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HOUSING STRESSORS, GENDER AND PHYSICAL WELL-BEING IN CITIES IN AFRICA: NIGERIA

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ABSTRACT

The paper examined effects of housing stressors - housing attributes that could be stress-inducing which are high rent/cost, lack of space, housing discomfort, physical housing condition and dissatisfaction with housing - on the physical well-being of women and men in Ibadan, Nigeria. The study used primary data which were obtained through cross-sectional survey of households systematically carried out in Ibadan. Analysis of variance (ANOVA) and multiple regression statistical techniques were used to analyze the data. Significant intra-urban variation is found in the effects of housing stressors on physical well-being of women and men. Only the impact of the high rent/cost is found to be higher for men than for women. Each of the housing stressors has more impact on the female-head households than on the married women living in the male-head households. Policy implication of the study suggested that gender sensitive urban development and planning policies that target - provision/ rehabilitation of urban infrastructure, provision of infrastructural facilities and employment opportunities in the suburban and the surrounding rural areas, poverty eradication, creation of enabling environment to facilitate increasing production of affordable houses to the low-income earners, provision of more spacious housing and the creation of communal space in the residential areas, decentralization of urban activities and services - will have great effects on the general well-being of urban population.

Keywords: Gender, Housing, Stressor, Urban planning, Ibadan, Nigeria

INTRODUCTION

The pace of urbanization in Africa since the Second World War has accelerated markedly and is expected to continue to do so in most African countries for some time to come. In Nigeria, the pace of urbanization has been dramatic showing extraordinarily high rates of growth per annum (Egunjobi 1999). Consequently, there has been rapid expansion of Nigerian cities' areal extent which is now sometimes ten fold their initial point of growth (Egunjobi, 1999; 2002; Ogunsanya, 2002; Oyesiku, 2002). A crucial aspect of this is that city growth is largely uncontrolled (Egunjobi, 1999; 2002); and so the cities are characterized by slum housing conditions, limited coverage of urban services, unreliable service provision, general environmental deterioration, confused transport systems etc. There are quantitative and qualitative housing deficiencies (Agbola, 1998; 2005; Egunjobi, 1999; 2002). The rate of household formation is far higher than the rate of housing construction. The immediate result of this problem is homelessness and household crowding. In response to the huge unmet housing demand Agbola (2005) noted that Nigerians in response have dou-

bled up in their various apartments with between six (6) to ten (10) people in a bedroom. In his words Agbola stated that

> *"one of the newly recruited staff in my Department who could not get a university accommodation, however temporary, has to sojourn with a friend somewhere after Ring Road in Ibadan here. They were sixteen (16) in a room apartment." (Agbola, 2005:18).*

Thus urban centres in Nigeria are under severe strains imposed among others by inadequate housing.

LITERATURE REVIEW

Observation from literature show that the term 'stressor' as generally applied in the vernacular of the social sciences is understood to mean a condition that produces some degree of social dysfunction or stress-inducing effects (Theodore *et al,* 1993; Vila, 1994; Theodore *et al.*, 1996; Harries, 1997; etc.). In the field of stress theory, relationships between stress and dysfunction have been more fully developed. Stress theory is an outgrowth of the relationship between stress and detrimental performance. First applied to machines, it was later used to provide a framework for understanding links between stressful life events and ill-health (Harrries, 1997:1254). The father of stress theory, Hans Selye, defines stress as "the non-specific response of the body to any demand" (Selye, 1983); stress may be good "stress", or bad "distress" (Selye, 1980). Evans (1982) suggests a "negative" definition; "any situation in which the environmental demands on individuals exceed their abilities to respond".

Stressful situations in some contexts may have positive outcomes because they help to produce successful coping strategies. In many other situations, however, the individual experiences fatigue and distress. This reduces the likelihood that he or she will be able to respond effectively to the next set of stressors. As a review of literature reveals, a wide range of circumstances has been characterized as potentially stress-inducing. The common feature is either a situation that requires continual adjustment to a high stress environment, for example in the workplace (La Rocco *et al.,* 1980) or in an inner city residential neighborhood (Cohen *et al.,* 1982); or a sudden and marked change to which the individual has to respond. Some of the earliest work was focused on the issue of job loss (Gore, 1978; Kasl and Cobb, 1982) and other economic hardships (Liem and Liem, 1978; Thoits, 1982; Voydanoff, 1990). Stress in relation to both these situations is exacerbated by lack of control or perceived lack of control over stressful circumstances. In later studies, the focus moved to a variety of potentially stressful life events such as pregnancy (Nuckolls *et al.,* 1972; Barvera, 1981); divorce (Kessler and Eses, 1982; Weinraub and Wolf, 1983); bereavements (Walker *et al.,* 1997); chronic diseases (Workman, 1984) and physical disabilities (Schulz and Decker, 1985). In such circumstances, it is assumed that there is a disruption of everyday activities and a marked change in behaviour patterns in response to the stressors (Smith *et al.,* 1993).

Stress-inducing effects of poor housing are part of a research tradition that has developed markedly during the last three decades (Smith *et al.,*1993:603). Although few studies have focused on housing, Smith et al note that it is plausible to suggest a scenario of stress that is consistent with these earlier studies. An environment that is continually and uncontrollably noisy, noxious, depressing or dangerous could be hypothesized as

seriously impairing on individual's ability to respond appropriately (Pacione, 1990). If existing sources of stress are not removed, or if new stressors are introduced, the coping resources of the individual in question will be severely strained. In addition to the events and situations generally perceived to be stressful, Lazarus (1984) points out that, in some circumstances, the details of everyday life in stressful environments might amount to another source of stress, particularly for households that are already facing difficult times.

Investigations on the impact of housing on human well-being have attempted to isolate the relative contributions of different housing stressor, including both objective circumstances of housing (in physical, social and economic terms) and subjective or perceived evaluations of the housing situation (Kasl and Harburg, 1975; Martin, 1987; Smith, 1990; Neil, 1991). Researches have reported that inadequate housing can be linked directly and indirectly to a range of outcome measures, including physical illness (Duvall and Booth 1978; Theodore et al 1993); strained interruptions in adolescent development (Simmons *et al.,* 1987; Hendershott, 1989); strained patterns of family interaction (Edwards *et al.,* 1982) and psychological distress (Cappon, 1971; Mitchel, 1971; Kasl, 1974).

Edwards *et al.* (1982:242) also note that mental stress, physical disorders and psychological illness in particular have been observed with remarkable consistency to be related to housing (Schmitt, 1966; Fanning, 1967; Capon, 1971). They also assert that females may be more adversely affected by housing, since in enacting traditional sex roles they are more likely to be confined to the dwelling than men (p. 244). Empirical investigation of this kind is rare in Nigeria. The null hypotheses tested in this paper are that: (i) there is no significant effect of housing stressors on the physical well-being of women and men - we expect that there is no gender difference in the effects of housing stressors on the physical well-being, and (ii) there is no significant intra-urban variation in the effects of housing stressors on the physical well-being of women and men.

METHOD OF DATA COLLECTION AND ANALYSIS

Data used in the paper were obtained from a cross-sectional survey of households in Ibadan, Oyo State, Nigeria. The sampling frame utilized was the total number of estimated households in Ibadan Municipal Area as of 1999. The average household size declared for Nigeria in the result of the National Population Commission (NPC) 1995/96 household survey is 4.48; this was used to divide the projected 1999 population of each locality as defined by the National Population Commission (NPC) in the Ibadan municipal area to obtain an estimate of household number. Due to cost consideration, a total of seven hundred and twenty-one households were selected as the sample size. This sample represents 0.20 percent of the estimated households in Ibadan as of 1999. To make for effective and objective coverage, due to non availability of the list of all households in each locality in Ibadan, the number of questionnaire forms administered in each locality was proportional to the total number of estimated households in each locality. For the purpose of intra-urban analysis, each of the locality in Ibadan municipal area as defined by the National Population Commission (NPC) was accordingly sorted into four residential areas – high density residential area (comprising traditional core high density residential area of Ibadan and non-

traditional core high density residential area), medium density residential area and low density residential area - according to where it was located. This was done following existing studies and in addition to reconnaissance survey and consultation with town planners. The classification of high density into two – traditional core and non-traditional core – was based on the observation that these two residential areas which are usually classified together in Ibadan are distinct in social and physical patterns. This was observed from the literature, reconnaissance survey and consultation with town planners. In terms of socio-economic status and housing condition non-traditional core high density residential areas are better off. Also, in terms of ethnic status, traditional core areas are relatively homogeneous in the sense that majority of the residents are indigenes of Ibadan. In the non-traditional core high density residential areas, residents are of different ethnic background. These factors that guided our division of high residential density areas into two are critical factors of residential differentiation which have been identified in the literature. Table 1 shows the summary of the four residential areas, projected 1999 household number and number of questionnaire forms administered.

The sampling procedure adopted was aimed at sampling along the major streets in each locality. Systematic random sampling was used in the selection of houses along the streets. The first house was selected by the use of random numbers and all subsequent units in the sample were chosen at uniform intervals of fifth houses. From each selected houses, a household, particularly a woman and her spouse (if any) were interviewed. Information was collected on housing attributes and physical well-being.

Multiple regression and analysis of variance (ANOVA) is used to test the stated hypotheses. The regression model is used to examine if there is gender difference in the impacts of the housing stressors. The model is of the form:

$$Y_1 = a_i + b_1X_1 + b_2X_2 \ldots + b_nX_n + e$$

where:

Y= dependent variable – Physical well being

a_i = base or multiple regression constant referred to as Y intercept

b's=regression coefficients or unknown parameters which indicate the change in Y per unit change in the explanatory variables

X's= independent variables (housing stressors variables - high rent/cost; lack of space; housing discomfort; physical condition of housing; and dissatisfaction with housing)

e = error terms or residuals

Choice of Variables

Dependent Variable – Physical Well-being

Physical well-being variables are specific measures of health problems and psychological distress. Health problems included are those that are particularly related to poor housing condition. Such health problems include cough, wheeze, blocked nose, skin infections, tiredness/body weakness, malaria, headache, diarrhea etc (Martin, *et al.,* 1987; Platt *et al.,* 1989; Strachan, 1988; Hyndman, 1990 etc). Psychological distress has two major forms (Mirowsky and Ross, 1989; Theodore *et al.,* 1993) depression and anxiety. Argument in the literature is that depression and anxiety are no distinct forms of psychological distress. They are instead closely intertwined (Dohrenwend *et al.,* 1980; Mirowsky and Ross, 1989). In this study, Theodore *et al.,* (1993) scale of psychological distress which comprises ten items that reflect various symptoms, including aspects of both anxiety and depression is adopted. Ta-

ble 2 shows the definition of physical well-being variables.

Independent Variables

The literature indicates that housing stressors have both tangible and intangible elements and that the relationship between these may be a result of individual tastes and preferences, previous housing experiences, variations in aspiration levels and cultural factors such as ethnic background (Stokols and Shumaker, 1982; Smith *et al.,* 1993; etc). Indicators of housing stress identified in the literature are: physical conditions of housing, lack of space per person, high rent/cost, dissatisfaction with housing and housing discomfort (Smith *et al.,* 1993; Theodore *et al.,* 1993; 1996). The physical condition of housing has two component items which are: state of neighbourhood utilities/services and the state of repair of the housing unit. Space per person has both objective and subjective indicator. Objective indicator of space per person is the number of persons per room. Subjective indicator used is the felt lack of space as measured by the perceived/felt lack of space/privacy. Indicator of housing discomfort used is the prevalence of pest in the house. Dissatisfaction with aspects of housing is a subjective measure of the housing quality. High rent is measured as the proportion of the household's income spent on accommodation. Table 3 shows how each of these housing stressors variables used as independent variables is measured.

Test of multi-collinearity among the Independent variables

The correlation coefficients among the independent variables used in the analysis are shown in Tables 4 (women) and 5 (men). These tables show that the correlation coefficients among the independent variables are relatively low, the highest being 0.338 (Table 4) and 0.334 (Table 5) between the felt lack of space and dissatisfaction with housing. There is no multi-collinearity occurring between the independent variables.

Table 1: Residential areas, projected 1999 household numbers and number of questionnaire forms administered in Ibadan Municipal Area

S/N	Residential Area	1999 Population Projection	Number of Households	Number of Questionnaire Forms administered
1.	Traditional core high density	829,203	185,090	384
2.	Non-traditional core high density	329,719	73,598	150
3.	Medium Density	295,917	66,053	136
4.	Low Density	94,716	21,142	51
	Total	1,549,556	345,883	721

Table 2: Definition of Physical Well-Being Variable

Code	Variable	How measured
Y	Physical well-being	(i) Specific physical health problem - 1 if experiencing any of the following specific health problems: persistent cough, wheeze, blocked nose, breathlessness, skin infections/diseases (e.g. eczema, rashes), tiredness or body weakness, feverish or feeling hot internally, malaria, headache, cholera and diarrhea. (ii) Psychological distress - 1 if often or sometimes experiencing any of the following: (i) anxious about something or someone; (ii) that people are trying to pick quarrels or start argument with you; (iii) so depressed that it interferes with your daily activities; (iv) that personal worries are getting you down physically ill; (v) moody; (vi) felt you were confused; (vii) are you ever bothered by nervousness? i.e. by being irritable, fidgety or tense; (viii) do you feel that nothing ever turns out for you the way you want it to? (ix) do you have trouble concentrating or keeping your mind on what you are doing? if the respondent is the worrying type.

RESULTS AND DISCUSSION

Impact of housing stressors on physical well-being of women and men in Ibadan

The impact of housing stressors as indicated by the proportion of variance explained by housing stressors variables on the physical well-being of women is shown in Table 6, while that of the men is shown in Table 7.

The low value of R-Square may be an indication that there are other variables apart from housing that have effect on physical well-being. Previous studies exploring the effects of housing quality on physical health have also got low R-Square (Theodore *et al.,* 1993). This could be explored in further studies. Nevertheless, in the present study, the main interest is the relative impacts of each of the housing stressors variables on women's and men's physical well-being. This is clearly seen in Tables 6 (women) and 7 (men). The women's most significant housing stressors are lack of space ($p<.01$), dissatisfaction with housing ($p<.01$), physical condition of housing ($p<.01$) and housing discomfort ($p<.05$) (Table 6). In the case of the men, the most significant housing stressors are lack of space ($p<.01$) and dissatisfaction with housing ($p<.01$) (Table 7). In all the housing stressors included in the analysis, only in the impact (as shown by the R-Square Change value) of the high rent/cost is the impact greater for men (0.6) than women (0.1) (Fig. 1).

Table 3: Definition of Housing Stressors Variables

Code	Variables	How measured
1	House rent/cost	
X1	High rent	Proportion of the household's income spent on accommodation.
2	Lack of space	
X2	Objective measure of lack of space	- Number of persons per room
X3	Felt lack of space	- 1 if felt lack of privacy in the house - 1 if at home there are too many people around - 1 if in the house, the respondent has almost no time alone - 1 if in the house people get in each others' way - 1 if at home respondents don't have enough room to do things conveniently.
3	Housing discomfort	
X4	Prevalence of pest in the house	- 1 if pest is prevalent in the house
4	Physical housing condition	
X5	State of deterioration of the housing unit	- 1 if there are any cracks in the walls of the house - 1 if there are any cracks in the floors of the building - 1 if the roof of the house is leaking and needs repairs - 1 if the house needs general repairs
X6	Neighbourhood condition	- 1 if each of the following neighbourhood facilities is in bad condition: neighbourhood road quality, garbage collection, public transport, street light, water supply, school quality, shops, power supply and general condition of the neighbourhood.
5	Housing dissatisfaction	
X7	Dissatisfaction with housing	-1 if dissatisfied with any of the following aspects of housing: kitchen, balcony/corridor/verandah, backyard, bathroom, toilet, ventilation, water supply in the house, power supply in the house, noise, smell, safety and courtyard.

Table 4: Correlation Coefficients among housing stressors variables (Women)

Variable		X1	X2	X3	X4	X5	X6	X7
X1	High rent/cost	1.000						
X2	Objective measure of lack of space	-.087	1.000					
X3	Felt lack of space	-.067	.209	1.000				
X4	Prevalence of pest in the house	-.042	.126	.220	1.000			
X5	State of deterioration of the housing unit	.068	-.136	-.280	-.311	1.000		
X6	Neighbourhood condition	-.030	.123	.202	.211	-.318	1.000	
X7	Dissatisfaction with housing	-.065	.129	.338	.263	-.461	.481	1.000

Source: Field survey, 2001

Table 5: Correlation Coefficients among housing stressors variables (Men)

Variable		X1	X2	X3	X4	X5	X6	X7
X1	High rent/cost	1.000						
X2	Objective measure of lack of space	-.087	1.000					
X3	Felt lack of space	-.026	.178	1.000				
X4	Prevalence of pest in the house	-.042	.126	.261	1.000			
X5	State of deterioration of the housing unit	.068	-.136	-.317	-.311	1.000		
X6	Neighbourhood condition	-.030	.123	.284	.211	-.318	1.000	
X7	Dissatisfaction with housing	-.065	.129	.334	.263	-.461	.481	1.000

Source: Field survey, 2001

Table 6: Impact of housing stressors on physical well-being of women

Housing Stressors Variable	Physical well-being of Women					
	Proportion of Variance (R-Square Change) (%)	R	R-Square	Std. Error of the Estimate	F- Change	Sig. F-Change
High rent/cost	0.1	.030	.001	3.9588	.657	.418
Lack of space	4.2	.206	.043	3.8808	15.533**	.000
Housing discomfort	0.6	.221	.049	3.8710	4.610*	.032
Physical condition of housing	1.5	.252	.063	3.8463	5.602**	.004
Dissatisfaction with Housing	3.6	.316	.100	3.7735	28.702**	.000

* Significant at p<.05
** Significant at p<.01
Source: Field survey, 2001

Table 7: Impact of housing stressors on physical well-being of men

Housing Stressors Variable	Physical well-being of Men					
	Proportion of Variance (R-Square Change) (%)	R	R-Square	Std. Error of the Estimate	F-Change	Sig. F-Change
High rent/cost	0.6	.078	.006	3.4035	3.509	.062
Lack of space	2.6	.181	.033	3.3638	7.737**	.000
Housing discomfort	0.1	.183	.034	3.3653	.502	.479
Physical condition of housing	0.9	.207	.043	3.3553	2.688	.069
Dissatisfaction with Housing	1.5	.240	.058	3.3316	9.001**	.003

* Significant at p<.05
** Significant at p<.01
Source: Field survey, 2001

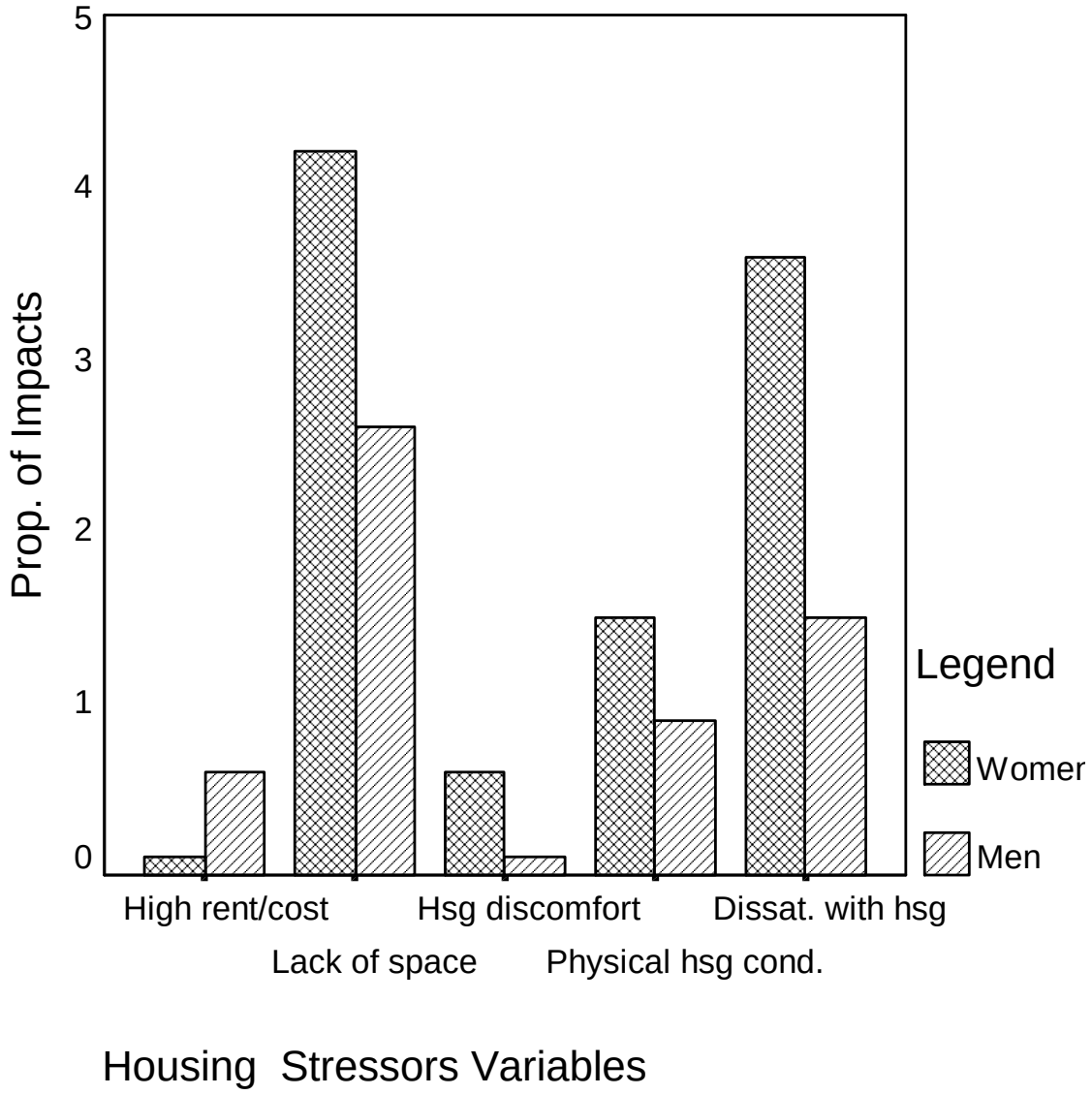

Fig. 1: Effect of housing stressors on physical well-being gender-wise

This result may be due to the fact that while responsibility for household housing provision falls more heavily on men, women are the major consumers and users of housing. Women's daily activities are found to be more adversely affected by housing condition than that of men (Table 8 and Fig. II).

Table 8: The percentage figures of women and men that their daily activities are adversely affected by the aspects of housing condition

Aspects of the household housing	Traditional core high density residential area		Non-traditional core high density residential area		Medium density residential area		Low density residential area		All the residential areas	
	Women (n=384) (%)	Men (n=292) (%)	Women (n=150) (%)	Men (n=114) (%)	Women (n=136) (%)	Men (n=125) (%)	Women (n=51) (%)	Men (n=40) (%)	Women (n=721) (%)	Men (n=571) (%)
Location of the house	25.1	21.6	18.7	22.8	22.1	14.4	13.7	10.0	22.4	19.4
Kitchen	18.0	10.3	17.4	11.4	11.8	8.8	11.8	5.0	16.2	9.8
Power supply	62.5	61.3	66.0	49.1	64.0	66.4	43.1	47.5	62.1	59.0
Water supply	35.2	26.4	35.0	23.7	41.9	35.4	20.6	11.3	35.4	26.8
Neighbourhood road condition	24.0	18.2	36.0	28.9	35.3	34.4	7.8	12.5	27.5	23.5
Space for income generation	17.7	7.5	18.0	9.6	8.8	8.0	9.8	7.5	15.5	8.1
Living space	19.3	13.0	10.7	10.5	5.9	4.0	2.0	2.5	13.7	9.8

Source: Field survey, 2001

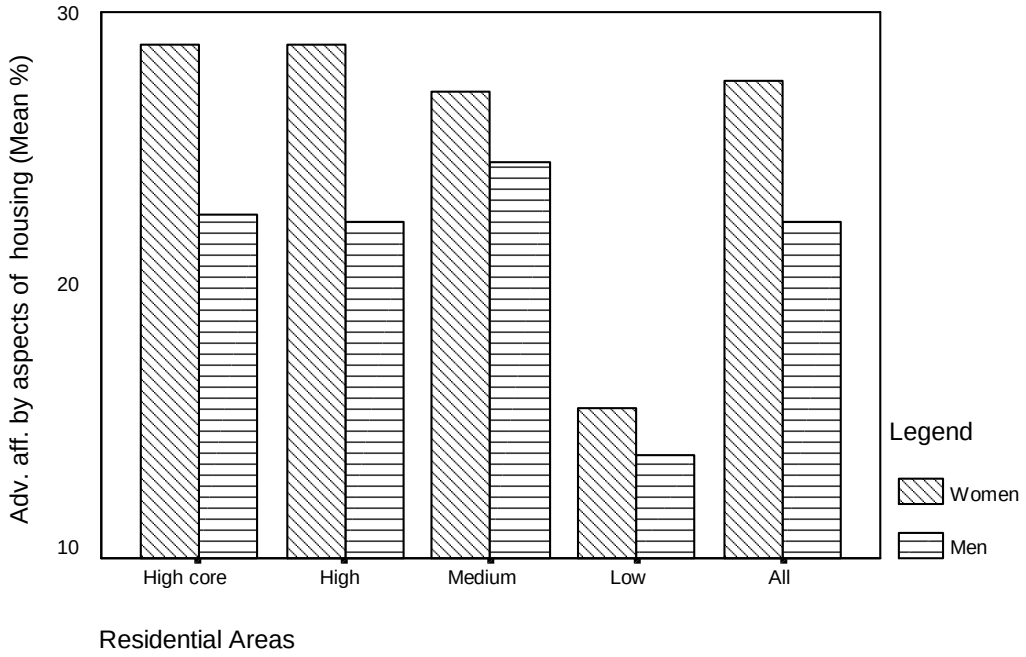

Fig. II: Gender differences in the felt adverse effects of housing condition in Ibadan

The impact of housing stressors variables as indicated by the proportion of variance explained by each of the housing stressors on the physical well-being of women living with their husband and the female-headed household is shown in Tables 9 and 10 respectively.

Table 9: Impact of housing stressors on physical well-being of married women

Housing Stressors Variable	Physical well-being of married Women					
	Proportion of Variance (R-Square Change) (%)	R	R-Square	Std. Error of the Estimate	F- Change	Sig. F-Change
High rent/cost	0.0	.005	.000	4.0154	.015	.902
Lack of space	4.1	.201	.041	3.9392	13.594**	.000
Housing discomfort	0.5	.214	.046	3.9315	3.519	.061
Physical condition of Housing	1.3	.242	.058	3.9116	4.270*	.014
Dissatisfaction with Housing	3.1	.300	.090	3.8488	22.071**	.000

* Significant at p<.05
** Significant at p<.01
Source: Field survey, 2001

Table 10: Impact of housing stressors on physical well-being of Female-headed household

Housing Stressors Variable	Physical well-being of Female-headed household					
	Proportion of Variance (R-Square Change) (%)	R	R-Square	Std. Error of the Estimate	F-Change	Sig. F-Change
High rent/cost	7.1	.266	.071	3.3333	5.268*	.025
Lack of space	5.2	.351	.123	3.2861	1.997	.144
Housing discomfort	2.1	.380	.144	3.2709	1.624	.207
Physical condition of Housing	5.8	.450	.202	3.2067	2.334	.105
Dissatisfaction with Housing	11.0	.559	.313	2.9998	10.132**	.002

* Significant at p<.05
** Significant at p<.01
Source: Field survey, 2001

These results show comparatively that each of the housing stressors has more impacts on the female-headed household than on married women living in the male-headed household (see Fig. 2).

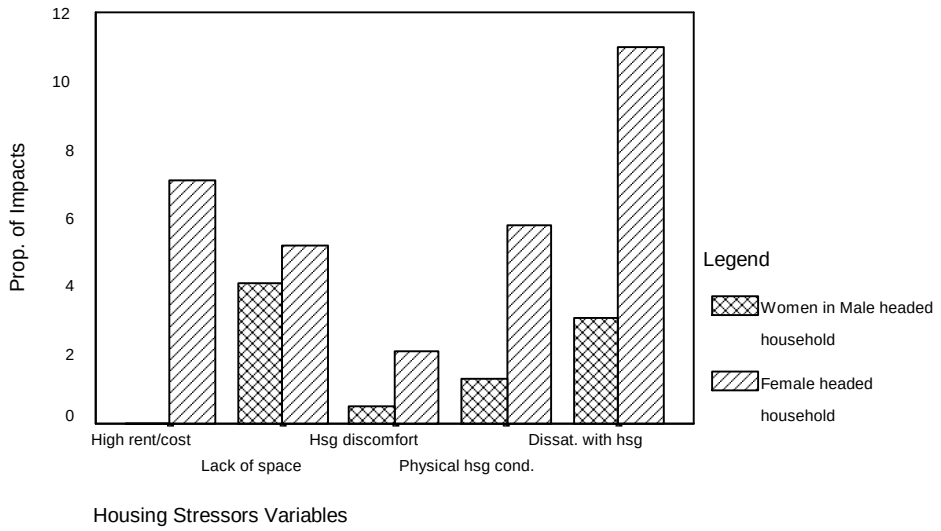

Fig. 2: Effects of housing stressors on the physical well being: Women living with their husband as against Female-headed household

The married women's most significant housing stressors are lack of space (p<.01), dissatisfaction with housing (p<.01) and physical condition of housing (p<.05) while those of the female-headed household are dissatisfaction with housing (p<.01) and high rent/cost (p<.05).

These results show that there is significant impact of the housing stressors on the physical well-being of women and men. Also gender differences are observed in the result of the impact of the housing stressors on the physical well-being. Therefore we reject the null hypothesis which states that there is no significant impact of the housing stressors on the physical well-being of women and men and that no gender differences are expected in the impact of the housing stressors on the physical well-being of women and men.

Intra-urban Variations in the effects of housing stressors on the physical well-being of Women and Men in Ibadan

One of the usefulness of the regression statistical analysis is that it can be used to measure the amount of impact or change one variable produces in another (De Vaus, 1996; Robinson, 1998; Babbie, 1998). Multiple linear regression technique was thus used to obtain the standardized regression scores value for each of the 721 women cases and 571 men cases in the sample. The standardized regression scores are the regression values that the regression model predicts for each case. Analysis of variance is used to analyze the predicted regression value obtained separately for women and for men. The result of the analysis of variance (ANOVA) is shown in the Tables 11 and 12.

Table 11: ANOVA test of women housing experience

		Sum of Squares	df	Mean Square	F	Sig.
Standardized Predicted Value (Women)	Between Groups	64.632	3	21.544	23.596**	.000
	Within Groups	654.643	717	.913		
	Total	719.275	720			

** Significant at p<.01
Source: Field survey, 2001

Table 12: ANOVA of men housing experience

		Sum of Squares	df	Mean Square	F	Sig.
Standardized Predicted Value (Men)	Between Groups	50.535	3	16.845	18.334**	.000
	Within Groups	520.941	567	.919		
	Total	571.476	570			

** Significant at p<.01
Source: Field survey, 2001

The analysis of variance (ANOVA) F-value of women is 28.921, and of men is 26.621. The significance value of both women and men F-value is .000. These analyses of variance (ANOVA) results are significant at $p<.01$. These results imply that there is a significant intra-urban variation in the effects of housing stressors on the physical well- being of women and men in Ibadan. Therefore we reject the null hypothesis which states that there is no intra-urban variation in the effects of housing stressors on the physical well- being of women and men.

POLICY IMPLICATIONS AND CONCLUSION

The paper examines gender differences and intra-urban variations in the effects of housing stressors on the physical well-being of women and men. The result shows that in all the housing stressor variables used in the analysis, only the impact of the high rent/ cost is found to be higher for men than for women. In all the other housing stressor variables, the impacts are found to be greater for women than for men. In the case of the women living with their husbands and the female-headed households, the result shows comparatively that each of the housing stressors has more impact on the female-headed households than on the married women living in the male-headed households. The analysis of variance (ANOVA) result shows that there is significant intra-urban variation at $p<.01$ in the housing experience of women and men.

This may be due to the fact that the contemporary urban pattern is such that spaces are shaped unequally. There has been the pursuit of fragmenting urban policy. An interesting aspect of this division with respect to residential pattern is the division as expressed through the household income. Byrne (1999) in his article on "Divided Spaces: Social Division in the Post-industrial City" notes that with income, the rich are separated from the rest of us and with space; it is the poor who are separated off. The pursuit of fragmenting urban policy, with the resultant increasing separation of spheres of work and home, have implications for the issues of transport and accessibility, coupled with that of local service provision which are critical to women's lives. The increasingly vital role of women in the labour market is not reflected in the planned environment of cities and towns. Access to services and employment in the cities and towns assumes traditional roles. This is evident in the lack of appropriate nursery and public transport provision and in the physical layout of the cities and towns. Low or inadequate service provision and gender blind design have hitherto hindered women's social as well as physical access.

Most studies on quality of residential land-use in Nigerian cities have identified three major categories of residential land-use qualities, which are distinct in social and physical patterns. These are low, medium and high quality residential land-use areas. While the high quality residential land-use areas have the common characteristics of being well-planned, the opposite is the case with the low quality residential land-use areas. The most distinguishing feature of the low quality residential land-use areas is that they have never been planned in most cases. Consequently, houses have been built without reference to a street network. In some of the modern forms, a significant proportion of the low quality residential land-use districts are planned with a grid pattern and network of roads. Nevertheless, the standard of housing construction is low, and most of

cost minimization in the pursuit of shopping, recreation, schooling and urban activities system. In urban planning, it is desirable to decentralize through the ordering of urban activities and services in a hierarchical manner to ensure utilities maximization and distance minimization. Greater attention should de given to the development of neighbourhood parks, shopping centers, corner shops and other lower order services as a matter of deliberate physical planning policy. Also, as a matter of urgency, the master plan of the Ibadan metropolis should be revised, (as it is already outdated) in order to incorporate the suburban development, upgrading of the decaying neighbourhoods and, above all, meet the needs of the dynamic population of the city.

Since women are the major and primary consumers and users of shelter and infrastructure, there is the need to increase the enlightenment and raise the consciousness of women, particularly the illiterate ones, on issues relating to sanitation, hygiene, and other public health matters. Of course, policies geared towards improving the number of females going to school should be pursued. Observation from the literature shows that educated women live a better quality of life than uneducated women. Women enlightenment and education generally on their need to be involved in discussions and activities in housing and urban planning/development are recommended.

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such residential land use districts lack basic amenities and facilities that make housing environment a convenient place to live. This study has shown that even though both women and men are affected by the housing condition, the effect on women is more due to their expected roles and responsibilities in the households.

Therefore, in order to address the situation, there is the need to carry out spatial engineering which Okafor (2000) terms "spatial manipulation" of the residential environments but with gender sensitivity. In other words, and as Filani (1999) identifies in the challenge to the future of geography, there is the need to organize and re-organize space within the dwelling unit and the dwelling environments in such a way that is gender sensitive. Hitherto, the focus of professionals engaged in the business of creating dwellings and dwelling environments has been on households defined and interpreted more often as household heads, whereas women are the primary and major consumers and users of these environments. For instance, it is common for the architect, in preparing a programme of requirements for the design of owner-occupied residences, to involve in the process, only the household head (usually a man) who has commissioned him to design a house. Little or no importance is attached to the specific requirements, values, roles and attitudes of women with respect to both the dwelling and its environment. In order to carryout spatial engineering that is gender-sensitive there is need to adopt approaches to planning and design that are more gender-conscious and sensitive.

The need for gender-conscious and sensitive spatial engineering even becomes more imperative with the fact that there has been a continuing process of separation of spheres of work and home. There is the need for the upgrading of the residential areas. Roads and other basic amenities and facilities need to be provided where they are non-existent and also made functional where they are no more functioning. Women should be encouraged to be involved in the planning interventions in the urban problems. This is because, in almost all aspects of the urban problem, women would benefit most from improvements. Tasks such as collecting drinking water and fuel, cooking and washing, keeping homes and land tidy, getting rid of waste, keeping up allotments, bringing up children and caring for the sick and invalids in the home usually fall on their shoulders. Hitherto, just as it is taken for granted that women should be responsible for these tasks, it is also assumed that women do not need to be involved in planning interventions in these areas. This perspective to urban planning and policy must change. The needs and priorities of women shuold be taken into account when neighbourhood improvements and basic facilities are being prepared.

As emphasized by Kolstee *et al.* (1994), women should be the starting point of plans for land use, routes to schools and markets, child care centers and local family and healthcare centers, and the location and layout of collective drinking water and sanitary facilities, collection points for domestic waste and facilities in the home ranging from ventilation in kitchens to space for a cottage industry that can supplement the household's income.

Man, naturally, would like to follow the line of least resistance and expend minimum efforts in reaching his goals. In an urban planning setting, the goal is achieving distance/

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