

# ENVIRONMENTAL STRESS AND URBAN DECAY PROBLEMS IN DEVELOPING COUNTRIES

E. E. IKUREKONG and J. NFAMARK

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## ABSTRACT

Urban areas of most developing countries present a dilemma to majority of their dwellers. While some perceive them as being full of opportunities, others see them as centres of stress because of the chaotic and crowded conditions in them. Environmental stress in these urban areas is induced by the myriad of physical problems such as unemployment, lack of infrastructural facilities, traffic congestion, overcrowding and inefficient waste management systems. The intensity of these problems result in psychological stress and general urban environmental decay. The paper reviews these problems and examines particular conditions in some Nigerian cities through a perceptive response from a group of randomly sampled students in 20 out of 36 States. Results show marginal differences among the cities in the intensity of stressor effects. Recommendations for overall improvement of urban environments are made.

**KEYWORDS:** Urban Environmental Stress; Human Spatial Behaviour Liveability, Social Order, and Functional Efficiency.

## INTRODUCTION

Most rapidly expanding cities of the third world today are characterized by a general inadequacy of infrastructural facilities, environmental degradation, unemployment, housing and transportation problems. However, different people within the urban centres perceive these problems in different ways. While some see the Nigerian cities for instance as being full of diverse opportunities, most others see them as very chaotic, crisis-ridden and benign to the well-being of the very people they were meant to serve (Ikya, 1993).

These views of the Nigerian cities are not unique to Nigeria alone. According to Ikya (1993), American intellectuals often criticized American urban life. He reiterated the observation of Webber and Loyod that: "Thomas Jefferson's happiest moment occurred when he was on his rural estate in Virginia", and that "Thoreau Counsellor Americans to escape the brutality of the city and return to a simpler way of life". To buttress this fact Ikya, (1993) pointed to the exasperation generated by the urban life which was put forward by a poet Susanne Zaurian in 1969 about New York:

"What can I tell you?  
The subways stopped  
The buses broke down, fell apart  
A few went out of control  
The power failed, and we ran out of candles  
I am writing this to you  
On top of sixteen feet garbage"

The above description of the urban life breeds resentment for the typical urban dweller because of the myriads of problems. These problems generate different levels of stress/strain on the residents and the physical environment.

Conceptually environmental stress is a phenomenon of life most prevalent in the developed societies where there is a significant high level of urbanization, industrialization and technological development (Omoluabi, 1982). However, that is not to say that this same phenomenon is completely absent in developing Countries. Induced conditions of stress arise from physical environment, characterized by overcrowding, noise, social and economic deprivations, commuting to and from work, large scale housing and industrial development in previously quiet rural areas (Hamilton, 1979). Other sources of stress according to Girdeno and Everly (1979) include racial discrimination, the bureaucratic processes of most institutions, the inherent demands of work, academic work, the domestic and paucity of environmental stimuli.

These stressors are all encompassing and are by no means only limited to built environments. Ecological scope of environmental stressors have been identified as air and water pollution (Peterson, 1982), drought, deforestation and desertification (Biswas & Biswas 1982) overgrazing and soil erosion (Lachs, 1982). All of the above stimuli have been classified as stressors because they produce in individuals aversive effects such as boredom, loneliness, lowered self-esteem, infectious disease, hunger and poverty (Coleman et al, 1984).

In summary, environmental stress refers to the non-specific response of a person's body to the effects of the physical and social phenomena which can either be internally induced or external to the body. So while internally induced stress is direct and only affect one person at a time, external stressors are indirect and affect many people simultaneously with the effects of corresponding pattern varying only in degrees from persons to person (Omoluabi, 1982). Hence, in this perspective residents in the environment as well as the environment with its host of components are considered.

## ENVIRONMENTAL STRESS IN DEVELOPING COUNTRIES

In most developing countries of Africa, Middle and Far East, and Latin America, their predominant agrarian economy cannot adequately sustain the needs of the population. Their level of education is low while the rate of population growth is very high. Infrastructural provision in rapidly expanding urban centres are very low leading to overuse and overcrowding conditions. Stress in the urban areas are generated by the over burdening populations creating unemployment and under employment situations. Overcrowded traffic situation due to inadequate spatial planning has brought about health hazards and concentration of social misfits. All these vices have rendered the urban environment of the cities laden with stress.

## ENVIRONMENTAL STRESSORS: THE NIGERIAN EXPERIENCE

Adedeji (1984) opined that the general impression of Nigerian towns and cities to a casual observer is that of urban disarray. Little of no physical planning in most Nigerian towns paved way for factories, shops markets and houses to exist side by side while zoning schemes achieve little or nothing. The roads are inadequate and usually poorly maintained. Sometimes serving more to impede than to facilitate

movement of traffic. Traffic jams and long waiting time at bus stops are very prevalent in Nigerian cities, portable water supplies are frequently grossly inadequate when supplied. Loud music from amplifiers, noise from generators that most frequently substitute the frequent failure in public electricity supply. Quite unlike the Western cities, Nigerian cities have concentrations of industries, high-rise buildings large-scale housing developments and overcrowding neighborhoods. It is known fact that a great majority of the lower paid workers live in degraded neighborhoods.

As noted by (Alli, 2004), 42 blighted areas were identified in metropolitan Lagos in 1984. Even though Lagos is fast becoming one of the world's largest mega cities with its teeming population higher than those of thirty two different countries, 60% of its population are classified as slum dwellers living under unimaginable and sub-human conditions. These neighborhoods are characterized by poor sewage and refuse disposal systems. The excessive heat of the tropics coupled with poor and insanitary conditions encourage the thriving of mosquitoes and its menace. These and other conditions constitute stressors synonymous with cities in developed countries.

The Indian environment according to Vagale (1984) is not too different from its Nigerian counterpart. It is that which is full of contrasts and contradictions. It portrays a decay of the urban core and an aimless sprawl of the sub-urban fringes; excessively high densities in the central areas and very low level of development on the peripheries; a semblance of an urban order and at the same time a chaotic mix-up of incompatible land uses. The metropolis produces and consumes the maximum quantum of goods and services and yet it is unable to provide public utilities, municipal services and community facilities, even at the minimum standards, it has the most extensive and costly network of transport and communication yet very inefficient, uneconomical and time consuming, the metropolitan areas account for the bulk of urban housing, however, face colossal problems of homeless squatters, slums and overcrowded neighborhoods. Industries abound yet the level of unemployment is alarming. As a consequence, major shifts in people to cope with changing trends, in industry and trade, the social fabric of the traditional Indian family and the cohesive community have been badly strained (Vagale 1984).

However, paradoxical as it may seem, the metropolitan areas of India which are the seats of political power, cultural change and economic growth are also the centres of unemployment, poverty and human degradation. As the nation gathers momentum in urbanization, industrialization and metropolization the attendant problems also wear off on the urban dwellers in general and the urban poor in particular. As the condition persists, stress is induced and aversive traits are on the increase. These aversive traits accounts for break down of law and order, and a host of negative tendencies, which further constitutes urban problems.

The effects of urbanization in the developing countries, as illustrated by the Nigerian and Indian experience taken in this study are to represent its African and Asian counterparts. All the above stress factors affect others at the same rate and on different magnitude.

#### EFFECTS OF ENVIRONMENTAL STRESS AND DECAY

Scwab et al (1974) acknowledged the fact that stress in the highly developed countries is directly a consequence of industrialization and technological development. In developing countries as asserted by Adebola and Chojnacka (1983), the cities are moving towards industrialization and as their citizens

enter the urban-industrial labour force in large numbers, the degree and scale of the health hazards associated with industrialization and urban employment increases. This, they maintain, is attributable to increase as per experience of an emergent society characterized by difficult intra-city mobility and extremely hazardous living condition which put strain and stress on her members.

#### STRESS EFFECTS IN A DEVELOPING COUNTRY EMPIRICAL FINDINGS IN NIGERIA

The main problem concerns the rising cases of youth restiveness increasing number of social misfits and mentally disordered patients. There is also an increasing number of reports of urban violence, and insecurity in cities across Nigeria.

A study was conducted in Nigeria to examine and explore the effects of urban environmental stressors on selected cities. The objectives of the study included the following to identify the major stressors in Nigerian cities; to measure the level of impact of the various stressors in each the cities, to determine the pattern of distribution of impacts of stressors among Nigerian cities to identify the socio-economic relations of stressing Nigerian cities and to suggest strategies that will ameliorate the effects of stress in the cities.

The concept of stress, as defined earlier in this paper, operates both internally and externally to influence human behaviour. The influence of particular types of stressors on groups eventually modifies the group behaviour and forms a pattern which could be expressed spatially depending on the settlement pattern of such a group. Major stressors in Nigerian cities include unemployment, poor housing conditions, lack of communication facilities, excessive noise levels traffic congestion, social and youth/religious unrests and unfulfilled aspirations (Omoluabi 1991).

**Table 1: Major Stressors in the Nigerian Cities**

Stressor	Code
Lack of infrastructural facilities	IF
Poor housing conditions	HC
Lack of communication facilities (Pre GSM)	CF
Excessive noise levels	NL
Social instability social (Youth/Religious) Unrests	SI
Unemployment	UE
Traffic congestion	TC
Unfulfilled aspirations	UA

Source: 1. Omoluabi, 1991

2. Author's field investigations, August 2003

The 20 cities selected for this study were randomly chosen from the 36 State Capitals in Nigeria. Those cities chosen include: Uyo, Umuahia, Lagos, Calabar, Benin, Minna, Lokoja, Kaduna, Sokoto, Makurdi, Lafia, Yola, Owerri, Enugu, Port Harcourt, Dutse, Kano, Osogbo, Akure, and Awka.

The investigation was carried out with 100 out of the 180 students who represented various universities and their respective towns in a National Students' Union Conference which took place at the University of Uyo in October 2005. Five students each were chosen randomly from the total number. The effects of the stressors were weighed representing the respective towns for the 20 capital cities from 0 to 9, representing no impact to induced behavioural changes. The students were required to rank the impact of each stressor in the respective towns using the guidelines by the author. The result of the students' response is presented on Table 2 below:-

Table 2: Average Ranking of Stress Effects as Perceived by the Students

Stressors / Towns	Lack of infrastructural facilities	Poor housing conditions	Lack of communication facilities	Excessive noise levels	Social (youth religious) unrests	Traffic congestion	Unfulfilled aspirations	Unemployment	Total
Akure	3	6	6	4	4	5	6	6	
Awka	2	7	8	3	4	5	6	6	
Lagos	4	8	5	7	6	8	9	9	
Uyo	3	5	6	4	3	4	6	5	
Calabar	3	5	6	5	3	4	5	5	
Minna	4	6	7	3	4	3	5	4	
Ibadan	5	6	5	6	5	6	8	6	
Sokoto	6	5	6	4	3	4	4	5	
Dutse	2	4	8	4	3	3	5	4	
Benin	7	6	4	5	5	5	6	6	
Kaduna	6	6	5	6	6	6	7	8	
Lokoja	4	5	6	4	4	4	5	5	
Makudi	5	5	6	4	4	4	5	5	
Lafia	3	4	8	3	5	5	4	4	
Owerri	4	5	5	5	4	6	8	9	
PH.	4	6	5	6	6	7	8	8	
Yola	5	4	6	4	3	4	6	4	
Enugu	5	6	5	5	4	5	8	6	
Kano	6	5	5	6	6	6	9	8	
Osogbo	3	4	7	4	4	4	6	5	

Sources: Author's field investigation, August 2005

1. The rows indicate the distribution of the stressors in each of the cities while the sum of the rows indicate the intensity of in each the city.
  2. The vertical columns indicate the effect of each stressor considered in each of the cities.
  3. The sum of the columns indicate the degree of impact of stress in a particular city.
- ❖ Figures I and II show the maps of distribution of stress effects and classification of cities respectively according to levels of stress in Nigeria

To further evaluate the ranking of the effects by the students, the impact on the cities was grouped by the author as shown on table below to facilitate the measurement of the intensity levels.

Table 3: Levels of Impact of Stress in Nigerian Cities

	Level of effect	Range
1	No impact	0-2
2	A fair impact	3-5
3	Very strong impact	6-8
4	Induced changes in behaviour	>9

Source: Author's Ranking of impacts

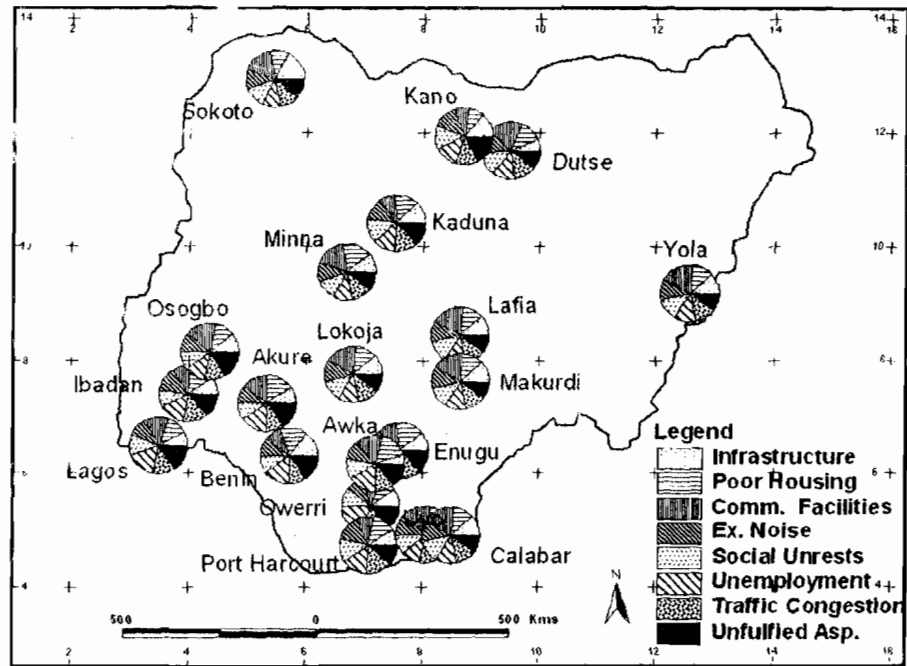


Fig. 1: Effects of Stressors in Selected Nigerian Cities

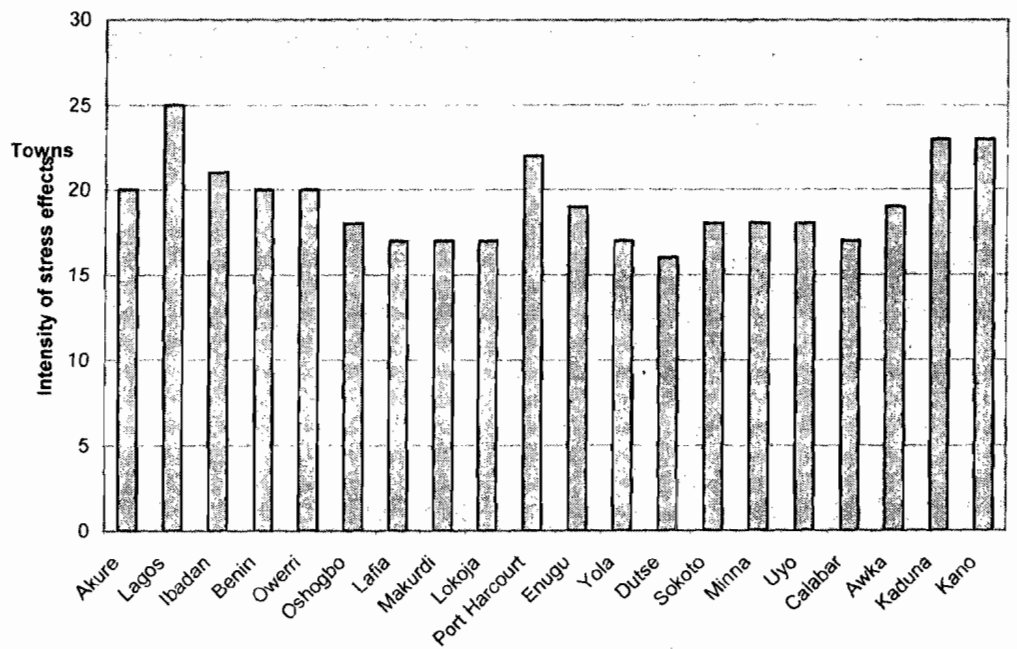


Fig 2: Intensity of Stress Effects in Selected Nigeria Towns

From the sum of the columns, all the cities can be classified according to the levels of impact of stress experienced in each of them. From the table of rankings, cities can be categorized as shown on table 4 below:

TABLE 4: CLASSIFICATION OF CITIES BY LEVELS OF STRESS IN NIGERIA

Greatest Effect of (induce behavioural)	Fairly strong Effects	Medium impacts	Minor Stressor impacts	No stressor impact
Lagos	Owerri	Akure	Calabar	Dutse
Kano	Ibadan	Awka	Uyo	
Port Harcourt		Benin	Minna	
Kaduna		Enugu	Sokoto	
			Lokoja	
			Makurdi	
			Lafia	
			Yola	
			Osogbo	

Sources: Analysis by the author

It can be deduced from the trend that stress impacts of the cities in any developing country like Nigeria is a function of time, population, functional complexity and level of infrastructural development. This can be taken to be same in other countries at a similar level of development.

Further investigation proves that intensity of stress impacts can be measured by the increased incidents of chronic psychiatric cases, social misfits, insanity, bronchial ailments and unemployed persons. (Omoluabi, 1991)

#### FINDINGS

The major findings of the study are that urban environmental stress induces behavioural changes in urban areas such as Lagos, Kano and Port Harcourt. This means that such stress effects are experienced in urban areas with

higher concentration of population, industries and business enterprises.

Stress effects in newer urban areas are induced mainly from housing, employment inadequate infrastructure induces stress in all the cities considered in this study. The pattern of distribution urban environmental stress as shown on table 4 could provide a guideline for policy formulation on prevention of the problem in Nigeria. Apart from personal genetic make up, socio-economic factor in urban areas related to stress include: unemployment, poverty ignorance and illiteracy, religious fanaticism and political instability.

Based on the findings, a scheme showing the stressors, effects and suggested solution strategies is presented on table 5.

TABLE 5: SUMMARY OF ANALYSIS OF URBAN ENVIRONMENTAL STRESS EFFECTS AND SUGGESTED SOLUTIONS IN A DEVELOPING COUNTRY NIGERIA

Environments	Stressors	Effects	Suggested solution strategies
Urban	Traffic congestions/air pollution	Higher morbidity bronchial disorders low productivity	Expansion of urban and network system
	Lack of infrastructural facilities/insufficient social amenities	Lack of concentration and reduced outputs	Provision of basic amenities by government and private sectors
	Unemployment	Youth restiveness	Job creation
	Social instability	Disturbances	
	Inadequate housing	General fatigue	Provisions of affordable housing
	Unfulfilled aspirations	More social misfits such as "area boys" in Lagos Nigeria	Creation of employment opportunities. Measures to check rural-urban migration
	Excessive noise levels	Impaired cognitive functioning/reasoning	Enactment of noise laws public enlightenment campaign
	Lack of communication facilities	Frustration/traffic congestion/accidents	Expansion of road networks and improvement of commercial facilities

Source: Author's field investigation, August, 2005

"Area Boys" used to describe most frustrated young men who make the dwellings under overhead bridges and constitute the fabric of social misfits mostly in Nigeria towns. They engage in pick pocketing and commit various forms of social vices in the cities.

### OTHER EFFECTS OF STRESSORS ON URBAN POPULATION

Vehicular traffic emits a high level of air pollutants viz particulate matter, carbon monoxide (CO), sulphur dioxide SO<sub>2</sub> and many other hydrocarbons. Ikurekong (2003) conducted a study in Uyo urban (Nigeria) to ascertain the relationship between air pollutants concentration and vehicular traffic in the central business district. He observed that increased air pollutant results in increased respiratory diseases, stress and pre-mature deaths. Accordingly, the study observed that sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO) Hydrogen Sulphide (H<sub>2</sub>S) and particulate matter all occurred in quantities which are above the permissible threshold levels. He stressed that carbon monoxide (CO) when inhaled ties up hemoglobin in the blood and deprives the body oxygen. This he maintained leads to headache, fatigued impaired judgment and a greater workload on the heart. Outside healthy hazards, he furthered that some automobile accidents do frequently occur due to fatigued drivers' poor sense of judgment.

In the same vein, Adinna (2003) quoted from Riggs (1968) identified three aspects of urban pollution generally to include:

- Urban intoxication which result in poisoning due to chemical emitted from factories
- Urban deficiency which from ultra-violet and other sun rays coupled with nutrients deficiency and
- Overwork which could result from academic, muscular intellectual or the result of insomnia

Adinna (2003) further opines that most of urban pollution are sublethal in nature and causes long-term damage to the living by encouraging cancers, altering genetic patterns impairing hormonal function and increasing vulnerability to diseases. Elements such as carbon monoxide reduces enzymes activities, cause drowsiness, headache, general stress conditions and even death. This environment makes life riskier.

According to Botkin and Keller (1997), the age-adjusted mortality rates for adults over 45 years old in the United States indicates a consistent 13% higher rate of cancer deaths in the metropolitan cities that include central cities. Hence, deaths from cancers are 50% greater for people living in the areas of highest air pollution than for those living in the least polluted areas. This phenomenon of development of cancer no doubt, has filtered into the developing nations at alarming rate.

Noise from automobiles and other domestic appliances beyond threshold frequencies can cause deafness, fatigue, impaired judgment, coronary heart disease, tension and hypertension (Omoluabi, 1991). Keys and Payne (1981) observe that poor concentration, impaired cognitive functioning and a feeling of irritability have been associated with the effects of noise, particularly when it occurs intermittently.

Moreover, psychomotor performance generally decrease when ambient temperature is high and atmospheric humidity is also high (Atzer et al, 1972), while overcrowding and spatial layout of building in large scale housing estates are usually associated with decreased interpersonal relationships and a tendency to aggressive behaviours (Baron et al, 1976). It is no doubt that emotional disturbance are triggered off by both crowding and high temperatures.

### SUMMARY AND CONCLUSION

The problems of the urban centres in developing countries are multidirectional and varied. They have transmitted themselves into stressors on the urban dwellers as well as bring large-scale decay on the environment. This decay is reflected on fading aesthetic of the environment and also brings corrosive effect on buildings and even our clothes, and growing inability of men to survive in the cities. The rate at which these stressors bring wear and tear on the environment is quite alarming so that mere replenishing of what they have destroyed is not the answer.

Between 1979 to 1990 several state government in Nigeria enacted edicts to regulate noise levels in their various areas of jurisdiction (Egunjobi, 1988). This was a glaring fact that the problem of noise as a major stressor had reached a dimension which demands some urgent actions. Apart from the individual states reaction, the Nigerian Government has not yet classified noise as an urgent national concern in the categories of solid/liquid waste disposal, flood prevention and to some extent fire hazards yet, noise is a debilitation nuisance on its own.

On the other hand, most Governments of developing countries have not considered youth unemployment as a priority except and unless of recent where there have been series and youth restiveness as is the case in the Niger Delta region of Nigeria. What the Governments fail to acknowledge is that this stems primarily from inability on the part of the youth to stem the tide of surging emotional/mental despair of joblessness. They are stressed up and when they react, others are affected, the environment receives large-scale vandalization, arson, break down of law and order which leads to sprawling decay.

Quantifying the impacts of stress on the economies of development countries is impaired by lack of quality data and low level of literacy in their population. However, the crippling effects of stress on national development requires a major policy and programme focus by government of developing countries.

### RECOMMENDATION

Basically urban problems have been tackled over the years through three outstanding instruments. viz

- Legislation
  - Physical planning; and
  - Education (Egunjobi, 1988)
- Legislation: Enactment of laws on noise abatement/control, solid minerals exploration/Exploitation, waste disposal family planning, Environmental impact assessment and on all other obnoxious activities of urban and rural dwellers. Sadly, most laws enacted in these countries are not enforced. There is dire need to reactivate dormant laws and possibly introduce built in traditional measures to take care of offenders. Policy refinements on job creation through social welfare programmes are just unavoidable economic measures that are indispensable in most developing countries, especially Nigeria.
- Physical Planning:** There are some stressors that can never be completely removed except there is spatial re-ordering of activity spaces. Participatory approaches must be devised to ensure compliance with zoning ordinances that can facilitate development control, thus eliminating disorder in spatial development of cities. Incompatible landuses is a major cause of noise and air pollution. This can be addressed through physical re-planning. Traffic congestion can be addressed if the urban/rural areas are massively opened-up to lead traffic away from overcrowded areas.

**Education:** Public enlightenment on sustainable use of

resources and the environment. It is indispensable in the understanding and acceptance of existing laws and ordinances. It is useful in the public understanding and interpretation of physical planning structure on ground as well as personal awareness of potentially harmful practices. If the above are consciously and conscientiously followed the level of stress and decay will be drastically reduced.

## REFERENCES

- Adedeji, 1984. "Urbanization Challenge in Nigeria: Race against time" L. Rowlands and A. Adedeji, (eds) in *Management problems of Rapid Urbanization in Nigeria*. University of Ife Press. Nigeria.
- Adegbola and Chojnacka, 1983. *Adult Mobility Differentials in Lagos* Human Resource Unit, Research Bulletin No. 83/03. Lagos.
- Alli, T. F. 2004. "Urban Renewal Programme as a Mechanism for Improving the Living Environment: The Lagos State Experience." Conference Paper Presented at National Conference of Directors and Heads of Town Planning Organizations in Nigeria Holding in Umuahia, Abia State.
- Adinna, E.N. 2003. 'Indoor Pollution and its Management in Enugu Urban' in Adinna E.N. et al (Eds) *Environmental Pollution and Management in the Tropics* SNAAP Press, Enugu.
- Atzer et al, 1971. Effect of Heat Stress on Performance. *International Journal on Ergonomics* 15:681-691.
- Baron et al, 1976. "Effect of Social Density in University residential Environment" in *Journal of Personality and Social Psychology* 34, 434-444.
- Baum et al, 1978. "Drowning and Personal Control Social Density and the Developing of Learned Helplessness" in *Journal of Personality and Social Psychology* 21: 79-83.
- Botkin, D. and Keller, E., 1997. *Environmental Science: Earth as a Living Planet 2<sup>nd</sup> Edition* California.
- Biswas and Biswas, 1982. *Stockholm Ten Years After* Mazingira, 6(3), 4-(3): 441-51.
- Coleman et al, 1984. *Abnormal Psychology and Modern Life*. Glenview, Illinois: Scott, Foresman and Company.
- Offodile, M. E., 2001. "Environmental Issues in Solid Mineral Development" a Paper Presented to the 31<sup>st</sup> Annual Conference of the Nigeria Institution of Estate Surveyors and Valuers, Uyo.
- Odieta D. E. and Hvosky, K., 2001. "An Overview of Property Degradation in the Niger Delta" a Paper Presented at the 2<sup>nd</sup> day CPD Workshop Organized by the Delta State Branch of NIESV held on 21-22 June, 2001 in Warri.
- Omoluabi P. F., 1982. "Incidence of Psychologic Disorder among non-patient Nigerians." A Paper presented at the 2<sup>nd</sup> Annual Conference of Nigeria Assoc. of Clinical psychology, Benin City.
- Egunjobi, L., 1988. "Urban Environmental Noise Pollution" P. O. Sada, Odermerho (eds) in *Environmental Issues and Management in Nigeria* Development Evans Bros. Nig Pub Limited.
- FEPa, 1991. *Guidelines and Structure for Environment Pollution in Nigeria*. Federal Environmental Protection Agency, Lagos, Nigeria.
- Girdano and Everly, 1979. *Controlling Stress and Tension: A Holistic Approach* Englewoods Cliffs, N. Prentice Hall.
- Hamilton, V., 1979. "Personality and Stress" in V. Hamilton & D. Warburton (Eds) *Human Stress and Cognitions: An Information Processing Approach*, Chichester, John Wiley and Sons.
- Igbosurike, 1983. "Energy Development and Energy Crisis with special Reference to Nigeria" in *Nigeria's Threatened Environment. A National Profile* NEST, 1991.
- Ikurekong, E. E., 2003. "Urban Vehicular Traffic and Air Pollution in Uyo-Nigeria" in Adinna, E. N. Ekop, O. B., Attah (eds) *Environmental Pollution and Management in the Tropics*, ESUT Enugu, Nigeria.
- Lach M., 1982. Environment in the 80's: Action or Disaster? *Mazingira*, 6(3): 441-51.
- Keys, K. F. and Payne, M. C., 1981. Effect of Noise frequency on Performance and Annoyance for Men and Women. *Perceptual and the Motor Skill* 52,435-441.
- Omoluabi, P. F., 1991. *Environmental Stress in a Developing Country*. Shaneson C. I. Ltd. Ibadan.
- Peterson, 1982. The Case for World Leadership. *Mazingira*, 6(3): 22-31.
- Vegale, L., 1984. "Local Government in Metropolitan Cities of India in relation to Urban Planning Development" in *Management Problems of Rapid Urbanization in Nigeria* Technical Paper No. 2 University of Ife, Nigeria.
- Schwab et al, 1974. "The Epidemiology of Psychomatic Disorder", *Psychomatics* 15, 88-93.
- Ozili P. C., 2003. "Tourism Potentials of Disused Mineral Sites" A Paper Present at the Conference of the Nigerian Institute of Estate Surveyors Uyo, Nigeria.
- WHO, 2000. *Environment Costs of Fossil Fuels: A Rapid Assessment Method with Application to six Cities*. WHO Environment Department Papers, No. 78.