Urban household crowding, psychological well being and gender in developing countries: Nigeria

Abidemi R. Asiyanbola
Department of Geography and Regional Planning,
Faculty of the Social and Management Sciences,
Olabisi Onabanjo University,
Ago-Iwoye, Ogun State,
Nigeria

E-mail: siyraimi@yahoo.com or demisyra@hotmail.com

A paper submitted for presentation as poster at the 2010 Population Association of America Meeting held in Dallas, Texas, USA 15th to 17th April 2010

2

Abstract:

The paper focuses on urban household crowding as a chronic stressor in Ibadan,

Nigeria. Data used in the paper were obtained from a larger cross-sectional survey of

households in Ibadan, Oyo State, Nigeria. Variables used in the analysis include both the

objective component of household crowding and subjective component of household

crowding, as well as psychological well being variables which also include specific

measure of health problem. Correlation and multiple regression statistical techniques are

used to analyze the data. The result of the correlation analysis shows that there is a

positive relationship between household crowding and psychological distress of women

and men. The comparisons of the magnitude of the regression coefficient of specific

household crowding variables and the overall effect as shown by R² suggest gender

differences in the effect of household crowding on psychological distress of women and

men; and the effect is more on women than on men. Policy implications of the findings

are discussed in the paper.

Key words: Gender; Household crowding; Psychological well being; Africa; Nigeria

1.0 Introduction

Observations from literature show that the determinants of psychological well being has been a major focus of the sociology of health research and an examination of the role of stress as a threat to psychological well being has been an important component of this research (Theodore et al 1996). This research has focused primarily on the stress induced by life events, such as the death of a spouse, divorce or job loss (Kessler et al 1985; Theodore et al 1996; Lin and Lai 1995; etc). The literature shows that theorizing detrimental effects of life events on psychological well being has stimulated substantial and consistent body of research literature, especially in North America and Western Europe. As observed in literature, investigations of the role of chronic stressors, that is, chronically experienced difficulties such as marital stress, job stress, household crowding, etc have remained much less well developed than investigations of life events (Theodore et al 1996). This paper focuses on household crowding as a chronic stressor.

Revelation from the literature points out that crowding is an experiential state in which the restrictive and other physical aspects of the limited space result in some psycho-physiological reactions by the individual (Choi etal, 1976). As noted by Choi and his associates a necessary factor affecting crowding is the density factor (number of persons per spatial unit). Also shown in the literature, household has been defined as spatial units, where members live in the same dwelling and share basic domestic and/or reproduction activities such as cooking and eating (Chant, 1997; Young, 1995; Mishra, 1992; Robertson, 1984; etc). Household is thus the nexus of daily life, a continuing experience (Theodore etal 1996). Theodore etal (1996) asserts that the degree of household crowding is an objective reality. They noted that as more and more people are

compressed into a finite amount of space, two possibilities may arise that could have adverse consequences for individual well being. Increasing the number of people within a limited space may multiply the number of intrusions or unwanted inputs from others and also may lead to interruptions in an individual's activities or increase the number of interferences. There may be little opportunity to escape interaction with others in a 'primary environment' in particular, such as household (Stokols, 1978; Theodore etal, 1996). Theodore etal (1996) note that whether there is a deficiency in needed space or the ability to have privacy, people may find it difficult to cope because of continued stimulus overload. According to them, since the household represents a place to which one habitually returns, any environmental deficiencies can act as chronic stressors, thereby intensifying a person's psychological reactions. If the stress is intense enough and continuous enough, coping mechanisms may be thwarted and the resulting psychological reactions may be particularly adverse in character (Theodore etal 1996).

Observations from the literature show that in this century and in this part of the World, investigation of household crowding as a chronic stressor is particularly timely. This is because 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. The growth of Africa's population is high while the rates of economic growth are low and the role of government is more pervasive than in other countries of the world (Obudho 1996). African urban population growing at a rate of 4.5 percent per year during 1985-95, is the highest rate of growth in the world. By 2020-25, the urban population is expected to grow at 3.4 per cent per year, about six times the equivalent rate for the MDCs. Urban growth rates are high for every country of Africa

where they exceeded 5.5 percent per year in 1985-90 (Obudho 1996). By the year 2025, 54.0 percent of the African population will reside in urban areas (UNCHS 1991). The average percentage figure for the African continent which is 54.0 percent is even lower than that for Nigeria which is 61.6 percent (UNCHS 1991). Consequently, there has been rapid expansion of Nigerian cities' areal extent which is now sometimes ten fold their initial point of growth (Egunjobi 1999; 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. Women and children trek long distance to fetch water (Plate I).



Plate I: Women and children trek long distance to fetch water in some places in Ibadan Source: Author's fieldwork.

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) notes that Nigerians in response have doubled 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). Plate II-IV shows overcrowded and deplorable housing situation in some parts of Ibadan city.

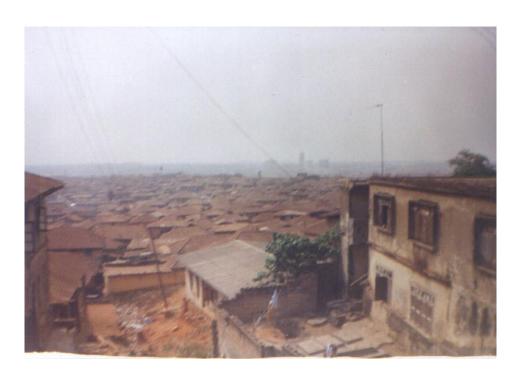


Plate II: Overcrowded and deplorable housing situation in some parts of Ibadan city Source: Author's fieldwork.



Plate III: Overcrowded and deplorable housing situation in some parts of Ibadan city Source: Author's fieldwork.



Plate IV: Overcrowded and deplorable housing situation in some parts of Ibadan city Source: Author's fieldwork.

2.0 Brief Literature Review

The literature shows that studies bearing on the effects of household crowding have produced mixed results and that this is partly due to the fact that the level of household crowding varies from country to country. Particularly in the developed countries, household crowding is quite low in comparison to developing countries. Also, and as others have suggested, the effects of crowding may well vary from one culture to another (Booth 1976; Gove and Hughes 1983; Booth etal 1980; Gove etal 1979; Taylor 1988; Theodore etal 1996 etc). In North America for instance, Baldassaire (1979) studies found no relationship between household crowding and psychological well being. Booth (1976) studies in Toronto found a significant positive relationship between subjective crowding but not objective crowding while Gove and Hughes (1983) in their studies in Chicago conclude that crowding has a substantial negative effect on a variety of aspects of mental health and that the subjective experience of crowding has a stronger relationship on mental health than does objective crowding.

The literature shows that in exploring gender differences in reactivity to crowding among women, previous researchers have investigated the possibility that crowding has a greater effect on women than men (Gove and Hughes, 1983; Booth and Edwards, 1976; Theodore et al, 1996). It has been argued in the United State that women are more attentive to other members of the household and have greater household responsibilities, therefore being more reactive to crowding (Gove and Hughes, 1983). Gove and Hughes (1983) in their empirical study find support for gender differences in general and, more specifically, pertaining to mental health (pp. 149-155). Their conclusion regarding gender differences is based on comparisons of the magnitude of the regression coefficients.

Theodore etal (1996) in their studies in Bangkok, Thailand, found that wives report poorer psychological health in most respects than husbands do. They found no statistical significant evidence that women are more reactive to crowding as a stressor than men. Their explanation for this result is that it may stem from cultural differences or that they have used statistical test. Critics of statistical test have argued in the literature that in many cases, instead of test of significance it would be more to the point to measure the magnitudes of the relationships or size of the difference such as the proportion of the total variance "explained", of coefficients of correlations and of regressions, of measures of association, and so on (Kish, 1970; Selvin 1970).

Observation from the literature shows that there have been a number of studies of the effects of household crowding in some developing countries including Singapore, Manila, Hong Kong, India and Thailand (Hassan 1977; 1978; Jain 1989; Marsella etal 1970; Mitchell 1971; Theodore etal 1996 etc). However, such studies and particularly from a gender perspective are rare in Africa and in Nigeria in particular. Not until recently, most studies in Nigeria assumed the universality of women's and men's experience. Gender was largely taken-for-granted variable and the different nature of women's lives was simply ignored.

The present study examines women's and men's experience of household crowding using Ibadan city in Nigeria as a case study. The null hypotheses tested in the paper are that: (i) there is no relationship between psychological well being and household crowding, and (ii) there is no gender difference in the effect of household crowding on the psychological well being.

The study area, Ibadan city, is located in the South-western part of Nigeria. The city was for a long time the largest city in tropical Africa. Although, it has now been surpassed by Lagos, it remains a truly Nigerian city. By virtue of its historical, political, administrative, cultural and socio-economic importance over the years, there is hardly any major ethnic or sub-ethnic group in Nigeria that is not represented in this city (Mabogunje 1968; Filani et al 1994). It is important to note that the literature on this important black city is ever expanding representing different academic and research interests (see, Filani et al 1994). However, in the area of gender studies not until recently, available in-depth empirical work is extremely dearth.

3.0 Methodology

Data used in the paper were obtained from a larger cross-sectional survey of households on gender and housing 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 NPC in the Ibadan municipal area to get an estimate of the number of households. Due to cost consideration, a total of seven hundred and twenty-one (721) 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 questionnaires administered in each locality was proportional to the total number of estimated households in each

locality. The sampling procedure adopted was aimed at sampling systematically along the major streets in each locality. Systematic random sampling was used in the selection of houses along the streets. From each of the selected houses, a household, particularly a woman and her spouse (if any) were interviewed.

Variables used in the analysis include both the objective component of household crowding i.e. persons per room and the subjective component of household crowding i.e. perceived crowding as well as psychological distress variables which also include specific measure of persistent health problem. Dummy variable is used to measure the subjective components of household crowding. Respondents were asked the following questions: (i) At home, there are too many people around; (ii) In this house, I have almost no time alone; (iii) In my house people get in each others way; and (iv) At home I don't have enough room to do things conveniently. The response categories were: strongly agree, agree, disagree, and strongly disagree. Psychological distress has two major forms (Mirowsky and Ross 1989; Theodore et al 1993;) depression (feeling sad, demoralized, lonely, hopeless, worthless, wishing you were dead, having trouble sleeping, crying, feeling everything is an effort and being unable to get going); and anxiety (being tense, restless, worried, irritable and afraid). Argument in the literature is that depression and anxiety are no distinct forms of psychological distress. They are instead closely intertwined (Mirowsky and Ross 1989; Dohrenwend et al 1980). In this study, I have adopted Theodore et al (1993) scale of psychological distress which comprises ten items that reflect various symptoms, including aspects of both anxiety and depression. Thus, in the first nine items, the respondent was asked to indicate how often he or she experiences certain feelings during the previous few weeks. The response categories were: often, sometimes, rarely, or never. The feelings were: (1) "Anxious about something or someone" (2) "that people are trying to pick quarrels or start arguments with you" (3) "so depressed that it interferes with your daily activities" (4) "that personal worries are getting you down physically, that is, making you physically ill" (5) "Moody" (6) "Felt you were confused, frustrated and under a lot of pressure" (7) "Are you ever bothered by being nervous i.e. by being irritable, fidgety, or tense?" (8) "Do you ever feel that nothing ever turns out for you the way you want it to?" And (9) "Do you have trouble concentrating or keeping your mind on what you are doing?" The last item was: (10) "Are you the worrying type – you know a worrier?" (Yes/No) (Theodore et al. 1993). Also, included in the measure of psychological distress is the specific measure of persistent health problem. The health problems include cough, wheeze, blocked nose, skin infections, tiredness or body weakness, feverish feelings, malaria, headache, and diarrhea. Respondent was asked to state whether within the past months he or she have experienced any of the above diseases. Respondents were asked to rate their overall health (not very good, fair, good, very good).

Most researches are based on the conception of the household defined as spatial units where members live in the same dwelling and share basic domestic and/or reproduction activities such as cooking and eating (Chant 1997; Young 1995; Mishra 1992; Robertson 1984; Harris 1984 etc.) Households are seen as natural units. This conception of households is based on the following assumptions: that households are constituted around relationships centered on marriage and parenthood, that co-residence is a defining feature, that the housing unit and the consumption unit are co-existence and that members of the unit pool and share economic resources, and that within the household there is a

clear division of labour based on gender – the man of the family, as the breadwinner is primarily involved in productive work outside the home, while the woman as the housewife and "housemaker" takes overall responsibility for the reproductive and domestic work involved in the organization of the household. These conceptions of the households have been criticized in the literature. Households mean different things to different people in different places, and there is growing debate on the desirability or otherwise of generating definitions which might be universally applicable (Chant 1997). Households are not homogenous in terms of family structure. Women in the households perform "triple role" (Moser 1992; 1993; Brent 1991; Young 1995). First, women's work includes reproductive work; childbearing and rearing responsibilities. Second it includes productive work and thirdly, women's work increasingly includes community managing work. The first two gender roles which are reproductive work and productive work are considered and used in the analysis of gender role. In the paper, the analysis focused on women and men generally and the subgroup of women that are married, nursing mothers and working. The data were analyzed using correlation and multiple regression statistical techniques.

4.0 Result and Discussion

Table 1 shows the result of the correlation analysis between household crowding variables and psychological distress of women and men. This table shows that both subjective and objective crowding variables are positively related to psychological distress of women and men. However, while the subjective crowding variables are found

to be significantly related to psychological distress of women and men, objective crowding is only found to be significantly related to women psychological distress.

Table 1: Result of the correlation analysis between household crowding variables and

psychological distress of women and men

Household crowding		Psychological distress			
Trousenora ero want	is variable	Women 'r'	Men 'r'		
	At home, there are too many people around	.129**	.294**		
Subjective crowding	In this house, I have almost no time alone	.153**	.172*		
	In my house people get in each others way	.130**	.197*		
	At home, I don't have enough room to do things conveniently	.239**	.214**		
Objective crowding	Number of persons per room	.089*	.065		

^{**}Significant at p<.01

Table 2 shows the effect of household crowding on the psychological distress of women and men in Ibadan, Nigeria. The effect of household crowding as shown by the magnitude of Beta value shows that the effects of objective measure of household crowding with the exception of the effect on working and nursing mothers (-.003) is more on married women (.050); working and married women (.055); and working women (.054) than on men (.020). The effects of having almost no time alone and not having enough room to do things conveniently are more on women than on men. Also, the effect of too many people around are more on working and nursing mothers (.141); working

^{*}Significant at p<.05

and married women (.125); and working women (.134) than on men (.073). The effect of people getting in each others way is more on men than on women. The overall effect as shown by R² shows that the effect of household crowding is more on married women (.063); working and nursing mothers (.068); working and married women (.091); and working women (.093) than on men (.062). This result implies that there is gender difference in the effect of household crowding on the psychological distress of women and men, and the effect is more on women than on men due to differences in gender roles and relations.

Table 2: Effect of household crowding on the psychological distress of women and men

	lect of househol					Sircss C	i women a	ilu ilicii																			
Househol variable	ld crowding	Effect of household crowding																									
		Men		All Women		Married Women		Working and Nursing Mothers		Working and Married Women		Working Women															
															T	Beta	't'										
														Subjective	At home,												
crowding	there are too	.073	1.393	.001	.013	.017	337	.141	1.599	.125	1.614	.134	1.897														
	many people																										
	around In this	-						-				-															
	In this house, I	.033	.640	.046	1.046	.092	1.863	.039	.448	.117	1.529	.046	.658														
	have almost	.033	.040	.040	1.040	.092	1.603	.039	.440	.11/	1.329	.040	.036														
	no time																										
	alone																										
	In my house																										
	people get in	.086	1.697	.023	.541	.050	1.051	.024	.281	.000	003	-	434														
	each other's											.030															
	way																										
	At home, I																										
	don't have	.111	1.697*	.201	4.618**	.157	3.160**	.128	1.560	.119	1.645	.200	3.124**														
	enough																										
	room to do																										
	things conveniently																										
Objective	Number of																										
crowding	persons per	.020	2.056	.038	1.018	.050	1.182	_	.969	.055	.862	.054	.959														
	room	.020	3.000		010			.003	., 0,																		
R^2	-	.062*	*	.062**		.063*	*	.068*	1	.091*	*	.093*	*														
**0	nt at n < 01. *Ci.	. ~																									

^{**}Significant at p<.01; *Significant at p<.05

5.0 Summary and Conclusion

This study shows that there is a positive relationship between household crowding and psychological distress of women and men. The comparisons of the magnitude of the regression coefficient of specific household crowding variables and the overall effect as shown by R² suggest gender differences in the effect of household crowding on psychological distress of women and men; and the effect is more on women than on men. This may be due to differences in gender roles and relations as well as the fact that women are the major users of housing and stay in the house more than men.

Policy implications include the provision of more spacious housing and the creation of communal space in the residential areas. Specifically, there is the need for improving the low income household access to decent housing. At the same time there is the need to be gender sensitive in the housing delivery policies and programmes. There is the need for the implementation of policies that will improve and empower low income women and men economically. Such policies include access to employment opportunities, increases in minimum wages and access to education, etc. Of course policies to 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. Also, this will improve the number of women in key positions of decision-making. More importantly there is the need to invest in reducing and redistributing women's workload as this will increase women's healthy living and psychological well-being as well as enhance women empowerment and facilitates the achievement of the Millennium Development Goal Number 3.

Among local decision makers – elected representatives, officials, service planners, and deliverers – there is the need to build greater awareness of and sensitivity to gender differences as this is fundamental to developing gender sensitive housing delivery. Civil society organizations including NGOs and community-based organizations also need to develop gender awareness and sensitivity (O'Connell 2000).

Acknowledgement: The author is grateful to Council for the Development of Economic and Social Research in Africa (CODESRIA) for providing a small grant for the research project from which this paper is derived.

References

- Agbola S. B. (2005) *The Housing Debacle*. Inaugural Lecture Delivered at the University of Ibadan, Thursday, August 4, 2005.
- Agbola, T. (1998) *The Housing of Nigerians: A Review of Policy Development and Implementation*. Research Report, No. 14, Development Policy Centre, Ibadan, Nigeria.
 - Baldassarre M. (1979). *Residential crowding in urban America*. University of California Press, Berkeley
 - Booth A. D. (1976) Urban Crowding and Its Consequences. Praeger, New York.
 - Booth A. and Edwards J. N. (1976). "Crowding and family relations" *Am. Sociol. Rev.* 41, p. 308-321.
 - Booth A. D., Johnson D. R. and Edwards J N. (1980) "In pursuit of pathology: the effects of human crowding" (comment on Gove, Hughes and Galle, ASR February 1979). *Am. Sociol. Rev.* 45, 873.
 - Brent April (1991) "Why Gender is a Development Issue" in Tina Wallace and Candida March (ed.) Changing Perceptions: Working on Gender and Development. Oxfam, Oxford
 - Chant Sylvia (1997) Women-Headed Households: Diversity and Dynamics in the Developing World. Macmillan, London.
 - Choi Sang Chin, Ahmad Mirjafari and Herbert B. Weaver (1976) "The Concept of

- Crowding: A Critical Review and Proposal of an Alternative Approach" *Environment and Behavior*, Vol. 8, No. 3, pp. 345-362.
- Dohrenwend, B.P.; Shrout, P.E.; Egri, G.G. and Mendelson, F.S. 1980. "Non-specific Psychological Distress and other Dimensions of Psychopathology". *Archs Gen. Psychiat.* 37, p. 1229.
- Egunjobi Layi. 2002. "Planning the Nigerian Cities for Better Quality of Life" in Onakomaiya S.O. and Oyesiku O.O. (eds). *Environment, Physical Planning and Development in Nigeria*, Department of Geography and Regional Planning, Olabisi Onabanjo University, Ago-Iwoye, Nigeria, p. 89-107.
- Egunjobi Layi. 1999. *Our Gasping Cities* An Inaugural Lecture delivered at the University of Ibadan on Thursday, 21st October 1999.
- Filani, M.O., Akintola, F.O. and Ikporukpo, C.O. (eds.). 1994. *Ibadan Region*. Rex Charles, Ibadan.
- Gove W. R. and Hughes M. (1983) *Overcrowding in the Household*. Academic Press, New York.
- Gove W., Hughes M. and Galle O. (1979) Overcrowding in the home: An empirical investigation of its possible pathological consequences. *Am. Sociol. Rev.* 44, 59.
- Harris O. (1984) "Households as a Natural Units" in Young K., Wohowitz C. and McCullagh (eds.) *Of Marriage and the Market: Women's Subordination Internationally and its Lessons*. Routledge, London.
- Hassan R. (1977) "Social and Psychological implications of high population density" *Civilizations* 27, 228.
- Hassan R. (1978) "Singapore children in high-rise flats" *Ekistics* 45, 374.
- Jain U. (1989) The Psychological Consequences of Crowding, Sage, New Delhi.
- Kessler R. C., Price R. H. and Wortman C. B. (1985) "Social factors in psychopathology: stress, social support and copying processes" *A Rev. Psychol.* 36, 531.
- Kish Leslie (1970) "Some Statistical Problems in Research Design" in Denton E. Morrison and Ramon E. Henkel (eds.) *The Significance Test Controversy A Reader* Butterworths, London pp. 127-141
- Lin Nan and Lin Gina (1995) "Urban Stress in China" *Social Science and Medicine* Vol. 41, No. 8, pp. 1131-1145.

- Mabogunje A. L. (1968) *Urbanization in Nigeria*. London: University of London Press Ltd.
- Marsella A. J., Escudero M. and Gordon P. (1970) The effects of dwelling density on mental disorders in Filipino men. *J. Hlth Soc. Behav.* 11, 288.
- Mirowsky, J. and Ross, C.E. 1989. *Social Causes of Psychological Distress*. Aldine, New York.
- Mishra Kiran (1992) "Nishing long house as a Household" in K. Saredamoni (ed.) *Finding the Household: Methodological and Empirical Issues.* (New Delhi Sage), 135-42.
- Mitchell R. (1971) Some social implications of high density. Am. Sociol. Rev. 36, 18.
- Moser, C.O.N. (1992) "Housing" in Ostragaard Lise (ed.) (1992) *Gender and Development: A Practical Guide*, London: Routledge, pp. 76-93.
- Moser, C.O.N. (1993) *Gender, Planning and Development: Theory, Practice and Training*, London: Routledge.
- O'Connell, Helen. 2000. "Introduction" *Report: One World Action Seminar Developing Gender-sensitive Local Services*. London, 28-29 June 2000. The British Council.
- Obudho, R.A. 1996. "The Urbanization of Africa in the 21st Century" HABITAT II Dialogue 1: *How Cities will look in the 21st Century*: Proceedings of Habitat II Dialogue 1: 4 June 1996, Istanbul Turkey, United Nations Centre for Regional Development. P. 119-138.
- Ogunsanya Ade A. (2002) *Makers and Breaker of Cities*. The Fifty-ninth Inaugural Lecture delivered at the University of Ilorin on Thursday, June 27, 2002.
- Olatubara, C.O. 1994. *Activity Patterns and Urban Residential Location Decision in Ibadan: Oyo State*. A PhD Thesis, Department of Geography, Obafemi Awolowo University, Ile-Ife.
- Oyesiku, O.O. (2002) *From Womb to Tomb*. 24th Inaugural Lecture, Olabisi Onabanjo University, Ago-Iwoye, 27th August 2002.
- Robertson Claire (1984) Shanney the Same Bowl: A Socio-economic History of Women and Class in Accra, Ghana. Blymindon: Indiana University Press.

- Selvin Hanan C. (1970) "A Critique of Tests of Significance in Survey Research" in Denton E. Morrison and Ramon E. Henkel (eds.) *The Significance Test Controversy A Reader* Butterworths, London pp. 94-106
- Stokols D. (1978) "A typology of crowding experiences" in Baum A. and Epstein Y. M. (eds) *Human Response to Crowding*. Lawrence Erlbaum Associates, Hillsdale, NJ. pp. 219.
- Taylor R. B. (1988) *Human Territorial Functioning*. Cambridge University Press, Cambridge.
- Theodore, D. F.; John, N.E.; Santhat, S. and Sairudee V. (1993) "Housing Stress, Physical Well-being: Evidence from Thailand". *Social Science and Medicine* 36(11), p. 1417-1428.
- Theodore D. Fuller, John N. Edwards, Sairudee Vorakitphokatorn and Santhat Sermsri (1996) "Chronic Stress and Psychological Well Being: Evidence from Thailand on Household Crowding" *Social Science and Medicine* Vol. 42, No. 2, pp. 265-280.
- UNCHS. 1991 cited in Obudho, R.A. 1996. "The Urbanization of Africa in the 21st Century" HABITAT II Dialogue 1: *How Cities will look in the 21st Century*: Proceedings of Habitat II Dialogue 1: 4 June 1996, Istanbul Turkey, United Nations Centre for Regional Development. P. 119-138.
- Young Kate (1995) *Planning Development with Women: Making a World of Difference.* Macmillan, London.