

User's Perception of Environmental Hazards and Risks as a Tool in Public Space Management: The Case of Selected Motor Parks in Lagos, Nigeria

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Key words: environmental hazards, users' perception, facility adequacy index, perceived level of environmental hazard severity, safety perception index, public space.

SUMMARY

The study examines the image of the everyday users' of motor parks with respect to the existence and magnitude of environmental hazards and risks with a view to using the information obtained as inputs to effectively manages parks and similar public spaces. Lagos, the former capital territory of Nigeria, is the focus of the study.

Data for the study were collected from both the permanent and transit users of Oshodi and Ojuelegba motor parks. The information obtained include: the users' socio-economic background, the perceived level of adequacy of environmental infrastructure, the hazards perceived to be in existence and the perceived level of environmental hazards severity and level of safety perception. Using what is termed "facility Adequacy Index (FAI), it was identified that, though, the level of adequacy of facility is perceived to be very low, the index of the permanent users (2.08) is lower than the transit users (2.77). The study does not only recognize that users' acknowledge the presence of hazards in the parks and that they constitute risks to health, but also established that each of income and educational status of users' varies directly with the perception held of the hazards severity (environmental risk factor) but inversely with the safety level perception.

The study concludes that the information obtained on the perception held of hazards and risks and opinion on ways of managing parks environment could be effective tools in the hands of policy makers at ensuring that public spaces are safe for everyday users.

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1. INTRODUCTION

Public spaces are the areas around us that we can all use and enjoy. The proportions of the daily hours spent by users depend on the type of the space and the purpose for which it is patronized. Public space may be open. This will include open sport field, beaches, towns' squares, streets and footpaths, motor parks and markets. On the other hand, public space may also be close or indoor. In this category is town hall. Of significant importance to this study is the motor park as a public space. Motor Park came into existence as a response to the need for central collection points of passengers and goods as commercial activities and population increase (Osaghe 1972). In the recent past however, Motor Park is performing quite a number of other functions in addition to the primary function of acting as a transport terminal. Indeed, very many of this type of public space, especially in large Urban Centers act as the nerve centre of economic activities of where they are located. Parks are therefore where there are concentration of people and economic activities.

With the agglomeration of economic activities and concentration of people in parks, existing environmental service are over-stressed. This is also the condition of environmental amenities in the urban centres in which they are located. The works of Oyebami (1980) and Odunmorayo (2004) on selected parks in Ibadan, Faluyi (1982) and Bakare (1985) on Lagos and Osaghe (1972) on Benin City all in Nigeria confirmed that the solid and liquid waste management system, toilet facilities, drainage system and the general environmental sanitation behaviour of motor park users are all in very poor states. If the above documentation by these researchers is something to go by, the conclusion can be drawn that the environment of motor parks in major urban centres constitutes hazards and risks to users.

In essence, the environmental condition of parks are less conducive to human health living. Yet, this is a public space that is patronized by those who earn economic benefit from it daily.

Efforts have been made to improve the environmental quality of parks, but it seems the desired results are not produced. One of the reasons for the poor results is that solution offered emanated only from the intuitions of the elected and career officers in government. Such solutions had no input of users. It is considered that enduring solutions to environmental hazards and risks in public space like motor parks which are fundamentally human problems should be sought from the users' themselves. An important way of evolving public participation into public space management is through the utilization of information on users perception of environmental hazards and risks. Such perception data could then be used as tool in the management of such public space. Therefore, the focus of this study is to

document the perception held of environmental hazards and risks in selected public spaces with a view to use the information as a tool in proffering solution to usher in effective environmental management. The two biggest motor parks in Lagos, the capital city of Lagos State, and the former capital of the Federal Republic of Nigeria is the focus of the study.

2. LITERATURE REVIEW

The need for perception study according to Carter (1975) is borne out of the following premises:

- many environmental problems require solutions which must be sought from various position of ignorance. In many instance, better information on how people perceive and react to environmental issues may lead to more enlightened decision;
- perception study reveals to policy makers the action that would be welcome and which programmes are to be embarked upon at a given time. Thus, through perception information, public crises and uproar, which may lead to public unrest are averted.
- users' environmental perception data would clearly reveal to policy maker and planners the need for environmental education. More over, the issues on, and direction in, which environmental education will focus in a given environment are made manifest.

From the above, users' perception data is a veritable tool in the land of planner and decision makers. Environmental perception involves two but separable actions. These are:

- the awareness of all the external condition and influences affecting man's life and development through sensation; and
- the interpretation of these conditions to from mental image of such environment or issues perceived for decision making process.

Summing up these two actions, Tuan (1972) opines that each man has an image of the world. The preferences, evaluation, decision and subsequent behaviour are therefore based on these pictures of the world on his head, rather than in the world of objective reality. Further more no two individuals or group of individuals make precisely the same evaluation of the same environment (Saarinen 1964). This is because individual acknowledge only what has value for his biological survival and satisfaction; and decoded this to suit his social and economic conditions. Thus, there exist several subjective factors that modify environmental perception. These include: experience (Lynch 1977, Porteus 1976); socio-economic class and status (Goodchild 1974; Sadalla et al 1999); age and sex (Carter 1975); race and culture (Hunter et al 2001), quantity and quality of information available (Hart 1999); adjustments and adaptation capacity to issues perceived (Holman 1998); the effects of what is being perceived on the economic and social activities.

Users' perception data can be used as a tool in proffering solution to different problems in the different areas of human endeavour. For example, its use as tool in the preparation of physical development/master plan has been succinctly pointed out by Afon (1998). Its use is also extended to identifying priority project in selective rehabilitation in the traditional residential area (Afon 2004). Other areas where perception data is useful include determining

rate of migration (Hunter et al. 2001). It can also be used to know the attitude of users to a particular environmental hazards and risks (Sadalla et al 1999). In another dimension it is used to know residents' feeling before, during and after an industrial construction (Hillary 1999). Residents' perception data on the environmental quality of residential region also exists (Afon 1998a). However, not much work existed on users' perception of environmental hazards and risks in motor parks.

On one hand, environmental hazard refers to sources of potential harm. It denotes a property (of substances, microorganisms, and so on) or a situation that in particular circumstance could lead to harm (World Bank 1997). Risk, on the other hand, considers the frequency and severity of damage from hazards. It is a function of the probability (or frequency) of hazard occurring and the magnitude of the consequences.

Environmental hazards could be natural or man-made. Natural hazards occur usually through what is regarded as the "acts of God". Events in this category of hazard include flood, volcanic eruption, storms, drought, avalanches among others. Man-made environmental hazards could also be called technological hazard. It emanates from human activities, which are harmful to his health. Practices such as bush burning, environmentally unfriendly means of managing waste, poor maintenance of public toilets, noise pollution are all good examples of man-made hazards.

Sadalla et al (2001) submitted further that man-made hazards are caused by substandard living conditions and residents' behaviour in communities such as deficits in housing and infrastructure. Such communities could be extended to public space like motor parks. Motor parks in Nigeria as a terminal facility in transportation is categorized into authorized and unauthorized (Faluyi 1982). These terminals are of varying sizes. Depending on the design criteria, authorized transport terminal may be provided with toilet facilities, trading stalls, shed and sck bay. Local Government is usually in charge of authorized terminals. The interest of this level of government is mainly for revenue generation rather than to serve the public interest.

The presence of the National Road Transport Workers Union of Nigeria (NRTWUN) and Road Transport Employees Association of Nigeria (RTEAN) are also noted in all authorized and some unauthorized parks. Money is generated for various reasons and in various ways by these two unions.

The users of terminals can be categorized into two. These are the permanent and transit. Permanent users are those who patronized the park daily for their own economic activities. These people include traders, road side mechanics, vulcanizes, food vendors, drivers, union officers, local government rate officers, motor-cycle operators (okada riders), road side hawkers. The transit users are those who visit the park temporarily. Majority of this category of users are passengers.

As a result of differences in the socio-economic background of users, and the purpose for visiting the motor parks, environmental hazards and risks in it will be perceived differently. The difference in perception would affect their response to management activities and policies. However, the aggregate perception data of users should be used as inputs into managing them.

3. THE STUDY AREA

There are very many authorized Motor Parks in Lagos, Nigeria. These include Ketu, Ojota, Berger, Bariga, Oshodi and Ojuelegba to mention but very few. Two of these parks are selected for study. The first one is the Ojuelegba Motor Park located in Surulere Local Government Area of the State. The other is Oshodi Motor Park in Oshodi Local Government Area. These two parks are selected on the basis that they are the two biggest and busiest authorized motor parks in the State. Furthermore, while Ojuelegba Park connects almost all parts of the state with few vehicles going to the eastern part of the country; Oshodi Motor Park is a location where one can board vehicles going to any part of the country. The locations of the two Local Government areas relative to the other eighteen is as shown in Fig.1.

The two public spaces are provided with toilet facilities. A cursory glance at the environmental situations revealed that the drains are filled to the brim with solid and liquid waste, people defecate in available open spaces especially at night and early in the morning, solid waste disposal methods are far from being environmentally friendly. These problems are addition to inadequate water supply, menace of roadside hawkers and touts, illegal shop development, overcrowding among others.

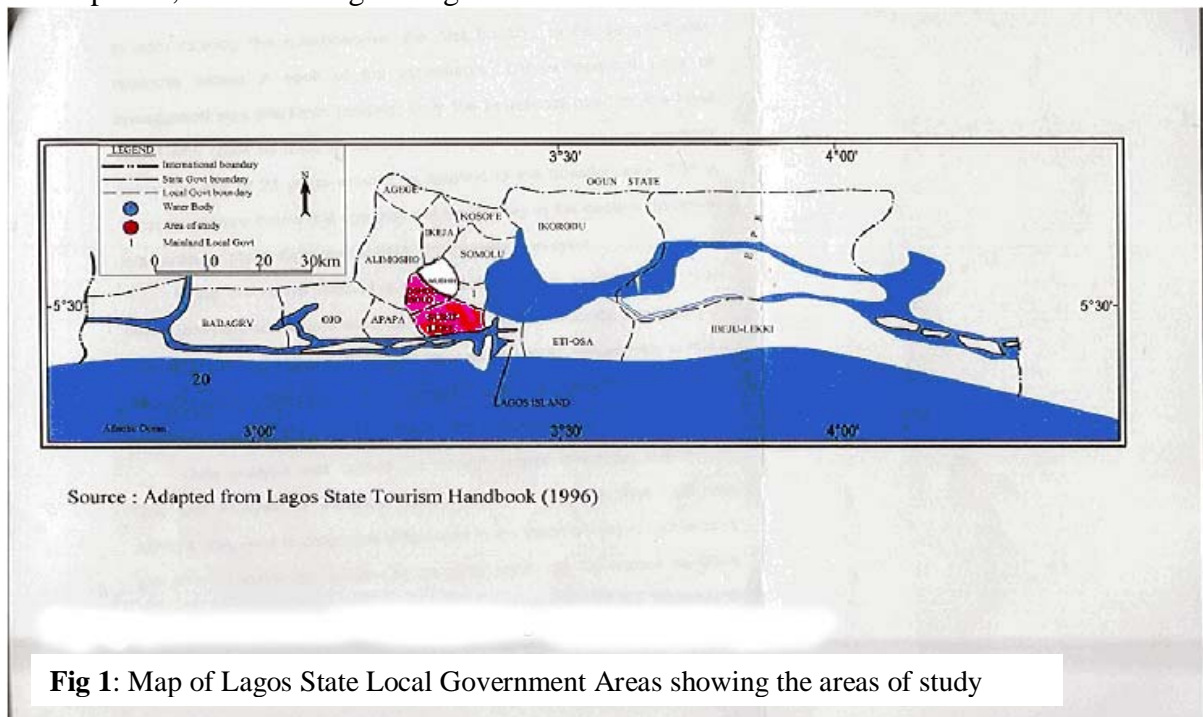


Fig 1: Map of Lagos State Local Government Areas showing the areas of study

4. METHODOLOGY

Data were collected from both the permanent and transit users of the two parks. Different methods were employed to collect data from the two identified users.

Samples were selected from the users of locked up stalls through systematic random sampling. The first shop was randomly selected. Subsequent unit of investigation was every 10th shop. Similarly, 50% of the vulcanizers identified in each of the parks were surveyed. Two people in each mechanic workshop were selected for survey. One out of every five food vendors in locked up stalls and those operating in specific open spaces were surveyed. Purposive systematic sampling technique was used to select one street hawker within an average distance of fifty metres. Two members' from each of the two unions operating in authorized parks (NURTW and RTEAN) were selected for study. Using these methods, a total of 94 and 88 questionnaires were administered in Oshodi and Ojuelegba respectively.

The transit users consists mainly the passengers. One out of every five vehicles loading to various parts of the country were selected for study. At least one passenger and at most 10% of the passengers were survey in the selected vehicles. The numbers of transit users surveyed were 57 in Oshodi and 44 in Ojuelegba.

Information obtained from the two categories of users includes: the socio-economic background of users, the perceived level of adequacy of environmental services in the parks, hazards that they could identify. Other information solicited are perceived level of hazards severity, level of safety perception and what in the opinion of users could be done to improve the environmental quality of the parks.

5. RESEARCH FINDINGS

It is established in literature that the deficits in the provision of environmental services can cause environmental hazards and risks. To this end, the study investigated how adequate the environmental services provided for users' consumption in Oshodi and Ojuelegba motor parks. Six major environmental services were identified. The users were to rate the level of adequacy of each service using any of the five Likert's scale of: *very much adequate*, *very adequate*, *adequate*, *not adequate* and *not at all adequate*.

In order to obtain the aggregate Facility Adequate Index (FAI) of each service, a weight value of 5, 4, 3, 2 and 1 is respectively assigned to each rating above. The summation of weight value (SWV) for each service is obtained from the addition of the product of weight value of each rating and the number of responses to each rating. The FAI is finally obtained by dividing TWV by the total respondents that rated each service. Therefore for facility i-j

$$FAI_{i-j} = \frac{TWV_{ij}}{N_{ij}}; \text{ where}$$

FAI_{ij} = Facility Adequacy Index for facility i-j

TWV_{ij} = Total Weight Value of facility i-j

N_{ij} = Respondents rating each of facility i-j

Presented in Table 1 is the aggregate users' view on how adequate each of the identified facilities is in Oshodi and Ojuelegba. The nearer the FAI to 5, the more adequate the services is considered by users.

Table 1:

The Facility Adequacy Index of the identified facilities in the Motor Parks

Identified Facility	Motor Parks		
	Oshodi	Ojuelegba	The Two Parks
Drainage Condition	2.43	1.24	1.84
Toilet Condition	2.32	2.21	2.27
Road Condition	2.26	2.20	2.23
Solid Waste Collection	2.19	2.26	2.22
Security	2.25	2.17	2.21
Water Supply	1.77	1.74	1.76
ΣFAI	13.22	11.82	12.53

Source: Authors' survey, October, 2005.

The average FAI denoted by $\overline{FAI} = \frac{\sum FAI}{n}$ where n = the number of identified services. The

FAI for Oshodi motor park is $\frac{13.20}{6} = 2.20$, while \overline{FAI} for Ojuelegba is $\frac{11.82}{6} = 1.97$. The

\overline{FAI} for the two parks is 2.08. From this analysis, the adequacy of environmental facilities in Oshodi lies between *adequate* and *not adequate*. In Ojuelegba, the adequacy lies between *not adequate* and *not at all adequate*. This situation tends to suggest that the provision of

environmental services is poor from users' point of view. This is against the \overline{FAI} of 2.68 and 2.88 computed respectively for Oshodi and Ojuelegba for transit users. This results tends to suggest that transit users may not be able to objectively rate the adequacy level of environmental facilities in the parks. In essence, the length of stay in a particular environment is a modifying factor of environmental perception. While the facility with the least adequacy index in Oshodi is *water supply* (FAI=1.77), *the condition of the drainage* is considered least in adequacy (FAI=1.24) in Ojuelegba.

With this view of users on adequacy of services and based on their experience and knowledge of the environmental situations of the motor parks where they operate, users indicated the various environmental hazards known to be present. Summarized in Table 2 are the findings

in the two motor parks. Users are allowed to respond by indicating as many of the environmental hazards they perceive to be in existence.

Of the ten identified environmental hazards, soil contamination is considered most prevalent in Oshodi Motor Park. It represents 10.15% of how prevalent environmental hazards are from users' point of view. In Ojuelegba however, noise pollution constitutes the commonest form of hazard representing 10.29% of users view in the park. On the whole, noise pollution is ranked as the most prevalent environmental hazards in the two motor parks.

Table 2:

The prevalence of Environmental Hazards in Oshodi and Ojuelegba Motor Parks from Users' Perception.

Environmental Hazards	Oshodi		Ojuelegba		The Two Parks	
	(%)	Ranking	(%)	Ranking	(%)	Ranking
Stagnant Water	78 (8.52)	10	81 (9.36)	6	159(8.93)	8
Odour from Toilets	83 (9.06)	7	79 (9.13)	7	162 (9.10)	7
Pollution from vehicle ...	81(8.84)	8	86 (9.94)	3	167(9.38)	5
Odour from uncollected waste	90(9.83)	3	86 (9.94)	3	176 (9.88)	3
Odour from filthy drains	87(9.50)	5	84 (9.71)	5	171(9.60)	4
Noise pollution	92(10.04)	2	89 (10.29)	1	181(10.16)	1
Soil Contamination	93(10.15)	1	71(1832)	10	165(9.26)	6
Motor Accident	57(6.22)	11	51(5.90)	11	108(6.06)	11
Pollution from indeterminate Urinating and defecating in open spaces	90(9.83)	3	89(10.29)	1	179(10.05)	2
Mosquito breeding	84(9.17)	6	74(8.55)	8	158(8.87)	9
Water Pollution	81(8.84)	8	74(8.55)	8	155(8.70)	10
Total	916(100)		865(100)		1781(100)	

Source: Authors' survey, October, 2005.

A careful observation of the hazards prevalent in the parks revealed that the causes are mainly as a result of deficits in the provision of amenities and poor environmental sanitation habits of dumping of waste in drains and open spaces and environmentally unfriendly habit of urinating and defecating in the available open spaces within the parks.

Users were further directed to express their opinions on the severity of each environmental hazards already identified. The expression in other words represents the level of exposure to risks that users' felt. The Likert scale used in the rating are *very much severe*, *very severe*, *severe*, *not severe* and *not at all severe*. Assigning a weight value of 5, 4, 3, 2 and 1 to each of the above rating, the risk factor for each hazard is obtained. The findings are as summarized in Table 3.

Table3:

Level of Severity Index (environmental risk factor) of the identified Hazards

Severity level of hazards from:	Environmental Risk Factor		
	Oshodi Motor Park	Ojuelegba Motor Park	The Two Parks
Stagnant Water	3.43	3.23	3.33
Odour from Toilets	3.73	3.59	3.66
Pollution from vehicle emission	3.81	3.75	3.76
Odour from uncollected waste	3.91	3.86	3.87
Odour from filthy drains	3.93	3.84	3.87
Noise pollution	4.00	3.75	3.80
Soil Contamination	3.55	3.21	3.88
Motor Accident	3.43	3.21	3.37
Urinating and defecating in open spaces	4.32	4.18	4.25
Water Pollution	3.56	3.40	3.41
Total	37.67	36.02	37.20
Average	3.77	3.60	3.72

Source: Authors' survey, October 2005.

From the table, the aggregate perceived level of hazard severity (Environmental Risk Factor) for Oshodi is 3.77, while the figure for Ojuelegba is 3.60. The average for the two parks is 3.72. In essence, users' perception of the severity level of environmental hazards is between *severe* and *very severe*. Pollution from indiscriminate passing of urine and excreta on available open spaces is with the highest risk factor. This is 4.32 and 4.18 in Oshodi and Ojuelegba respectively. Conclusion can therefore be reached that users in the two motor parks do not only identify hazards in their environment, but also realize the level of risks in the environment they operate daily.

The level of users' safety perception in the park is also investigated. Users were to rate their feeling of safety using any of the ratings: *very much safe*, *very safe*, *safe*, *not safe* and *not at all safe*. The computed level of safety tagged *safety perception index* (SPI) indicated that users in both parks do not feel safe enough to warrant their staying further. The SPI in Oshodi is 2.51. This is 2.52 in Ojuelegba.

Despite the users' high level of awareness that the environmental conditions in the park constitute risks to their healthy living and perception that their safety is low, they still patronize this public space. Attempts were made at identifying reasons for their continued patronage of the area. Presented in Table 4 is the various reasons expressed by users for continued patronage.

The ranking of the reasons as shown in Table 4 indicated that economic reason is the most important why users can not seize patronizing the parks. For example, users ranked the fact that their means of livelihood is earned through the different economic activities they engage in as the most important reason for their continued patronage of the parks despite the known high level of environmental hazards and risks. That *friends work in the park*, which is a social consideration was ranked least among the reasons for continued stay in such environment.

The study also investigated the relationship between each of income and educational status of users and the perceived level of environmental hazards severity (environmental risks factor). The environmental risks factors of 3.6, 3.69, 3.70 and 3.75 are

Table 4:

Reasons for continued patronage of the parks despite the users' low level of safety perception

Reason	Oshodi Park		Ojuelegba Park		The Two Parks	
	No of Respondents	Ranking	No of Respondents	Ranking	No of Respondents	Ranking
Earning a living in the park	93(19.21)	1	75(17.99)	1	158(18.05)	1
No other conducive area to trade	56(11.57)	3	48(11.51)	5	104(11.54)	5
Friends work in the park	28(5.79)	9	21(5.04)	9	49(5.44)	9
No other business location	53(10.95)	5	56(13.43)	2	109(12.10)	4
Make more profit here	53(10.95)	5	47(11.27)	6	100(11.10)	6
Close to my residence	55(11.30)	4	55(13.19)	3	110(12.21)	3
Direct route to my house	45(9.30)	7	34(8.15)	7	79(8.77)	7
Have stayed long on the park	62(12.81)	2	50(11.99)	4	112(12.43)	2
Have a personally built shop	37(7.64)	8	31(7.43)	8	68(7.75)	8
Total	484(100)		417		901(100)	

Source: Authors' Survey, October, 2005.

respectively computed for users with no formal, primary, secondary and tertiary educational background. This confirms that perceived level of environmental hazards severity is directly related to educational status. In other words, as educational status of users is increasing, the awareness that one is under environmental risks is increasing. Furthermore, safety perception index of 2.84, 2.60, 2.41 and 2.48 respectively for each of the educational status above suggests that the higher the educational status, the less the users feel safe in the two motor parks. Similarly, the higher the income, the lower the perceived level of environmental hazards severity by users. Confirming this is the fact that the environmental risk factor of the low, medium and high-income users are respectively 3.15, 3.45 and 3.00. However, the level of income of users directly varies with the safety perception level of users. The safety perception index of 2.49, 2.62 and 2.78 respectively for the low, medium and high-income users confirmed this assertion. It therefore followed that the higher the educational status, the more users are enlightened about hazards in the environment. On the other hand, economic gains make users to regard environmental hazards as ordinarily occupational hazards. Hence, the higher the income that one makes in an environment, the less one considers the hazards as risks to health.

The study also investigated from the users' point of few what could be done to improve the environmental qualities of the motor parks. Their submission is as summarized in Table 5.

At a glance from the table, improving the environmental quality of the parks involves all the state holders; in this case the government and the users. The three most important improvement exercises are directly the responsibility of both the government and the users. It

is also obvious from submissions summarized in the table that users also recognize their responsibilities of paying for services enjoyed.

The study concludes by investigating the amount that users could afford and be willing to pay on monthly basis as users charges for important services. Four of such environmental services were identified as shown in Table 6.

Table 5:

Activities to improve the environmental Quality of the Motor Parks from users' point of view

Suggested Solution	Oshodi Parks		Ojuelegba Park		The two Parks	
	No of Respondent (%)	Ranking	No of Respondent (%)	Ranking	No of Respondent (%)	Ranking
Provision of better waste management system	91(9.07)	2	88(9.10)	2	179(11.54)	1
Facility of more Toilet	86(8.57)	4	89(9.20)	1	175(11.28)	3
Improving the road quality	65(6.48)	9	64(6.62)	10	129	
Provision of adequate water supply	92(9.17)	1	87(9.00)	3	179(11.54)	1
Paying for SWM by users	8298.17)	6	71(7.34)	6	153(9.86)	5
Paying for the Cleaners Service	67(6.68)	8	66(6.83)	9	133(8.50)	7
Paying for the use of Toilet	73(7.28)	7	69(7.14)	7	142(9.16)	6
Paying for water	61(6.08)	12	58(6.00)	12	119	
Ejection of street hawkers	59(5.88)	13	55(5.69)	13	114(7.35)	10
Paying for security service	87(8.07)	3	84(8.69)	4	171	
Ejection of touts	85(8.47)	5	82(8.48)	5	167(10.76)	4
Ejection of permanent open space users	64(6.38)	10	6196.31)	11	125(8.06)	9
Demolition of illegal structure	62(6.18)	11	68(7.03)	8	130(8.38)	8
Relocation of the bus stop	2992.89)	14	25(2.59)	14	154(3.45)	11
Total	1003(100)		967(100)		1551(100)	

Source: Authors' survey, October 2005.

Table 6:

Amount of money users could afford and be willing to pay per month for services enjoyed

Service	Oshodi			Ojuelegba		
	Minimum	Maximum	Mean	Minimum	Maximum	Mean
Sweeping the park	5	200	32.16	5	150	32.96
Putting the toilet in sanitary condition	5	100	28.27	5	150	26.01
Water Supply	5	200	31.47	5	150	31.52
Security	10	200	36.22	20	200	28.35
Total	25	700	128.12	35	650	118.84

Source: Authors' survey, October 2005.

The maximum amount expressed by users to be paid per month on the four services in Oshodi is seven hundred Naira (N700.00) only. This is as against the Six hundred and fifty Naira (N650.00) recorded in Ojuelegba. The computed average amount which the users can

afford and will be willing to pay in Oshodi and Ojuelegba is N128.12 and N118.84 respectively.

6. CONCLUSION

The information presented in section 5 of this study represents the users perception data on some issues in the two parks selected for study. This concluding portion of the study is aimed at racing the implications of the views expressed by users.

No doubt exist that there exist deficits in the provision of basic environmental facilities in the two motor parks. These include water supply, toilet facilities and effective means of managing solid waste generated. The facility adequacy index explains the situation better. The deficit is responsible for the poor environmental sanitation behaviour of users. The absence of enough toilet facilities for example, is responsible for urinating and defecating in available open space in the parks.

Closely linked with the above is the prevalence of environmental hazards in the parks. The users could identify the different hazards in their working environment. And indeed, the perceived level of environmental hazards severity (environmental risk factor) confirmed further that users are aware that where they operate daily is not conducive to human healthy living. Further more, the aggregate level of safety perception indicated that users know that their safety in the parks is impaired. The study confirmed further that living in an environment constituting risks to health is not mainly due to ignorance, but may be as a result of the need for economic survival.

In this study that safety perception level increases as income increases confirmed that economic consideration is of paramount important in users environmental hazards and risks perception. From the ranking of the various improvement exercise, the least favoured is the relocation of the bus stop. Ejecting the street hawkers is not also a popular improvement exercise.

Using the users' perception data obtained in this study it is recommended that basic environmental amenities like water, toilet, waste management system must be provided in adequate quantity and quality. Cost recovery system from users should be embarked upon in order for the services to be self sustaining. Amount to be charged should be in the range of the mean monthly amount obtained for each of the motor parks.

Relocating the bus stop should not be contemplated. This will be resisted by users. Ejecting street hawkers may also be an unsuccessful task. More importantly, environmental education should be embarked upon where environmental friendly habits will be stretched. This is however when environmental facilities have been improved significantly.

REFERENCES

- Afon, A.O. (1998): Master Plan Preparation: A Theoretical Framework on the Factors of Resident Perception Data in Ilesanmi, F.A. (ed) Master Planning Approach to Physical Development: The Nigerian. Pp. 66 – 74. Experience Paraclete Publishers, Yola, Nigeria.
- Afon, A.O. (1998a): Perception of Environmental Quality of the core of Ogbomoso in Oyo State, Nigeria. M.Sc. Thesis, Department of Urban and Regional Planning, Obafemi Awolowo University, Ile-Ife, Nigeria.
- Afon, A.O. (2004): Residents' Satisfaction Index in Selective Rehabilitation of An Urban Core Residential Area in Ogbomoso, Oyo State. Journal of Nigerian Institute of Town Planners vol. xvii, pp. 45 – 58.
- Bakere, A.D. (1985): The Planning and Design of Ibadan Road Transport Terminals. MURP Dissertation, Centre for Urban and regional Planning, University of Ibadan, Ibadan, Nigeria.
- Carter, A. (1975): The Study of Urban Geography. Edward Arnold.
- Faluyi, O.O. (1982): Lagos City Motor Park: A geographical analysis. B.Sc. Dissertation, Department of Geography, University of Lagos, Lagos, Nigeria.
- Goodchild, B. (1974): Class Differences in Environmental Perception. Urban Studies II, pp. 157 – 355.
- Hartt, H. (1999): Communicating about Environmental Risk with Stakeholders. Report of Research on Community about Risk with Stakeholders. Technical Report prepared for BP – Amuco, Cheveland, OH.
- Hunter, L.M.; White, M.J. Little, J.S. and Sutton, J. (2001): Environmental Hazards, Migration and Race: Research Report: NICHD and NIEHS Grant ROLHD – 95 – 002.
- Lynch (1977): The Image of the City in Loewenstein L.K. (ed) Urban Studies: An Introductory Reader London, The Free Press pp. 352 – 371.
- Odunmirayo O.Y. (2004): An Analysis of environmental Sanitation Practices in Selected Motor Parks in Ibadan North Local Government. B.Sc. Dissertation, Department of Urban and Regional Planning, Obafemi Awolowo University, Ile-Ife, Nigeria.
- Osaghe, M. (1972): Benin City motor terminals and their spheres of influence cited in Adesanya A.A., Location and Design of Inner-city Passenger Terminals: A Case of Abeokuta.
- Oyebami, B. (1980): Inadequacy of Terminals in Ibadan. H.N.D project, Department of Town and Regional Planning, The Polytechnic, Ibadan, Nigeria.
- Porters, J.D. (1976): Environment and Behaviour: Planning and Everyday Urban Life. New York, Victoria Press.
- Saariren, T.F. (1964): Perception of Environment Research paper No. 5, Association of American Geographers.
- Sadalla, E., Swanson, T and Velesiw, J. (1999): Residential Behaviour and Environmental Hazards in Africa – Sahara Colonies.
- Tuan, Y.F. (1972): Discrepancies of Environmental Attitude and Behaviour: Examples from Europe, and China in English, P.W. and Mayfield, R.C. (eds) Man, Space and Environment. London, Oxford University press, pp. 69 – 80.

World Bank (1999): Environmental Hazard and Risk Assessment: Environment Department,
Working Paper No. 21.

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