the indigenous people of the area and consumed mostly by indigenous people. Informal housing is housing that did not conform to most of the basic standards laid down for housing development in the city or housing not being subject to planning approval or building inspection (UN-Habitat 2011)**.** Informal housing developments are usually inhibited by civil servants, indigenous people, artisans, and most low and middle-income earners of the city (Amole and Olayemi, 2010; Olayiwola, *et al.,* 2012). The lands in informal housing are usually developed without a secured title. Formal housing developments have the legal title to the land and the whole neighbourhoods have housing dully approved by the planning and development agency. Informal housing settlements are a common feature of rapidly growing developing countries (UN-Habitat 2011). Urban informal housing accounts for 75% of urban housing provisions (Olatubara, 2007). The low-income earners cannot afford housing in the formal housing sector due to financial limitations (Taghizadeh-Hesary *et al.,* 2019).).

Therefore the informal sector becomes the predominant urban housing sector in Nigeria for the poor (Ikejiofor, 2006). Despite the preponderance of this category of housing in Nigeria urban centres, little research attention has been given to its transformational phenomenon especially in Nigeria. Informal urban housing comes in different types and forms for diversified human activity (Zhang *et al.,* 2020). The Nigeria housing policy (2001) recognises informal housing sector. A study conducted by Abdulrahman (2018b) on factors responsible for SPHT in urban centres of Southwest Nigeria, revealed the following factors to be central: population growth, need for urban land (space) and human diversified livelihood activity. These factors evolve in a vicious circle and thus required control rather than leaving it at the discretion of the individuals. The vicious circle of SPHT as conceptualised for urban housing problems of which SPHT is one of such problems is presented in Figure 2.

Urban Physical Housing Transformation

Spontaneous Physical Housing Transformation, SPHT, is when housing alterations or modifications are willingly carried out without recourse to building regulation or approval from relevant agency thereby undermine the primary functions of the main building fabrics to the users. Housing transformation is not a new concept of housing quality problem (Sheuya, 2009; Kalabamu and Bolaane, 2014; Aduwo and Ibem, 2017). However, its pattern varies among the urban areas.
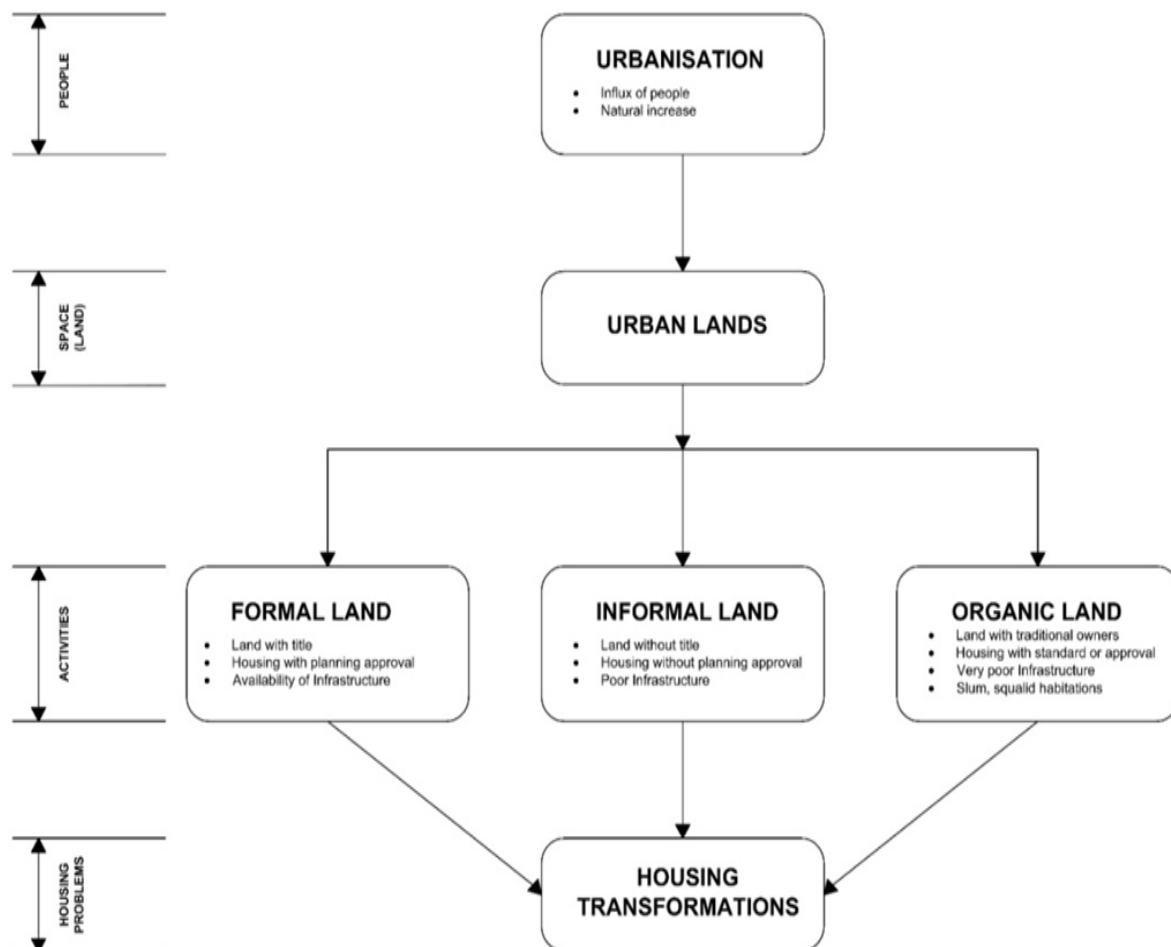
Source; Authors, 2022

Figure 2. Vicious Circle of SPHT in Urban Centre

Figure 2. expresses the evolving vicious circle pattern of urban housing transformation problems of which SPHT is one of such problems as conceptualized by this study. The influx of people to urban areas requires land space for activities in urban lands. Spontaneous erection of structure is such human activities. This trend keeps evolving with the increase in population growth in the urban centre. Housing developments constitute one of the major human activities in urban areas (Ibimilua and Ibitoye, 2015). A study conducted by Aduwo and Ibem, (2017) show that urban housing transformation is predominantly for socioeconomic gain. This suggests that urban SPHT is a socioeconomic problem predominated mostly by certain demographical groups of the urban centre.

The urban population growth is composed of different demographical variables; age, gender, death rate, birth rate, and education level at different proportions (Cabrita *et al.,* 2017; De Melo *et al.,* 2 017). The demographical variables are dynamic over time (Loprinzi *et al.,* 2013; Kazi *et al.,* 2018). Age determines the choice of activities in the human lifetime (Verbrugge *et al.,* 1996; Foundations of Development, 2019). This is because different age groups exhibit different behaviour, skill, and lifestyle (UN,2005). Consequently, different age groups would require house-type peculiar to their livelihoods activity. These reasons further establish the importance of age among other demographic variables. A study conducted by Aduwo and Ibem (2017) on the purpose of housing transformations in public estates in Lagos, Nigeria shows that spaces created from housing transformation are predominantly used for home-based socioeconomic activity. This suggests that certain age groups are more active players in this socioeconomic activity. The Nigeria population has been consistently on the increase and active age groups are on the increase and housing transformation for economic survival in the urban areas is on the increase.

However, the study on different aspects of urban informal housing is still low and has many areas to exploit. The significant motivational factors of urban public housing transformations have been linked to socioeconomic (Tipple, 2000; Kalabamu and Bolaane, 2014; Aduwo and Ibem, 2017;), socio-culture (Isah *et al.,* 2015), lack of input from the users when the housing was conceived and design (Adedayo, 2013), and housing transformation is the activity carried out to remedied housing dissatisfaction (Mohit *et al.,* 2010; Khan, 2014). None of these studies looks into how age groups influence urban SPHT. The planned and unplanned urban housing transformations adduced reason for different patterns of urban housing transformations in an urban landscape. The housing transformations in planned neighbourhoods appear organised while unplanned housing transformations appear spontaneous and chaotic (Abdulrahman, 2018b). The urban housing transformations are inversely proportional to level of satisfaction of the building users (Alagbe and Aduwo, 2014). This implies that the more the housing undergoes transformations for socioeconomic gains the less the comfort and satisfaction of the users. The SPHT inhibits the functions of the housing as a living space and reduced the habitability (Abdulrahman, 2018b). Adedayo (2013) adduced that lack of inputs by the house owners are responsible for urban housing transformations that occur at the post-occupancy life of a building. However, informal housing still undergoes transformations despite inputs by the owners. Thus housing transformations are largely due to the dynamic of time and human need.

Measurement of SPHT

Measurement of SPHT involves transformations of the physical housing characteristics and housing facilities including neighbourhood facilities like surrounding open space that has been altered due to household post-occupancy activities as the need arise. The study adopts four housing attributes by Mohit et al (2010). These are structural components of the main building, dwelling units, neighbourhood space around the building, and management services in charge of urban housing development and management. The alteration of these components constitutes SPHT of the study. This alteration is the discrepancy between the post-occupancy and pre-occupancy of the buildings examined. The age of the users of these transformed spaces and houses that are transformed would be captured by the study. The measurement as conceptualised for this study is demonstrated in figure 3. The SPHT involves the main house, house owner and the physical housing characteristics that are altered in the sampled houses. These form the three main circles shown. The continuous interactions of these three basic features brought about the vicious circle of SPHT among the urban residents. As in figure 3, the continuous interactions between house owners and the house itself define housing dissatisfaction. When the house owners become dissatisfied with housing conditions, the need to carry out alteration becomes inevitable. The interaction between housing and neighbourhood space around the main building (Physical housing characteristics) is expressed by the user of the transformed space.
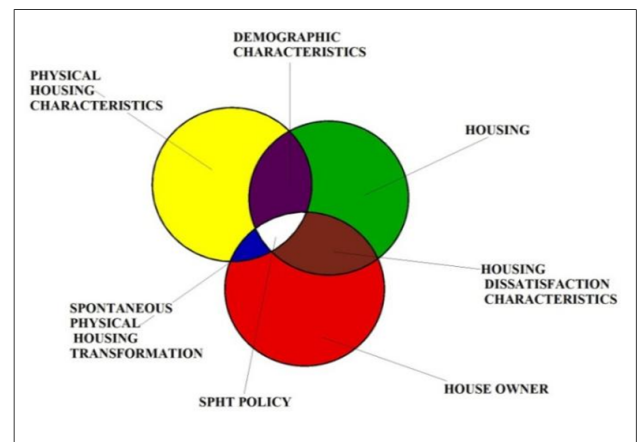

Figure 3. A conceptual model of SPHT vicious circle in urban centres. Authors, 2022

The age group of the user of the transformed space is the focus of the study. The interactions between the housing owners and the kind of use of the transformed space either for improvement, living apartment or for socioeconomic gains are shown as urban SPHT. The point of intersection of the three phenomena at the centre is the management services in charge of urban housing development and management (SPHT Policy). The policy is the centrality for regulating the urban SPHT in Abeokuta. This is necessary for ordering the activity of housing transformations for health and comfort of urban residents as required for urban housing sustainability.

Demographic Factor

Demography is the science of distribution and composition of a given population (UN, 2014; Amaral, 2018). Demographical

factors are age, gender and education level (Digby, 2013). The ageing is the universal biological changes that occur with time (Frank, *et al.,* 2015). Age is a measure of time and time is usually spent on a specific activity (Bronikowski and Flatt, 2010)**.** Certain characteristics are common to the similar age groups of similar socio-culture or socio-economic at each age level (Levings, 2006). Chronologically, age is a property of individuals for determining biological maturation and physical development (Deals and Collard, 2013). The experiences, roles and status of individuals are often tied to age (WHO, 2015). Age modifies individual behaviour (Sanderson and Scherbov, 2008). Thus, human activities are determined by age. Individual age category is used in forensic science analysis to provide useful information applicable to criminal, legal, anthropological and other kinds of investigations (Freire-Aradas *et al.,* 2017). Housing is consumable goods (Łaszek, 2013). Age determines individual satisfaction with consumable like housing (WHO, 2015). The age patterns of individuals have been studied in many social sciences including sociology and gerontology (Loretta, 2001; Flatt and Schmidt, 2009). Most of these studies examined time-use in relationship to age groups. How age influences SPHT has largely been ignored despite the time activity spent in housing accommodations. The study, therefore, aims to examine whether the age of the users of transformed housing influences the transformation phenomenon under investigation. The study hypothesized that differences in SPHT activity between the age groups are statistically insignificance.

Youths in the context of urban compositions and challenges: The age group of the urban population called youth has become the centre of focus globally and has been variously classified into such age brackets as 15-24 years (UN, 2005); 15-29 years (Commonwealth Youth Programmes); while for many countries, the figure varies from 13-18 years, 20-25 years, and 12-20 years (Bello-Kano, 2008). The youth as a concept of urban population has no precise definition in the African context as those who fall between 40-50 years of age are still considered youth contrary to what is obtainable in Europe and America (Alanana, 2003). Adolescence is the age group stretching between childhood and adulthood, 10-19 years and is defined as a biological growth period in which the age group engaged in major social roles and a transition period to full youth periods (Loprinzi *et al.,* 2012)**.** The African Youth Charter of 2006 defines youth as persons between the ages of 15 and 35 years. The National Youth Policy chronologically defined youth as persons of age 18 to 35 years (NYP, 2019). Therefore, Youth is age period between adolescence and adulthood periods. The youth as a concept of the population has varying definitions according to regions of the world. However, age is the basis for measuring this biological growth period of the urban population.

According to the National Bureau of Statistics, NBS, (2020) Labour Force Survey, Nigeria's unemployment rate was 27% in 2020. The number of persons in the economically active or working-age population (15 – 64 years of age) in 2020 was 116,871,186. The youth within the age bracket of 25-34 years were 23,328,460 or 29.1% of the national population. The 2021 unemployment rate in the second quarter of 2021 was 30%. The Nigeria population within the age group of 15 to 34 is about 35 percent of the country total population *(*Nevin *et al.,* 2020*).*An examination of unemployment rates by level of education according to Nevin *et al.* (2020) shows that 41% of the labour populations with a bachelor's degree are without

employment for this cadre of youths. The unemployment rate among bachelor's degree holders(18%) is higher than for people with vocational skills, the unemployment rate for people with vocational skills is also lower than people with master's (23%) and doctorate degrees (23%) the report further observed. The educated youths are more vulnerable. What this means is that there are more jobs vocational than white-collar jobs for the urban educated youths in Nigeria. The challenges of urban youths, therefore, are unemployment, continuous rising in the population of these active youths and the quests for diversification for economic survival. All these points to the need for more accommodations to practice means of livelihood and spontaneous growth of small structures for business outfits become popular in urban centres.

The study area

The study area, Abeokuta is the capital of Ogun State, Nigeria. The urban centre has a total population of 451,607 (NPC, 2010). The estimated population of Abeokuta is 683,096 at a growth rate of 3% in 2023. Abeokuta lies approximately between 7° 08' 41.72" N and 3° 22' 19.56" E. It has two administrative local governments (Abeokuta North and South). The urban centre has enormous industrial potentials due to its proximity to the commercial mega city of Lagos, Nigeria. The housing transformations that are spontaneously carried out in the informal housing in the neighbourhoods and the users' age are the focus of this survey conducted in the study area. Figure 4 is the google map of the neighbourhoods cover by the survey.
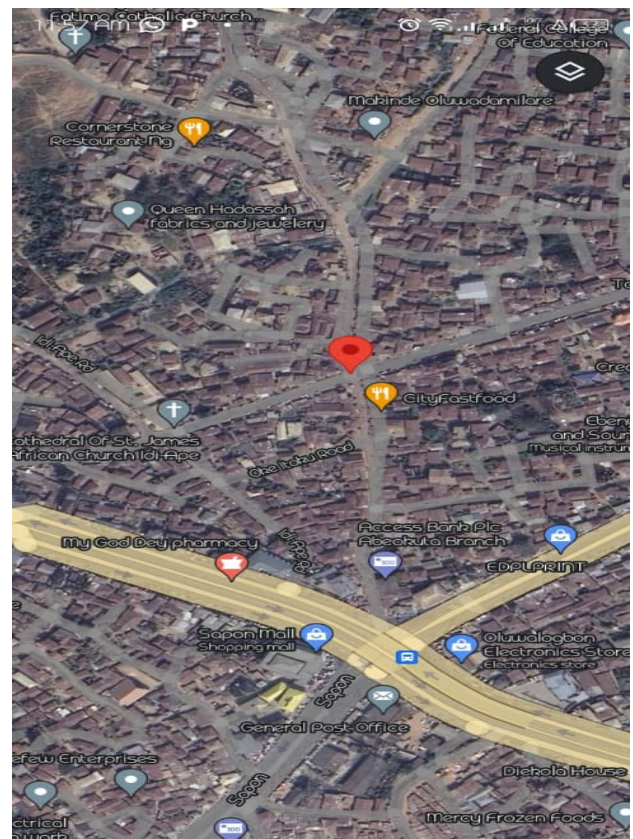

Figure 4. The Neighbourhoods of Abeokuta. Source, Google Map, June, 2023

Research methodology: A descriptive research design was employed using a survey questionnaire as an instrument for field data collection. This instrument was adopted for two

reasons: first, the questionnaire enables a wider coverage of the study area due to the high degree of literacy in the study area. Second due to busy nature of socio-economic activities in the neighbourhoods which preoccupy the targeted respondents most of the time made the questionnaire option more appropriate. The questionnaire has two distinct sections: demographic and SPHT characteristics sections. The demography covered the age groups measured at intervals of 10 years from 25 to 75 years. The SPHT section covered questions on transformed structural components of the selected houses, living, corridor, open space around the main house that has been transformed. Others include parking space and other neighbourhood space around the building, the kind of business used the transformed space for and the age of the occupants of the transformed space were captured in the questionnaire. The study has its sample frame from the informal housing in the neighbourhoods among the randomly selected transformed houses. A total of 400 structured questionnaire samples were randomly distributed through self-administering for ease of retrieve. This is adequate (Krejcie, 1970). This approached was adopted by Salami *et al.* (2020). A total of 185 questionnaire samples were retrieved out of which 118 were valid, representing 64% response rate. The low response rate has been observed to be due to the busy nature of the inhabitants' socioeconomic activities which inhibited the retrieving of more questionnaires. Morton (2012) observes that response rates are information about risk taken in the conduct of a study and does not translate to low validity of the result. The data were analysed using descriptive and one-way ANOVA analysis of variance statistics. The result indicates a statistical significance of SPHT among the age groups examined in Abeokuta.

In other to understand the age groups contribution to SPHT in the study a post hoc test was conducted for this multiple comparisons. A Tukey's post hoc test revealed that SPHT occurred across the age groups. However the phenomenon investigated is higher among the age group of 25 to 55years. The SPHT activity diminishes among the age group of 56-75years as shown in Table 1.0 Tukey method was employed for its strength to handle unequal age groups sizes of the study (Table 2.0). This comparison is necessary as the result of ANOVA does not provide detailed information about how an age group differs from others in the conduct of the SPHT phenomenon investigated.

ANALYSIS AND PRESENTATIONS OF FINDINGS

Demographic and Socioeconomic of the Respondents

The respondents' socio-demographic features show that 51% are between 25-35 years which is the predominant age group occupying the transformed structures for one business or the other. This is followed by the 36-45 years age group with 25%, ages between 46-55 years are 6%, while ages between 56-65 are 3% and 66-75 years is 13%. The respondents' education qualifications show that 7% have secondary education and 93% have tertiary degrees in various disciplines. The occupation analysis shows that unemployed graduates are 39%, self-employed are 25% and civil servants who double as self-entrepreneurs are 24% of the respondents. The tenants are 72% while the owner-occupiers of the transformed spaces are 25% of the respondents. The gender spread shows a predominant male 81% and female 15%.

Table 1. Descriptive Analysis of Spontaneous Physical Housing Transformation, SPHT

	N	Mean	Std. Deviation	Std. Error	95% Confidences interval for mean		Minimum	Maximum
					Lower Bound	Upper bound		
25-35yr	58	2.31	0.537	0.070	2.17	2.45	1	3
36-45yr	33	2.06	0.242	0.042	1.97	2.15	2	3
46-55yr	7	2.71	0.488	0.184	2.26	3.17	2	3
56-65yr	4	1.50	0.577	0.289	0.58	2.42	1	2
66-75yr	16	2.13	1.025	0.256	1.58	2.67	1	3
Total	118	2.21	0.597	0.055	2.10	2.32	1	3

Table 2. Multiple Comparisons of the Age Groups

Multiple Comparisons						
Dependent Variables: Area of Alterations (Sqm)						
Tukey HSD						
(I) Age of Respondent	(J) Age of Respondent	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
25-35yr	36-45yr	-0.387*	0.109	0.004	-0.68	-0.09
	46-55yr	-0.517*	0.164	0.015	-0.97	-0.07
	56-65yr	0.096	0.214	0.992	-0.49	0.68
	66-75yr	-0.309	0.265	0.77	-1.03	0.42
36-45yr	25-35yr	0.387*	0.109	0.004	0.09	0.68
	46-55yr	-0.13	0.18	0.951	-0.62	0.36
	56-65yr	0.483	0.227	0.209	-0.14	1.10
	66-75yr	0.078	0.275	0.999	-0.67	0.83
46-55yr	25-35yr	0.517*	0.164	0.015	0.07	0.97
	36-45yr	0.130	0.18	0.951	-0.36	0.62
	56-65yr	0.613	0.258	0.123	-0.09	1.32
	66-75yr	0.208	0.301	0.958	-0.62	1.03
56-65yr	25-35yr	-0.096	0.214	0.992	-0.68	0.49
	36-45yr	-0.483	0.227	0.209	-1.1	0.14
	46-55yr	-0.613	0.258	0.123	-1.32	0.09
	66-75yr	-0.405	0.331	0.738	-1.31	0.50
66-75yr	25-35yr	0.309	0.265	0.77	-0.42	1.03
	36-45yr	-0.078	0.275	0.999	-0.83	0.67
	46-55yr	-0.208	0.301	0.958	-1.03	0.62
	56-65yr	0.405	0.331	0.738	-0.50	1.31

*The mean difference is significant at 0.05 level.

The marital status shows that the single is 46%, married 38% and others 14%. The house-type shows rooming houses 56%, semi-detached 33% and single detached 6% and others 5% of the transformed houses. About 82% of the sampled houses covered have SPHT structures and 10% did not have and 8% are partly completed. The income distribution of the respondents shows that 78% have a monthly income between ₦ 100,000 - ₦ 250,000. The period of staying in the transformed spaces shows that 65% have stayed for a period between 1-10 years and 35% have stayed for a period between 11-20years.

Descriptive Analysis of SPHT Measured

The research question attempts to investigate whether age groups influence SPHT activity in the study area. The descriptive analysis of the SPHT is presented in Table1.0. The mean SPHT between the various age groups shows that the highest mean, 2.71 is expressed by age group 46-55 years. This is followed by the age groups 25-35 and 66-75 years with 2.31 and 2.13 mean scores respectively. The least mean is expressed by age group 56-65 years with a 1.50 mean score.

The Effect of Age group on SPHT

Levene test was used to test whether the different age groups of the respondents have an equal variance. The result, $F(4,113) = 44.891$, $P = .000$ shows a significant value that is greater than 0.05. Therefore the differences in SPHT activity between the various age groups were found to be statistically significant. Table 2.0 is the multiple comparison values for the differences in SPHT between the various age groups examined. The results established significant variations in SPHT levels between the different age groups examined. The age groups that are statistically significant and those not are shown in the multiple comparison analysis of Table 2. The difference between and within the age group 25-35 years and (36-45 and 46-55 years) is statistically significant with 0.004 and 0.015 and not significant for higher age groups 56-65 and 66-75 years as indicated. This simply means age group 25-35 years, 36-45 and 46-55 years have different transformation levels in SPHT activities and contributes significantly to this phenomenon in the study area. There is no difference between the age group 25-35 years and (56-65 and 66-75 years). These age groups i.e. (56-65 and 66-75 years) do not significantly contribute to the SPHT. The difference is statistically significant for and within the age group 36-45 years and 25-35 years with 0.004 significance. This implies that this age group would carry out SPHT on their housingat different significant levels. There is also a statistically significant difference in urban SPHT level between age group 46-55 years and 25-35 years with 0.015 significance and not statistically significant for age groups (56-65 and 66-75 years). This also means age group 46-55 years and 25-35 years have different significance transformation levels in carrying out SPHT and contribute significantly to urban SPHT in Abeokuta while the age groups (56-65 and 66-75 years) have no significance contribution to the phenomenon investigated. The most active age groups influencing urban SPHT in Abeokuta are 25-35, 36-45, and 46-55 years. These age groups are youths and early adult age groups as revealed.

DISCUSSION OF FINDINGS

The study examined the effect of demographic factor, specifically age, on the SPHT activity carried out on informal housing in the urban centre of Abeokuta. The study was motivated by the spontaneous continuous development of small business outfits in unorganised manners and predominantly occupied by different age groups. The study examined how predominant certain age groups could influence urban SPHT in the area. These unplanned development patterns are responsible for visual pollutions, obstructions to the public right of way, over stress of infrastructure and energy facilities, promotion of hybrid housing, high degree of noise, solid waste and hindering the primary functions of the building thereby creating poor indoor air quality detrimental to the health and wellbeing of the housing occupants. The activity of SPHT in the urban areas, therefore, requires proper management for a sustainable built environment.

The descriptive analysis indicates that the age group, 25-35 years, constitute the dominant users of the transformed space with 51% occupancy. The analysis results in Multiple comparison Table 2.0 for this group indicates a statistically significant difference in SPHT with these age groups of 25-35, 36-45 and 46-55 years as the predominant occupants of the transformed spaces examined with a mean value of 2.31, 2.06 and 2.71 respectively. However, the degree of carrying out SPHT varies significantly among these age groups. The findings suggest that the high demand for accommodation for different human activities significantly depend on age and this is high among the youths and the adult age groups as revealed by the results. The results also specifically show that the age group degree of carrying out SPHT is significantly higher in the age groups 25-35, 36-45 and 46-55 years. This corroborates with NBS, (2020), Nevinet. al, (2020), Avis, (2019) and UN-Habitat, 2021 that a high degree of urban unemployed active youths is a source of concern, particularly in Nigeria and Africa in general. This is worrisome as unemployment of able and trained persons could lead to frustration and tendency for violence, crimes, social and economic instability, poor planning, spontaneous physical developments and uncivilised attitude in urban areas.

Although the age group level of SPHT is significantly higher among the age group 25-55 years in Abeokuta, the degree at which SPHT is carried out is significant different among these age groups that are active in the conduct of the phenomenon investigated. The level of SPHT at a relatively younger age group of 25-35 years is higher and the same transformation activity is lower among the age group 56-65 years. It can be deduced that although SPHT activity is age-dependent phenomenon in the urban Centre examined, it is an economic problem of urban centre consequential to concentrations of unemployed youths in the city. The results also show that SPHT is directly proportional to youth age groups and inversely proportional to adult and old age groups. This simply means the more the population of youths in urban centre, the more the SPHT activity in urban housing in the area. Consistently, the more the old age groups (56-65 years and above) the less the SPHT activity that would be carried out in the urban areas. The high demand for space accommodation for business enterprises is associated with high population of unemployed youths and urban SPHT is for the economic survival of the youths and adults in urban centre. The study shows that there is a link between age groups and SPHT in the urban centre examined. Thus youths influence SPHT in urban areas and these age groups cannot be ignored in urban built environment planning, design and management. There is the need for a flexible Physical housing transformation policy that

would take cognisance of the changing age groups for organised built environment required for the health and comfort of the urbanites. The findings further shows that informal housing sector has largest population of youths in urban centre examined. The study has revealed among other things that urban youths are the wheel of housing transformations and ignoring these vibrant age groups could be consequential to social, economic and physical developments in urban centres. The Youths and adults are not a homogenous group. While both groups share basic universal needs, the expression of housing need depends on a wide range of personal, social exposure and technological factors. Technological developments are evolving on daily basis and cities are the centre of civilisation (Sheuya, 2009). The urban physical developments have to be in tandem with these technological development requirements for sustainability.

Conclusion

The findings of this study have established the influence of age in the spread of SPHT in the urban informal housing environment of Abeokuta. The youths and adult age groups are active at varying degrees in the promotion of SPHT activities in the urban areas examined. The spread of SPHT, as well as conversions of space around the buildings in an unplanned manner have been responsible for the over crowdedness outlook of the major streets in the study area and this could be prevented and controlled for urban sustainability when urban housing transformation policy is put in place and becomes operational. The urban informal housing sector has been contributing a lot to urban housing provisions, poverty reductions and transformation activities and has been attracting little research attentions. Therefore physical housing transformation should not be left to the discretions of the urban residents without a regulatory framework on how to conduct it statutorily.The study concludes that SPHT policy is imperative for health and comfortof residents for sustainable urban built environment as advocated for in the Sustainable Development Goals, SDG 11.

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