POPULATION PRESSURE AND HEALTH RISKS IN URBAN MARKET ENVIRONMENT: A STUDY OF BODIJA MARKET, IBADAN, NIGERIA

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Abstract

The whole world, and especially less developed countries are reeling under increasing population pressure at this time. It however appears that increasing number of the earth's inhabitants, including those in Sub Saharan Africa are becoming urban residents. Therefore, the issue of population-induced environmental and health risks in urban areas has been acknowledged a real global threat. The Less Developed Countries (LDCs) are no doubt, in a worse situation. Central to this paper therefore, is to understand and explain the effects of population pressure and the resulting degraded environment on the health of urbanites. Specific focus is however, on urban market environment (and in this case, Bodija Market, Ibadan). Particular emphasis shall be on the following two issues: To ascertain the perception of buyers and sellers on the adequacy or otherwise of basic facilities as water, toilet, drainage system, existing number of stalls etc for the market population. The second is to determine the level of awareness of both sellers and buyers on the environmental and health implication of their activities in the market. In other to analyze and understand the population – environment – health nexus, as it affects Bodija Market, Ibadan, which is the focus of this paper, the theoretical perspective of Structural – Functionalism was employed. A random selection of 260 sellers (in the built-up sections of the market) was made. One hundred (100) were randomly selected from households in the residential areas adjourning the market to represent buyers. This made a total of 360 respondents. This study was directed at permanent sellers in Bodija Market, (men and women) and people who frequent the market to make purchases. The findings show that available facilities in the market are grossly inadequate and that people are exposed to health hazards in the market. It was also discovered that the majority of the respondents have little or no knowledge of the kind of health risks they are exposed to. It was found that market population far exceeds the capacity and number of these facilities. The findings also show that environmental and health risks result from attempts by market users to adjust or cope with these inadequacies (as indiscriminate human waste disposal). It was however, surprising to find that such environmental and health risks were often downplayed or out rightly ignored or unknown to many market users (buyers and sellers). The study concluded that population pressure is a crucial factor in the despoiling of urban market environments, leading to serious health risks.

Key words: Population-induced pressure, Health risks, Market environment, Global threat

Introduction and Background

There is no doubt that the world, and especially many countries of developing societies are reeling under increasing population pressure today. With a world population doubling almost every 30 years, environmental and health risks resulting there from have been unprecedented in history (UNDP, 1998). In both rural and urban sections of most parts of Sub Saharan Africa, for instance, a critical point has been reached in the spoilage of the environment. The health of the majority in this region is consistently put to risk. All these, result primarily from a soaring population beyond available resources.

It however appears that increasing number of the earth's inhabitants, including those in Sub Saharan Africa are becoming urban residents. In fact almost half of the world's population of over 6.1 billion people have become urban dwellers (Mabogunje, 2002). Therefore, the issue of population-induced environmental and health risks in urban areas, have been acknowledged a real global threat. The Less Developed countries (LDCs) are no doubt, in a worse situation.

Usually combining high fertility rates and declining mortality rates with huge in-migration, urban areas of the LDCs are often overwhelmed by population growth. For instance, by 1950, the percentage of the total population living in urban centers of more than 20,000 inhabitants in Nigeria were less than 15 percent. By the year 2000, however, this proportion had jumped to 43.3 percent (Mabogunje 2002).

The disproportionate consequences of population pressure on environment and health of urbanites of the LDCs have been noted (Jamal and Weeks, 1998). Urban markets, for instance, appear to fare worse than most other sections of the urban areas of the less developed countries. Most LDCs, lagging far behind technologically, devoid of modern industries must depend on the informal sector of their economies for the employment of the majority of their population. Urban markets of these societies have become one of the leading employers of labour.

Teeming with buyers, sellers, and numerous others out to achieve varying goals, urban markets in most LDCs have become huge waste production centers. Inadequate infrastructure, as toilets, clean water and good roads among others, and a near total absence of waste management, put most of these markets at serious environmental and health risks. Many are unsightly, foul-smelling, fly-breeding, rat-infested, fire and environmental hazards.

Bodija market in Ibadan is representative of one such urban market. Carrying the employment burden of a large percentage of the 5 million inhabitants of Ibadan, the market is also the major foodstuff depot of the city (Abumere, 2002). Thus, to describe Bodija market as crowded and unsightly is an understatement. As important as this market is to the economy of the city, Bodija Market is obviously one of the most neglected sections of Ibadan. Virtually all roads within the market are bad and have been taken over by sellers and buyers. This is due to inadequate stalls. The market also lacks good drinking water and available toilet facilities are largely not only inadequate but non functional.

Central to this paper therefore, is to understand and explain the effects of population pressure and the resulting degraded environment on the health of urbanites.

Specific focus is however, on urban market environments (and in this case, Bodija Market, Ibadan). Particular emphasis shall be on the following two issues:

(i) To ascertain the perception of buyers and sellers on the adequacy or otherwise of basic facilities as water, toilet, drainage system, existing number of stalls etc for the market population.

(ii) To determine the level of awareness of both sellers and buyers on the environmental and health implication of their activities in the market.

With about 90 percent of food purchases of urban residents being sourced from the markets (Unueverlor and Hirschnoru, 2000) urban residents in general face serious health risks under those conditions already mentioned. The attention given here, to the problem of population pressure and health risks in urban market environments is hoped, will help in better understanding and arresting its dire consequences on urban dwellers.

Empirical Evidence on Population Pressure, Environment and Health Risks

Literature on the impact of population pressure on the environment and health of the earth's inhabitants swelled with the 1972 Stockholm Conference. The Rio Summit of 1992 further confirmed the concern of the World, regarding the future of our earth and its environment. However, literature and discussions on environmental crises in towns and cities (the "urban" agenda) and the concerns of global environmental ("green") issues, such as global warming, deforestation and desertification receive greater attention (World Bank 2000). The particular focus of this paper, as had been noted already, is how a section of the urban areas - the urban markets – have become health risks to urban residents, especially market users (the "brown" agenda).

According to Arrow, (2002) literature on the grim pressure of population on resources was first emphasized by Malthus (1798). Empirical evidence since that time, has supported the view that environmental problems and health risks that result, arise in the main, from the agglomeration of people over a limited space (Ehrlich and Ehrlich, 2002; Stephens 1995; Agbola and Agbola, 1997). Benneh *et al* (1993) have for instance, detailed how the inadequacy of urban facilities (water electricity, waste disposal) and the absence of assets among many urban residents have left the environment unhealthy.

The findings of Lucas (1998) show that, the provision of urban facilities in the LDCs cannot simply keep up with population growth in the cities. Rural-urban migration and natural growth were mentioned as the leading causes of this population growth. Fay and Opal (2000) believed that rural-urban migration are increasingly becoming the major cause of urban population explosion in the LDCs. Evidences in urban population growth in Nigeria, including the city of Ibadan, even agree with these findings (SIP, 1998; Agbola and Agbola, 1997).

In line with the classic analysis of rural-urban migration (Hari's and Todaro, 1970; fay and Opal, 2000) attribute this type of migration to the relatively better economic conditions in the city. Bryceson and Jamal (1997) have noted that apart from higher expected urban incomes that pull rural folks to urban areas, there exist factors "pushing" them out of the rural areas. The general decline in agricultural commodity prices since the mid 70s was mentioned as one factor.

However, Jamal and Weeks (1998) have noted that economic decline in the last two decades have triggered off many social problems in the cities of LDCs. One of such, is a fall

in formal employment. This has made urban markets (a key part of the informal sector) a major urban employer of labour. This, according to Fay and Opal (2002), is one major reason for the diversity in income groups among urban residents. For this reason, Siren *et al* (1992) asserted that urban areas are not only places where stark symbols of resource misallocation, both physical and social are apparent, but are places where poor sanitary and environmental conditions predominate. No wonder, the urban poor die more, concludes Stephens (1995)

Even if there is no rural-urban migration, the World Bank (1991) asserts that urban population will still grow. Isiugo-Abanihe (1994), O'Counell, (1994), Orubuloye (1993; 1995) have amongst others highlighted factors that appear to produce high urban birth rates and population growth in Nigeria and other LDCs, even without rural-urban migration. These factors include the near universal early marriages, and the societal pressure on most married women to have children in Nigeria.

Interestingly, Dasgupta (1995) has shown how the urban poor (and also the rural poor) desire for more children, is caused by their degraded environment. Population pressure resulting from more birth was also shown to further worsen their environmental and health problems. In this regard, the more the children of a market woman, the more the number of people available to sell her wares and thus the more income that can be generated. But also, more sellers, children and adults, in the market means that more pressure will be put on the limited market facilities such as roads, toilets, and water supply. These facilities are likely to run down faster under these conditions, increasing the environmental and health risks in the market.

According to Daily and Ehrlich (1996), crowdedness and disease go hand-in-hand. They asserted that there are social determinants of the spread of diseases. These they said include the frequency and nature of interpersonal contacts, travel and migration patterns, access to health care, sanitation and poverty. Most urban markets in the LDCs can thus be seen to be favorable to the spread of disease. In a later work, Daily and Ehrlich (1999) stated that today's densely populated communities containing large numbers of immune – compromised people (due to malnourishment and immuno-suppressive pollutants in the environment) are high risk communities. This can be especially true of urban market environments of the LDCs.

The growing incidence of unsafe food sold in most urban markets worldwide is a source of great health risks to city dwellers, according to Unnevehr and Hirschhorn (2000). This is especially worrisome in the light of the assertion by the World Bank (2000) that a typical urbanite buys at least 90 percent of his/her food from the market. A much higher risk is said to face people in developing countries. Unnevehr and Hirschhorn (2000) seem even more disturbed by the many cases of food-borne illnesses that go unreported and unrecognized. Yet, they believe that these type of illnesses greatly contribute to the burden of disease in the LDCs. According to Kaferstein and Abdussalam (1998), the growing movement of people, live animals and food products, as well as population increase in urban areas of these less developing countries, are some of the major factors that make urban markets unhealthy.

Ehrlich and Ehrlich (2002) say that rapid transport systems now make transfer of pathogens in food or from an animal reservoir into local human population a global threat. Thus Motarjemi et al (1993) asserted that about 70 percent of the 3 million annual deaths among children under five have been traced to biologically contaminated. Many of such food

are purchased in urban markets. For Unnevehr and Hirschhorn (2002), basic sanitation and water services lacking in most urban markets of the LDCs like Bodija, are essential in addressing these food safety hazards.

However, according to Olowu and Akintola 1995) and Onibokun and Faniran (1995), although the immense population pressure put on essential facilities in urban markets is real, the situation might have been better with proper planning and efficient local government management. Thus, the concern that the physical conditions of these markets seem to interact perfectly with economic circumstances of their teeming users compound the threats to health.

Theoretical Framework

In order to analyze and understand the population – environment – health nexus, as it affects Bodija Market, Ibadan, which is the focus of this paper, the theoretical perspective of Structural – Functionalism shall be employed. This sociological perspective has been credited to Talcott Parsons (1902-79) who combined the works of Emile Durkheim, Max Weber, Vilfredo Pareto and the economist Alfred Marshall. Parsons's Structural-Functionalism starts from the premise that ends which people in a society pursue are not randomly distributed. This was in contrast to the hitherto dominant philosophy of utilitarianism which said individuals are pursuing their own satisfaction and the best way to attain is individually. For Parsons, individual pursuits are socially derived.

In this regard, it could be argued safely that, the high fertility rates and rural-urban migration from which the pressure on urban market environment is derived are themselves socially derived. Individuals, according to Parsons under the influence of those four thinkers before him, learn to want what they want from society (Cuff et al, 1992). Because people in the societies of the less developed countries desire to be better-off materially, but lack requisite skills, assets and Western education, large families became economically rational. More hands, they reason, will be able to feed the additional mouth produced.

Further, Parsons saw that people did organize their conducts only on how best to get what they wanted, their choice of means toward the ends were morally regulated. For instance, most sellers in the urban markets (or, any other market, for that matter), are profit-driven. But, usually, there is an agreed price to sell almost every particular item in the market. There is also, usually a standard measure to weight commodities for buyers. These standard prices and measures are determined usually by market leaders on behalf of all sellers. Deviations from these standards are usually sanctioned by the leaders on behalf of the entire market.

By extension, it can be said that the perception of buyers and sellers on the adequacy or otherwise of market infrastructure for instance are the products of certain unwritten codes based on some shared values. This is basic to understanding the concept of 'society' or in this case the 'market', as forces that constrain the individual (Ritzer, 1996).

In the Structure of Social Action (1937), Parsons argued that social life involves the interaction of culture, personality and social systems. Individuals are believed to have personality elements, such as dispositions, inclinations, thoughts and feelings which motivate their actions. Thus the level of education of buyers and sellers should for instance, determine their perception of drinking water from shallow wells close to pit latrines in the market as health risks or not. The relationship between individuals contributes to the "social system"

element (Cuff et all 1992). Culture, according to Parsons, shapes social systems and personality. So, because the Yoruba culture permits the domination of trading by women, who are compelled to bring their young children to markets like Bodija, situations of cleaning up a child's excrement in between attending to customers are created. Often, such nursing mothers do so with unwashed or improperly washed hands, contaminating the foodstuff given to the buyers.

Structural-functionalism asserts that social life is made up of units. Not only the whole society, but parts of it, as the school, the family as well as the markets must be studied. This is important to see how the parts of the system meet the requirements of the whole. Also structural functionalists seek to know what conditions are for the continued survival of the social unit.

Parsons mentioned four functional "imperatives" which any system including a market, must satisfy in order to keep surviving.

1. **Adaptation** - Any society or small units like the urban market must be able to mobilize resources to get things done. A market like Bodija must be able to attract a continuous interaction of buyers and sellers in order to meet the needs of the larger society.

2. **Goal Attainment** - Social Units such as markets have things to do, and goals to realize. Urban markets like Bodija, must provide the foodstuff need of a large section of the populace and also a means of livelihood for many urban poor. These, Bodija market is doing very well.

3. **Pattern Maintenance and Tension Management** - A social unit will only get thingq done, fulfill its goals, if its members are loyal to those gmals and motivated enough to put in the effmrt needed for "pattern maintenance". Hn an urban market, in poor environmental state, like Bodija, buyers are often discouraged from patronizhng the market. Thus, traders often have to organize themselres to carry-out self-help projectq. This may includd road repairs, removal of heaps of refuse or digging of wells/boreholes. These traders recognize the fact that for the system (the market), to keep surviving and maintain itself, they must be proactive.

4. **Integration -** Social units, such as markets, involve relations among individuals and among sub-units. The different traders' association in Bodija Market, for instance, must work harmoniously not only for their different members, but for the entire success of the market. Indeed, all distinct associations within the market, in spite of having their separate leaders, are under the big Bodija Market Association umbrella.

   Structural-functionalism therefore, views urban markets like Bodija as systems, within a larger system. It is linked with other subsystems within the larger system (the city). The larger system and its sub systems interact and must fulfill certain functional imperatives for one another for their continued existence.

Methodology

The entire market users, that is, buyers and sellers in Bodija Market, Ibadan, make up the universe of this study. A random selection of 250 sellers (in the built-up sections of the market) was made. One hundred (100) were randomly selected from households in the residential areas adjourning the market to represent buyers. This made a total of 350 respondents. This study was directed at permanent sellers in Bodija Market, (men and women) and people who frequent the market, to make purchases.

Being the biggest market in Ibadan, Bodija market was purposively chosen. It is assumed that this market best features the central problem of this study – population pressure, environment and health risks. For the household survey of buyers, the systematic random sampling was used. This was necessary in order to give all elements in the population a fair chance of being selected. Residential areas of Farayola, Akingbola and kara were covered. A census of houses in these areas was carried out by the research team. Then a sampling interval of twenty-five (25) was chosen.

In the case of the market survey of sellers, the built-up sections were purposively chosen. These contained foodstuff sellers, meat and vegetable sellers among others. Apart from having the highest risk of contamination relative to sections as plank sellers or pepper grinders, these sections of the market have well-arranged stalls, which are all numbered. There are 15 blocks of shops in this section, for example, numbered A – O. Each stall has thirty-two (32) shops on each wing, making a total of 64 shops. Therefore, 15 blocks of 64 shops mean there are 960 shops in the foodstuff section alone (physical counting by the researchers). A sampling interval of 10 was taken, thus providing 96 respondents in this section alone. Similar method was applied in the other sections to get the remaining 154 respondents. For both respondent buyers and sellers, the first identified and qualified respondent was interviewed. All questionnaires were edited for legibility, consistency and uniformity before the process of coding. Simple percentage and frequency counts were used to analyse the data,

Findings

Table 1 shows the respondents knowledge of the types and state of the basic facilities they use in the market. For instance, 21.1 percent of buyers and 45.0 percent of sellers reported they used pit latrines in the market. While 30.5 percent of the buyers and 30.9 of the sellers admitted as common practice, the use of open refuse sites as toilet in the market. Modern water closet toilets can be seen to be virtually non-existent in this market as only 4.9% of total respondents mentioned it. These respondents might have mentioned it erroneously, in fact, probably to boost their image.

When it comes to the sources of water available to drink and do other things in the market, almost half of all respondents (49.4 percent) said they drink the popular “pure water”. These are packaged sachet water, of a highly questionable quality. Also, 48.5percent of buyers and 32.5 percent of sellers said well-water is available for use in the market. When respondents were asked whether the available water in the market is good for drinking, 71.1 percent of buyers and 64.0 percent of sellers (not in Table 1) answered “No.”

Respondents showed a less than average understanding of the types of drainage system in the market (indeed, 31.4 percent reported don’t know). It was easier for most to

simply conclude "there are no gutters" in the market. On further prodding, 48.9 percent of buyers and 59.0 percent of sellers said the market has an open-built drainage system (culverts/channels to drain used water and run-offs from the rains, but which are not covered). Some 9.1 percent of the respondents insisted there was no drainage system and therefore people in the market including themselves throw waste water anywhere (open natural) in the market.

Concerning solid waste disposal, 41.9 percent of buyers and 30.7 percent of the sellers said the various open refuse dump sites were used for disposing waste. The depth of the filthiness is even more appreciated with the 51.4 percent of all respondents, who claim refuse are dumped simply anywhere in the market. This is said to be done in the evenings, under the cover of night. The only place spared under such conditions is vicinity of the particular person throwing the refuse away. Only 6.9 percent of all respondent buyers and sellers say there exists waste bin/containers in the market. This explains the indiscriminate dumping of refuse in the market which is injurious to the health of both the buyers and sellers, as it has already been elicited from Table 1

Table 1: Percentage Distribution of Types and State of Facilities Available and Used by the Respondents (buyers and seller)

		BUYERS		SELLERS			
FACILITY	**CATEGORY**	**NO**	**%**	**NO**	**%**	**NO**	**%**
TOILET	WATER CLOSET	4	4.2	13	5.2	17	4.9
	PIT LATRINE	20	21.1	112	45.0	132	38.4
	PAIL/BUCKET	10	10.5	11	4.4	21	6.1
	OPEN REFUSE	29	30.5	77	30.9	106	30.8
	OTHERS	32	33.7	36	14.5	68	19.8
WATER SOURCES	PIPE-BORNE WATER	1	1.1	11	4.3	12	3.4
	WELL-WATER	46	48.5	83	32.5	129	36.9
	BORE-HOLE	10	10.5	16	6.3	26	7.4
	"PURE WATER"	34	35.8	139	54.3	173	49.4
	OTHERS	4	4.2	6	2.4	10	2.9
DRAINAGE SYSTEM	OPEN-BUILT	47	48.9	15	59.0\	197	56.3
	OPEN-NATURAL	1	1.0	31	12.2	32	9.1
	UNDERGROUND	6	6.3	5	2.0	11	3.2
	DON'T KNOW	42	43.8	68	26.2	110	31.4
WASTE DISPOSAL	OPEN REFUSE DUMP SITES WITHIN THE MARKET	26	41.9	70	30.7	96	33.1
	ANYWHERE IN THE MARKET	31	50.1	118	51.7	149	51.4
	WASTE BIN/CONTAINERS	5	8.1	15	6.6	20	6.9
	OTHERS	-	-	25	11.0	25	8.6
MARKET ROADS	VERY GOOD	-	-	4	1.6	4	1.1
	GOOD	-	-	1	0.4	1	0.3
	FAIR	15	16.0	73	28.6	88	25.3
	BAD	39	41.6	85	33.3	124	35.5
	VERY BAD	40	42.4	92	36.1	132	37.8
STALL OCCUPANTS	2			8	4.1		
	3			73	35.6		
	4			96	46.8		
	5 AND ABOVE			28	3.5		

Source: Field survey, 2007

The market roads are also generally regarded by respondents as being in terrible conditions. Indeed, 35.5 percent of both buyers and sellers say the roads are bad, while another 37.8 percent even perceive of the market as "very bad". Only 0.3 percent of respondent said the roads are good. The market stalls, designed for a single trader can be seen to occupy several traders. Almost half of respondent sellers (46.8 percent) shared a stall with three other sellers. Even some 13.5 percent share a stall with 4 or more other sellers. This same stalls, double as stores for the various merchandise being sold, e.g. bags of rice, or beans, tubers of yams etc.

Table 2 shows the distribution of the knowledge of environmental and health implications of respondents activities. This of course, is a function of the state of basic facilities (examined earlier) in the market. Regarding the not uncommon habit of indiscriminate human waste disposal, 31.0 percent correctly said it could cause an outbreak of cholera. Only 4.4 percent of all respondents mentioned Typhoid fever. A real lack of the expected knowledge of consequences of indiscriminate human waste disposal is shown by a substantial number of respondents (26.5 percent) who mentioned foul smell. Another 2.7 percent said indiscriminate human waste disposal could cause chickenpox and mosquito breeding was mentioned by 0.7 percent of the respondents.

The poor understanding of the health and environmental implications of indiscriminate human waste disposal may not be unconnected with a low educational status of most persons, found in urban markets of the less developed countries, like Bodija, especially the traders. Unfortunately such shallow understanding will only exacerbate the already bad environmental situation (Unnehnr and Hischhorn, 2000). Also, when questioned on the health implications of drinking unsafe water, 33.0 percent of buyers mentioned abdominal pain while 15.0 percent and 24.0 percent mentioned diarrhea and typhoid respectively. Among the respondent – sellers 27.6 percent mentioned typhoid, while 17.5 percent mentioned abdominal pain, while 13.8 percent mentioned diarrhea.

Such health problems as Malaria fever, Body pains and Small pox, were surprisingly mentioned as probable consequences of drinking unsafe water. This again, shows a serious lack of the proper understanding of the health implications of a despoiled environment. On the issue of indiscriminate refuse disposal, the majority of respondents (79.1 percent), even though certain that poor refuse disposal helps in the transmission of disease, could not mention specifically the type of disease in question.

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Table 2: Percentage Distribution of the Respondent's Knowledge of Environmental and Health Implications of Their Activities

ACTIVITY	HEALTH RISKS	BUYERS		SELLERS		TOTAL	
		N	%	N	%	N	%
Indiscriminate Human Waste Disposal	Typhoid	4	4.9	9	4.3	13	4.4
	Cholera	18	21.7	73	34.6	91	31.0
	Foul Smell	17	20.5	61	28.8	78	26.5
	Mosquito Breading	1	1.2	1	0.5	2	0.7
	Diarrhea	26	7.2	54	25.6	30	10.2
	Chicken Pox	4	4.8	4	1.9	8	2.7
	Water Contamination	10	12.0	4	1.9	44	15.0
	Littered Environment	23	27.8	5	2.4	28	9.5
Drinking Bad Water	Typhoid	24	24.0	68	27.6	92	26.6
	Abdominal pain	33	33.0	43	17.5	76	22.0
	Body Pain	4	4.0	7	2.8	11	31
	Cholera	7	7.0	31	12.6	38	11.0
	Diarrhea	15	15.0	34	13.8	49	14.2
	Worm Infestation	2	2.0	12	4.9	14	4.0
	Skin Diseases	4	4.0	9	3.7	13	3.8
	Small pox	5	5.0	13	5.3	18	5.2
	Brain/body Malfunction	6	6.0	12	4.9	18	5.2
	Malaria	-	-	17	6.9	17	4.9
Indiscriminate refuse Disposal	Transmission of Disease.	22	68.8	190	80.5	212	79.1
	Unsightly Environments	10	31.2	38	16.1	48	17.9
	Contamination of well-water	-	-	4	1.7	4	1.5
	Foul smell	-	-	4	1.7	4	1.5

Source: Field survey, 2007

Summary, Conclusion and Recommendation

Attempts have been directed in this paper toward ascertaining the perception of buyers and sellers on the adequacy or otherwise of basic facilities in urban markets like Bodija, Ibadan. Also, we have attempted to refer to the level of awareness of buyers and sellers in such urban markets on the environmental and health implications of their activities/situation in the market.

By interviewing a total of 360 respondents (100 buyers and 260 sellers), selected at random, it was discovered that available market infrastructure are grossly inadequate in Bodija. Per capita, it was found that market population far exceeds the capacity and number of these facilities. It was also discovered that environmental and health risks results from attempts by market users to adjust or cope with these inadequacies (as indiscriminate human

waste disposal). It was however, surprising to find that such environmental and health risks were often downplayed or out rightly ignored or unknown to many market users (buyers and sellers).

Conclusion

In conclusion, population pressure was found to be a crucial factor in the despoiling of urban market environments, leading to serious health risks. It must also be admitted that population pressure does not act on urban market environments in isolation. Poverty, poor education and inefficient local government administration, among others all combined to make urban market environments like Bodija, hazardous.

Recommendations

As a result of the findings of this study, the following recommendations may be appropriately put forward. First, government at all levels must intensify efforts at a balanced development of both rural and urban areas of the Nigerian society. This will most likely reduce the high rate of in-migration to urban centers like Ibadan city. These in-migrants were found to be the greater source of the population pressure of urban areas and their markets. Also, the responsibility of creation and maintenance of big urban markets by the lowest-ranking tier of government, the local governments, should be transferred to the more endowed state governments. This is likely to increase the provision of basic facilities in this market and thereby bridge the gap between population in the markets and available amenities.

Finally, government is advised to intensify efforts at providing quality education to Nigerians, up to at least secondary school level. Since it was discovered that many buyers and sellers were ignorant of the health risks they were exposed to in such hazardous market environments, sound education will definitely reduce such ignorance significantly. Educated market users will also more likely protect their environment.

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