

Assessment of Users' Perception of Environmental Aesthetics in Recreational Open Spaces in Abeokuta Nigeria

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ABSTRACT

Historical cities in Nigeria generally lack pre planning, they evolved from villages and trade posts while still retaining their old slum and semi-permanent structures. It has equally been observed that ancient cities can be categorized into orthogenetic and heterogenetic cities. The architecture in the orthogenetic cities is monumental for political or religious functions than in the heterogenetic cities. In most Nigerian cities, urban open spaces are regarded as landed areas not built upon and ranged considerably from natural landscapes to definitely cultural, artificially designed areas and from huge green areas to almost entirely enclosed small outdoor rooms. The spatial design of the built forms and open spaces most times are without the active participation of the end users resulting in poor aesthetic performance and low patronage. Descriptive statistics and oral interviews were employed in the analysis of users' perception over twelve recreational open spaces to determine their environmental aesthetic component. A significant relationship between environmental aesthetics and users' perception was established. Findings showed a weak positive relationship with the correlation. Noise prone environment is for example typical of most Nigerian cities, the outcome result of the high decibel of sound from loudspeakers was of no remarkable influence to the Users. The paper concludes that environmental aesthetic awareness of the respondents was low and accounted for the weak positive relationship in the correlation. It therefore recommends that sensitization and awareness can be boosted through public enlightenment while the environmental aesthetic components can be enhanced through appropriate designs and good maintenance strategies.

Keywords: Aesthetics, Environmental, Open Landscape, Perception, Recreational, spaces

I. INTRODUCTION

Nigerian towns can be classified under orthogenetic and heterogenetic recognition. Bello, Oyedele and Ibrahim (2014) described orthogenetic as representing pre-industrial and traditional towns, they are ancient cities that have been in existence before industrial revolution period and are characterized with an ethnic group with peculiar culture and lack of formal planning which makes a noticeable effect when there is a need for urban physical development. The lack of formal planning also necessitated urban renewal programme for most urban neighborhoods. Examples of orthogenetic cities in Nigeria are Abeokuta and Ile-Ife. Asikogu and Asikogu (2008) observed that most Nigerian cities like Abeokuta show inadequate consideration or even total neglect for landscape and open space development in the preparation of land use plan.

The Ogun River which gives the name of the state flows west of the Olumo rock. Abeokuta the capital of Ogun state derives its name from this rock. Abeokuta lies southwest of the Federal Republic of Nigeria, and is 100 kilometers from Lagos, the commercial nerve of Lagos, to the north, and to the south some 70 kilometers away from the city of Ibadan, the largest city in Black Africa. The highest point on the Olumo rock is about 137 meters above sea level and makes the location visible and perceptible.

According to Bernstein and Schacter (2010), perception (from the Latin perceptio) is the organization, identification, and interpretation of sensory information in order to represent and understand the presented information, or the environment. To perceive is to refer the current situation to consequences and to act accordingly. This means that perceivers are neither spectators nor passive recipients of information from the environment. Rather, they are cognitive agents that interact intentionally in their environments.

The assessment of aesthetic perception unfolds components of user satisfaction through a functional recreational open space (ROS) which in the view of Ward (2013) will create attractive neighbourhoods that contribute to positive attitudes and social norms. In the views of Xenakis (2012), the aesthetic behaviour and consciousness of the public represent temporal and spatial convergence, that is, citizens living in the same region, leading the same life styles and underpinning the same cultural structures, share similar life experiences and cultural identities. The homogenous cultural traits of Abeokuta as an orthogenetic city will be a defining tool to discover and specify its aesthetic perception. The aesthetic perception of a people (e.g. of recreational spaces) living in the same region and sharing a similar cultural system also exhibits a fixed feature or character. It is therefore possible to construct a suitable landscape that fulfils the needs of the populace. On the other hand, as a result of different regions and cultures, the aesthetic perception and consciousness of the public also present a kind of difference, which is the differentiation of space.

Based on the differentiation in features, also the city's characteristic, which unfolds a city's identity that is adaptable to its regional environment can be constructed. This implies that sociocultural adaptation will influence the environmental aesthetic perception of both the users of the ROS and other categories of stakeholders. The characteristics of aesthetic perception derives from conceptual definitions and analyses. In their analysis, Polovina and Marković (2006) Marković (2010); discovered that similar characteristics of aesthetic experience specified empirically through the use of a production task, a set of descriptors of aesthetic experience can be obtained. The convergences and differentiations of aesthetic perception and consciousness of the public are relatively dynamic and varying, which can be reflected in the features and forms the basis of urban planning and landscape design with an impacting value. The planning and management of landscape development requires a thorough and systematic approach. The method or framework which is advocated in its assessment provides for the classification of landscapes based on character, value and sensitivity.

There are certain features that can characterise and distinguish landscape one from another. Such peculiar traits according to Hansen and Alvarez (2015), comprises the physical characteristics of plants that provide interest, variety, and aesthetic appeal to a landscape. Besides being essential to life on the planet, plants

add beauty and charm with their unique forms and colour. Aesthetic perception is therefore a special kind of subject-object relationship that is, as a fascination with an object, appraisal of profound meanings of an object, and a corresponding feeling of an exceptional relationship with an object. It is also observed that aesthetic experience is not reducible to positive emotions or positive hedonic tone, but that it can be associated with both pleasant (attractive) and unpleasant (aversive) paintings. Aesthetic appraisal can include both positive emotions, such as pleasure, pride, and surprise and negative emotions, such as hostile emotions (anger, disgust, and contempt), some self-consciousness emotions (shame, guilt, regret, embarrassment), and some cognitive emotions (confusion) (Silvia & Brown 2007, Silvia 2009; Cooper & Silvia 2009;). In view of the divergent contributions on aesthetic perception Lo, Yiu and Alan, (2003), noted that more research is needed to understand how location, size, number, design, management of trails, open spaces, affect use patterns, perceptions and preferences of users.

The perception of recreational open spaces in Abeokuta is quite suggestive by its failure to attract significant public patronage. There is conspicuous evidence of poor environmental aesthetics, skewed locations, characterised by user unfriendly ROS in the city. Rouhi, Monfared and Forsat (2016) noted that user perception can be influenced by planning, aesthetic design, and management of public parks and that they are important environmental issues since these parks are one of the main spaces of urban life, especially with the rapid population growth in recent years. The results suggest that increasing public satisfaction for urban parks depends on the following measurements: establishing appropriate aesthetically satisfying landscape, forming physical and financial security, giving attention to different age groups and their needs in designing Park thus enhancing livability in cities.

Statement Of The Research Problem

Existing studies on Recreational Open Space Aesthetic perception have mostly focused on developed cities in western countries. No systematic research on theories and methodologies of such subjects as assessment of Users' environmental aesthetic perception of recreational open space in an African orthogenetic city like Abeokuta has been presented so far.

Although western researchers have provided abundant articles on the use of open spaces, the city structures and characteristics of Western cities are different from those in Nigeria.

Simon (2015), argued that considering enormous cultural differences between African and Western societies, research results and recommendations for Western cities are not automatically valid for cities in Nigeria. Even studies that employed quantitative analyses for open space use in Nigeria are also rare. Nevertheless, differences in the characteristics of recreational open spaces in Nigerian orthogenetic city and the distinct cultural heterogeneity between open spaces in Eastern and Western societies are worth exploring.

Beside the contextual issue of user patronage, there is the paucity of researchers and planning advocacy of recreational open space in African context. The consequences of this as there is now a crave for international or world best practice, are obvious in the several unmet expectations such as the environmental aspect of the Sustainable Development Goals (SDGs) or prescribed planning standard of “one acre of land space per 100 population” prescription for recreational open space planning (Dixon, 2008).

Akamagune (2015) noted that there are no adequate recreational facilities in most tourist centres of Nigeria as their facilities have been overstretched due to rapidly increasing population causing severe deterioration of their showcasing. The negligence of adequate planning and development of recreational facilities in Nigeria is a huge setback to cities achieving maximum utilisation in their social, economic, physical and environmental sectors. This with many other managerial problems in maintaining the few available ones; has led to gradual decay of the nation’s recreational areas and consequently reduce their benefit to the built environment. This sordid state of the tourist centres has consequently affected their effective patronage.

The apparent low patronage of ROS in Abeokuta even on public holidays, underscores the need to assess the environmental aesthetic perception index of ROS infrastructure in the orthogenetic city. Jacobsen (2008) noted that parks in neighborhoods that are generally utilized are successful and well arranged. The proper arrangement gives a sense of order and beauty to the ROS. The immediate environmental setting can also affect the aesthetic appreciation of the facility. Old worn-out buildings can blight the aesthetic attraction of the ROS, due to obsolescence. Akamagune (2015), further observed that the structures (Building) surrounding some recreational sites like the Olumo rock is very old. Apart from cultural recreational environments having unpleasant looks, some designs and planning

practice in the built environment retains a disastrous trend (Turner, 1996)

Simon (2015) noted that prior to the colonial days and the interest of the colonialists to enhance the livability of Nigerian indigenous cities, very little was probably known about recreational open space resource. It may be assumed that because open space is conceptualized in people’s mind as a free space for all” and the fact that it has less demand threshold when compared with other land uses in the urban centres, therefore little or no attention has been given to its further development leading to some pertinent questions.

The Aim of this research is to assess users’ perception of environmental aesthetics with the view of enhancing the performance and patronage of Recreational open spaces in Abeokuta Nigeria. The specific objectives are to:

1. examine the existing location characteristics of ROS

2. analyse users’ perception of environmental aesthetic quality of ROS

Some researchers have attempted to determine how aesthetics is represented in an object, and how a specific feature of an object could evoke the respective feelings during perception. Despite the vast number of approaches and models, these explanations do not resolve the problem concerning the conditions under which environmental aesthetic perception occurs, and what constitutes the content of these perceptions, (Xenakis & Arnellos 2014). Research have been carried out to explore and identify the needs and preferences as well as the effect of the perception of recreational use by users including parents and children towards park facilities, trails and its surroundings towards achieving a useful and high quality recreational open space (Linsey, 1999; Bjerke, Østdahl, Thrane & Strumse, 2006; Arnberger, 2006; Tucker, Gilliland & Irwin, 2007). It is most obvious these studies were not carried out in an African orthogenetic city context.

Indeed, all relevant theoretical explanations and models, and all relevant experimental studies suggest that all activities that are eventually deemed aesthetic involve emotional processes of the same type and mode of realization as those that influence and prepare an agent to act.

Despite the apparent agreement between researchers, the capacity to understand and shape human perceptions of environments is actually a more complex and vexed topic. For example, the way people perceive environments is clearly different depending on certain factors such as their physical stature and size or the personal experiences (Wohlwill, 1976; Heerwagen 1998). In

view of this, architectural and design texts tend to selectively emphasise the universal aspects of spatial experience (Kellert 2005; Lippmann 2010).

Smardon, (1988) examined Perception and aesthetics of the urban environment: review of the role of vegetation, Landscape Urban Plant, is similarly based on a general study of perception of users or residents and narrowed to vegetation influence factor. The paper reviewed the role that urban vegetation plays in regard to human behavior and the perception of urban environments. This includes a review of the functions or benefits of urban vegetation to human use-economic benefits, instrumental or physiological functions and perceptual functions including visual, sensory benefits and symbolic aspects. The aesthetic function is determined by landscape structure characteristics such as landscape patchiness or openness as a result of the abundance of linear elements (Van der Zanden, Carvalho-Ribeiro, & Verburg, 2013). The characteristics factor in this study is visual aesthetics typified by vegetative plants. Consideration of the human senses were limited to visual aesthetics only and not on all facets of human aesthetic perception which this study is set to achieve.

Aytas and Uzun (2015) found out in research specifying the visual landscape quality of pedestrian areas that naturalness (coherence, seasonability, size) is the most effective factor in perception and preference. However, the measured characteristics dwelt primarily on visual aesthetics and did not consider all environmental aesthetic components such as sight, taste, smell, sound and texture, which formed an overwhelming part of this study.

It is observed that some notable researches by, Xenakis (2014), Simon (2015), Jim and Chen (2006) Aytas and Uzun (2015) Akamagune (2015) have made contributions in environmental aesthetics. These and other several studies, which include those on the city beautiful movement, architectural aesthetics and philosophy, city colours and aesthetics, tourism aesthetics, and landscape aesthetics, have provided the foundations for defining urban aesthetics. But the environmental aesthetic component in an orthogenetic African city so far has not been assessed.

The scope of this study was limited to the examination of some existing natural and artificial landscapes accessible to members of the public constituted the research samples. The samples are then non-cognitive users like the site visitors, residents around the neighbourhood of the ROS situated within the two local government areas of Abeokuta, North and South. Factors that

express the physical and environmental characteristics of the site such as facilities distribution, natural appearance, land structure, air and sound quality, land cover constituted the body of variables in this work.

Perception of Recreational Landscape Features that stimulate environmental aesthetics in the available Recreational open spaces and the emotional evocations stirred up in these two main categories of observers and users are central and to be sought in this work. These two terms (beauty and aesthetics) mean the same thing and used interchangeably where most suitable, throughout the context of this study.

STUDY AREA

The orthogenetic city of Abeokuta, capital of Ogun state Nigeria as shown in Figure 1, is the study area which comprises two local governments namely: Abeokuta North and Abeokuta South located in south western part of Nigeria by the Ogun River as shown in figure 2. It occupies an area of 100 square kilometres with an estimated population of about 593,100. (NPC, 2007).

The area lies within the rain forest belt of the tropics, between latitude 070 51 and 070 20' N and longitude 030 171 and 030 27' E. (Onakomaiya, et al, 2000). The altitude ranges from 120 to 180 m above sea level. The dominant feature of the area is the Ogun River which flows from north to south draining the city through a number of rivers such as Ona-Ibu River in the southeast, the Osun in the east, Yewa in the west and Ewekoro and Adiyari Rivers in the south-west (Oyegoke, & Sojobi, 2012).

Abeokuta enjoys a tropical climate with distinct wet and dry seasons, with rainfall ranges from 1016mm to 1270mm (NEAFR, 2002, NiMet, 2016). It is underlain by both the crystalline basement rocks and the Cretaceous Sedimentary formation (Oyegoke, & Sojobi, 2012). Existing side by side with the public recreational ROS are the private operated centres also mostly located in Abeokuta North. They are artificial man-made landscapes basically set up for economic gains like the fun factory and emerald amusement park.



Figure 1: Map of Nigeria showing Ogun State within the National setting of the Federation of Nigeria.

Source: <http://www.nigerianmuse.com>

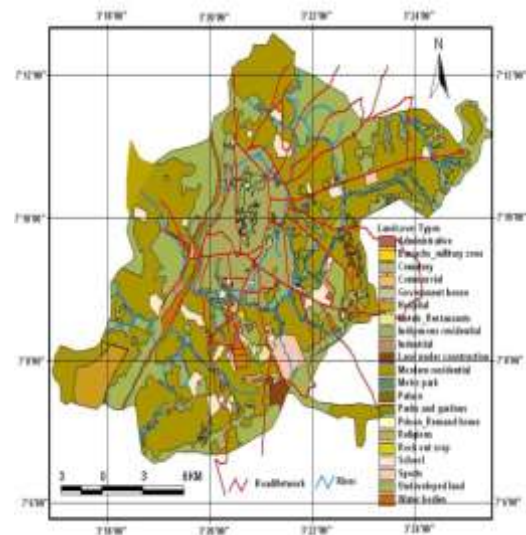


Figure 3: Map of Abeokuta Metropolis Showing parks and gardens
 Source: Adeleke and Orimoogunje(2012)

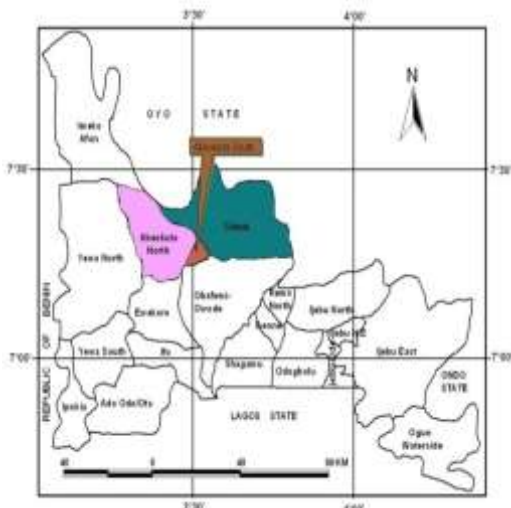


Figure 2: Map of Ogun State showing the Study Area
 Source: Adeleke and Orimoogunje(2012)

There are still some undeveloped lands within Abeokuta which act as buffer zones as shown in figure 3. These available land spaces intersperse from residential to the commercial areas like Kuto and Ojere as well as close outskirts before MoshoodAbiola stadium. There are undulations and flat lands with some transportation route connecting the various recreational spots as shown in Figures 3.

According to Christopher (2011), the Olumo Rock as shown in Figure 4 is a recreational landmark which is located in the traditional core of Abeokuta Town in Ogun State, Nigeria. The rock is the most important tourist attraction in the state. The Olumo rock is a massive outcrop of granite rock, pre-Cambrian geological formation. It is located between Ikija and Ikereku neighborhoods and visible from all parts of the city.

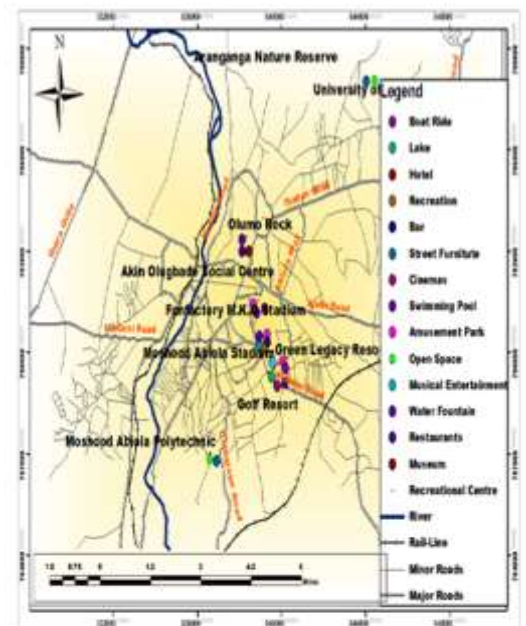


Figure 4: Map of Abeokuta showing Recreational Open Space (ROS) locations
 source: Authors field work (2019)

Christopher (2011) further explained that the name, Olumo” means “God built it.” It is surrounded by a lot of caves within which the Egbas took refuge in the time of Yoruba inter-cities war. One of such caves, which is about 6m by 7m wide, has slab-like stones that must have served as seats for ancient dwellers around the cave. Olumo rock is an historical monument, served as a shelter and fortress to the Egba people during the Yoruba wars. By 1930, the main body of the Egba”s had already settled at the site of Olumo Rock and the refuge provided by the rock marked the end of their wanderings and struggles for existence.

II. LITERATURE REVIEW

Ziesel (2006), observed that it is challenging to appreciate how individuals perceive, use and experience spaces and facilities provided in parks until it is enquired from them. The inconsistencies between the perception of people and the views of urban planners were at a point being highlighted in the 1970’s by a number of researchers such as (Wandersman, 1979; Porteous, 1977). Jurkovic, (2014) also noted that, despite the important role of this correlation, planners and researchers have continued to neglect user perception and opinion. It is a fallacy to generalize that everyone is an advocate for open space preservation. Open spaces are sometimes referred by some individuals as nothing in between something. This perception sees open space as a non-prolific element and redundant, in the sense that it does not encourage development or generate tax. Behind this conception is the notion that all areas of land should be built up.

Based on their studies, some researchers such as (Bratina, 1997; Cooper, 1998; Goličnik, 2005; Jole, 2008; Jacobs, 2009) stated that the opinions of park planners and users may vary greatly. An essential indicator of the success ratings of a park is determined by the level of

patronage it receives and the way it is used. Abeokuta is developing into urban and suburban landscapes. Open space most often comes under pressure for development in growing neighbourhoods and also at risk of being either undervalued or underprovided in planning of new subdivisions. Hence, maintaining the quality of park spaces requires vital attention in ensuring open spaces are fully utilized and the user interaction with nature or humans properly enhanced (Wolch, Jason, Newell.2010, Goddard, Dougill, &Benton 2010, Zhou & Wang, 2011).

The behaviour of individuals, as well as firms and government agencies with regard to the location of ROS, are central to regional development (Mabogunje, 1985). Equitable accessibility with less transportation cost is being held as one of the vital ingredients in recreational open space planning. In one sense, the problem of backwardness will remain with a region as long as it suffers from government development policies. When an urban environment is neglected in terms of location of services or industries, certain factors are at work producing limitations to the growth. Tietz, (1968) noted that such location will lack adequate interactions that can allow for the effectiveness of its ability to manipulate available resources to its advantage. Location decisions of firms and

An open space network should promote a more active lifestyle by proposing and providing a range of safe and aesthetically pleasing spaces that are spatially distributed within a neighbourhood and are accessible and satisfy the sporting and recreational needs of the neighbourhood. Public space should endeavour to provide for multiple users. For instance, by way of landscaping and the provision of facilities, a sporting oval can be designed to provide for children, sportspeople, and walkers (Giles-CortiBroomhall, Knuiman, Collins, Douglas, Lange & Donovan, 2005

Table 1.0: Recreational Centres in Abeokuta

S/N	Name of ROS	Locational Address	Geographical Location	Component	Ownership
1	Olumo Rock - Olumo	Ogun state min. of culture and tourism, oke - mosan,	Abeokuta North.	Museum, restaurants, water fountain	Public
2	MoshoodAbiola Stadium	Kuto, Abeokuta, Ogun State, Nigeria	Abeokuta South	Bar, Recreation and musical entertainment	Public

3	Funfactory	MoshoodAbiolaStadium,KutoAbeokuta,,	They have a 4.5 kilometer course comprising four par three, four par five	facilities include toys, games, bouncy castles, train rides, carousels, swimming pools	Private Public Private
4	University of Agriculture	Abeokuta-Ibadan road in the North Eastern end of the city, 15 km from Abeokuta City Centre	Open spaces for seating and relaxation	Trees and Street Furniture	

Source Authors' compilation 2019



Plate 1 Motor ride at Fun factory without seats for spectators at fun factory
 Source Authors' compilation (2019)



Plate 2 Patches on the defined motor route

Source Authors' compilation (2019)

III. RESEARCH METHODOLOGY

The mixed method of research was used in this study. A combination of qualitative and

quantitative approaches (Dawson, 2002; Veal, 2006; Kothari, 2007;) will accommodate issues being investigated, and answer questions that

neither quantitative nor qualitative method alone can answer. Creswell et al, (2003) stated that, many researchers have used different terms for this method such as mixed methodology, integrating, synthesis, qualitative and quantitative, multi-methods, but the term mixed method is more commonly used. Assessing the users' perception of recreational open space was analysed using both subjective and objective approaches.

Therefore, the aim of the study was achieved with the use of structured questionnaire, and unstructured oral interview data from respondents. Landscape elements aesthetic features questionnaire was given to respondents for assessment.

Research Population

The population for this study was from three major groups. First group comprises Leisure seekers, tourist sports participants and spectators at the research site. Selection was by simple random sampling and by every third contact, as well as household population of those living some metres away from the ROS covering the two local government areas of Abeokuta North and South (these will be called zones for the purpose of this study).

Sample Size

The mathematical method for a two tailed test was adopted to determine the sample size. The total population for Abeokuta North and South from the 2006 national census was 749,088. Result calculated from a percentage growth rate of 4.3 % amounted to 1,294,879.285 for thirteen years interval. A margin error limit of 5% and theoretical constant k was applied to obtain a sampling size of 400. This final figure the basis for the number of questionnaire distribution.

Sampling Techniques

The two local government area of Abeokuta was divided into strata based on their income levels and educational background the number of allocated questionnaires was shared among each stratum. Recreation participants of different classes and backgrounds were randomly selected with every 3rd contact during the visit to the available sites.

Four hundred questionnaires were distributed amongst The respondents comprising of Leisure seekers, tourist, sports participants and spectators at the research site based on their political wards.

Method of Data Analysis

Questions relating to the objectives of the study were designed to cover ROS in the study area. The study analysed variables using content analysis and descriptive statistical methods involving descriptive statistics such as

frequency distribution, percentage distribution, mean distribution and standard deviation. A test of the hypothesis was obtained by the application of Kendall tau bivariate analysis. The relationships between the two major variables that were vital to this study includes ROS and Aesthetics perception.

IV. RESULT AND FINDINGS

The result shows a weak positive relationship with the correlation. This proves that the relationship between environmental aesthetics and physical characteristics of ROS is not strong and it also explains that as the characteristics feature of the ROS improves, the environmental aesthetics quality also increases but at a minimal rate.

The environmental aesthetic awareness of the respondents was quite low and has accounted for the minimal rate indicated in the perceptual assessment, and is a proof of the initial argument of difference in perception based on cultural orientation and lifestyle. For a noisy environment as is typical of most Nigerian cities, the outcome result of the high decibel of sound from loudspeakers was of no remarkable influence hence, the result obtained in the western context cannot be substituted for this research based on the geographical study area.

V. RECOMMENDATION/CONCLUSION

Environmental aesthetics perception denotes the appreciative engagement of humans as part of a total environmental complex, where the intrinsic experience of sensory qualities and immediate meanings predominates. The experience of environment as an inclusive perceptual system includes such factors as space, mass, volume, time, movement, colour, light, smell, sound, taste, tactility, kinesthesia, pattern, order, and meaning.

Urban designers with adequate knowledge of environmental characteristics of an African city should be employed in designs of both indoor and outdoor space to ensure adequacy towards meeting the people's aesthetic demand. Factors such as sound, air and food quality besides visual perception that influences recreational habits within an African environmental context should be further improved and harnessed.

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