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Olusola Ayandele

**CONNECTEDNESS TO
NATURE AMONG CITY
DWELLERS AROUND
FLOODPLAINS IN
IBADAN METROPOLIS**



IFRA-Nigeria

WORKING PAPERS SERIES

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This paper is part of a **publication series of 4 IFRA-Nigeria working papers (86, 87, 88, 89)** resulting from [the one-day roundtable “Urban Lives & Environmental Changes”](#) organized *by and for* early-career researchers, held at the University of Lagos on May 10th, 2022. This event was co-organized by IFRA-Nigeria and the Center for Housing and Sustainable Development at the University of Lagos. Our roundtable and the following publication were made possible by the work of the Organization Committee and the Editorial Board of these publications’ series *composed of*

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Connectedness to Nature Among City Dwellers Around Floodplains in Ibadan Metropolis

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Abstract

Assessment of connectedness to nature is important in understanding the concepts of sustainable and resilient cities. This study assessed level of connectedness to nature among city dwellers around floodplains and riversides in Ibadan metropolis, Nigeria by investigating their preference and experience of animal, plants, water bodies, geological formations and natural spaces. The study was conducted around the floodplain of River Ona and 8 communities closest to the rivers were purposively selected in Apete, Ajibode, Orogun, Old Bodija, Eleyele, Gbekuba, Odo-Ona, and Omi-Adio. The researcher's conveniently sampled 16 residents, 2 from each community, responded to questions on their most or least preferred nature and their experience of such nature. Their preferences were descriptively analyzed and accounts of their nature experience thematically analyzed. Majority of the distribution, aged between 22-57 years ($x=40.9$), were male (56.3%), married (66.8%), and owned their houses (56.3%). Quantitative analyses showed that their most preferred nature is vegetation (38.1%) followed by animals (23.8%) while water bodies (4.17%) was their least preferred nature. Thematic analysis of their experience of nature revealed themes of pleasant, unpleasant and ambiguous connectedness to nature. Pleasant connectedness to nature is linked to respondents' wellbeing and conservation of the environment. The study concluded that preferences and experience of nature influence connectedness to nature among city dwellers around floodplains in Ibadan. This study recommended greening of the environment, enlightenment campaigns, early nature experience and regular visit to nature.

Keywords: Nature; Natural space; City; Connectedness to nature; Experience of nature; Floodplains.

Introduction

Humanity is being threatened by the direct and indirect effects of anthropogenic climate change. Unchecked urbanization is transforming natural landscapes and green vegetation into built structures and impervious surfaces (Turner et al., 2004). More people are moving from largely natural vegetated rural areas into densely populated urban built settlement at an alarming rate. In order to achieve stability in natural and social systems, our cities must steer urbanization from its current, unsustainable path, towards sustainable, greener cities that offer their inhabitants choice, opportunity and hope (FAO, 2010). A commonly overlooked effect of urbanization is an increase in our risk of being disconnected from nature in our daily lives. This perceived separation is widely viewed as the main driver behind the global environmental crisis (Whitburn et al., 2020). City dwellers are experiencing a diminished awareness of what constitutes nature, reporting less connection with nature, reduced empathy for other species, and less willing to protect the natural environment (Aaron & Witt, 2011).

Nature comprises of the plants, animals, and landscapes that make up the planet (Bratman et al. 2015). It is defined in this study as one's natural surroundings such as water bodies (rivers, lakes, oceans, etc.), plants (trees, gardens, forest, etc.), wild and domestic animals, and geological landform (mountains, hills, etc.). Research show that human beings are biophilia. Biophilia refers to the innate tendency to connect with nature (Clayton, 2007; Wilson, 1993) or a learned concern for nature (Simaika & Samways, 2010).

The verb “connect” means to bring into contact so that a real or notional link is established, join together, to form a relationship or feel affinity with someone (Oxford Dictionary, 2022). Human beings possess instinctual need to “belong” to a community; connect with family, friends, neighborhoods, or special interest communities which in turn provides a sense of purpose and facilitates connection to people and place (Fiske et al., 2002).

Connectedness to nature is the extent to which an individual feel that he or she is a part of nature (Schultz, 2001). It reflects the relationship between humanity and nature. The concept of connectedness to nature is facilitated by information about nature and nature experience. Information about nature is primarily based on cognitive concepts, intellect, and information as obtained through education, internet and media sources, or field guides to satisfy a curiosity or an urge “to know more” (Young, 2012).

Nature experience refers to contact with nature via outdoor sports and recreation, facilitated eco-adventure and field trips, and is usually sought after to help the body, make

the mind feel better, enliven one's spirit, and enable understanding of information learned about nature (Young, 2012). Having an experience of nature is critical to connecting to nature (Larouche et al., 2016; Sedawi et al., 2020). Connectedness to nature is important because it leads to concern for nature, taking care of it and less likelihood to harm it. On the other hand, lack of connectedness to nature is likely to lead to a lack of interest and care for it (Soga & Gaston, 2016).

In Nigeria, especially in southern Nigeria, African traditional religion with its emphasis on connection with nature, have worship centers, sacred sites, and grooves near rivers and on mountains, where forest, trees and animals are often conserved (Barau et al., 2013). These locations provide excellent opportunities to experience nature in the country. Being connected to nature has been associated with a variety of positive benefits like stress relief, increased mental energy, improved concentration, creativity, well-being and pro-environmental attitudes and behaviors (Bratman et al., 2015; Dean et al., 2018; Rosa et al., 2018). But opportunities for nature connection are increasingly limited with the continuing urbanization of green spaces, modernization, declining emphasis on outdoor experiential learning opportunities within educational systems, financial and time constraints to participation, and limited equitable access to nature (Areola & Ikporukpo, 2020; Louv, 2005; Soga & Gaston, 2016).

Despite the massive changes to nature in Nigeria, there are sparse studies focusing on connectedness to nature. The present study was designed to evaluate preferences about nature and the experience of nature among city dwellers around floodplains and riversides in Ibadan metropolis, Nigeria. The study is a psychological-ecological research that assumed that preference for nature could encourage experience of nature which may lead to positive connectedness to nature and manifest in greater concern for nature and promotion of pro-environmental behavior.

In order to address the overall aim of this study, we pose the following research questions:

- What is your most or least preferred nature in this area?
- How would you describe your experience of nature?

Method

The present study was carried out in Ibadan, the capital of Oyo state and the third largest metropolitan city in Nigeria, selected because the city is rapidly urbanizing. It has a population of 1,338,659 according to the 2006 census and is located at the southwestern part of Nigeria (7°03'N and 7°10'N, 3°02'E and 4°40'E). Ibadan metropolis' geographical and ecological identity is defined by the natural as much as the built landscape. It is

drained by two major rivers. Ona River, one of the two major rivers, has a length of 55 km and area of 81.0 km² (Agaja et al., 2013).

For the study, 8 communities closest to the rivers and located around the floodplain of Ona River were purposively selected in Apete, Ajibode, Orogun, Old Bodija, Eleyele, Gbekuba, Odo-Ona, and Omi-Adio). Convenience sampling technique was used to select 16 respondents, 2 from each community.

After the introduction and rapport building, the researcher defined nature as the water bodies (rivers, lakes, streams, etc.), vegetation (plants, trees, gardens, forest, etc.), wild and domestic animals and birdsong, and geological landform (hills, floodplains, etc.) found around the study, and other things that were not made by man. Respondents were then asked to mention their most or least preferred nature in the study area and describe their experience of nature. Their responses were audio recorded, transcribed and subjected to thematic analysis with their preferences descriptively analyzed.

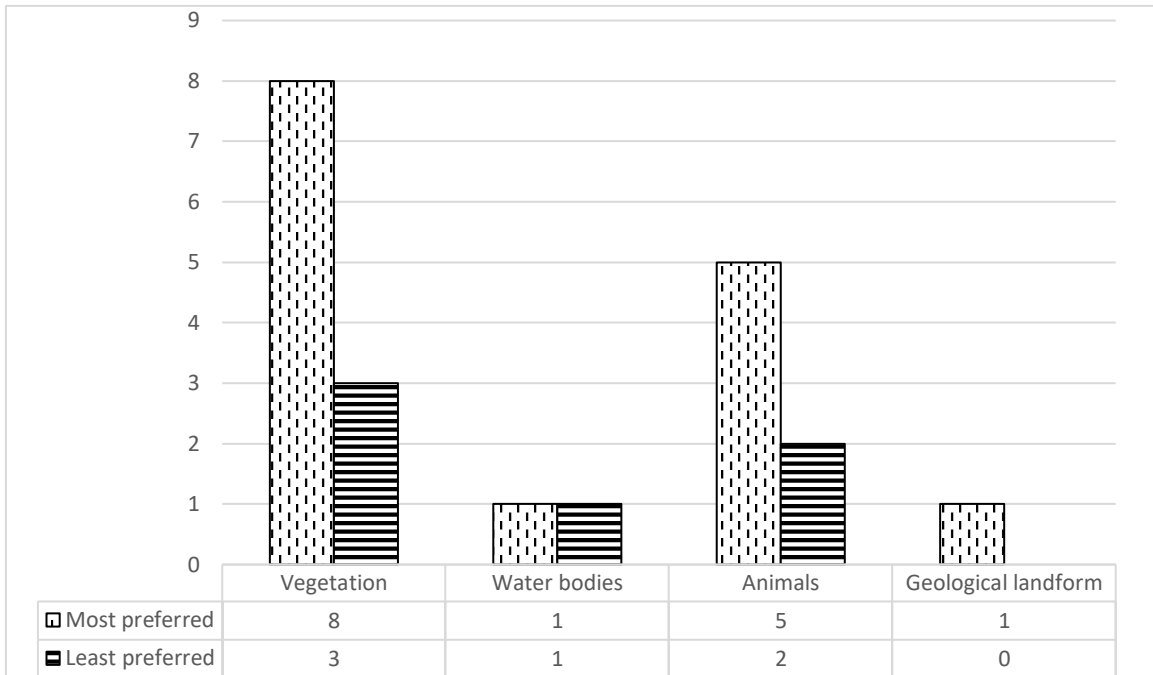
Results and Discussion

Survey respondents were aged between 22-57 years ($\bar{x}=40.9$). Majority of them were male (56.3%), married (66.8%), and live in houses that were owner-occupied (56.3%) in the sampled areas.

What is your most or least preferred nature in this area?

As shown in figure 1 below, majority of the respondents preferred vegetation (38.1%) such as forest and gardens, followed by animals (23.8%) like wild animals that are hunted, birds that sings in the morning and domesticated animals kept as pet. Water bodies (4.17%), especially rivers, was the least preferred nature in the study area while 14.3% and 9.5% of the respondent identified vegetation and animals respectively as their least preferred nature. Geological landform was only selected by 4.2% of the respondents as their preferred natural space. Preference for nature can have long- term effects on an individual's connectedness with nature and their willingness to display pro-environmental behavior (Bratman et al., 2015; Dean et al., 2018).

Figure 1: Preference for nature in the study area



How would you describe your experience of nature?

Based on the thematic analysis of the interview, their responses were grouped into pleasant, unpleasant and ambiguous connectedness to nature.

Pleasant Connectedness to Nature

Pleasant connectedness to nature were derived from comments containing themes such as relaxation, peace, love, enjoyment, happiness, spirituality, fun, and health.

Last year, I bought some 100s of acres of land at Ido local government which I planned to reserve for future development. It's peaceful and isolated, free of human's pollution. I go there on weekends to relax and forget about the problems of this country" (Male, 50 years, Omi-Adio).

Green, serene, wild, lush, and spacious space or trees are noted to enhance human well-being and is positively associated with satisfaction among residents in Sweden (Björk et al., 2008).

Another respondent stated that

"I love being outside, I enjoy strolling in near the lake. I even swim in the water and catch fish. I plan to get a boat by *December* which I will use to cruise around the lake" (Male, 38 years, Apete).

These findings revealed that experiences of nature among the city dwellers were associated with higher levels of perceived general and mental health (Dean et al., 2018) and positive ecological behavior (Yang et al., 2018).

“Taking care of my cats give me great fulfilment. Anytime I’m bothered or disturbed and the cats come around meowing and rubbing their bodies me, I just felt loved and forget my sorrow. These animals are my enjoyment of nature” (Female, 40 years, Orogun).

A study conducted by Convery et al. (2005) in the United Kingdom revealed that many farmers have deep psychological affinity with their animals; this emotional connection produces physical and mental wellbeing in such persons owning pets.

“I love green plants and flowers. You can see how aesthetic my garden is. It makes me happy” (Female, 50 years, Old Bodija).

Gardening has been identified as evidence of connectedness to nature (Clayton, 2007). It is known to reduce stress, a source of human well-being and promotes nurturing attitude (Bratman et al., 2015; Dean et al., 2018). The gardener interviewed stated her love for vegetation and the happiness she derived from it.

“I started appreciating nature when I was in the university, I joined my student fellowship members to go pray *in* the forest. It *seemed* God answered my prayer more when in nature than even inside the church. Now I go to mountains top, NIHORT forest and Eleyele lake to pray” (Male, 46 years, Eleyele).

The respondent had a connectedness to nature at a younger age by going into the forest and derived spiritual benefits from that connection. He is likely to protect and preserve identified nature spaces such as mountains, forest and lake where prayers are answered. This supports the African traditional religious belief that natural spaces are excellent sites of spirituality which should be conserved (Barau et al., 2013).

“During my undergraduate days, I assimilate better when I study at the botanical garden. The cool breeze and the bird’s whistling made reading smooth. I love the grass lawns, sports fields, and gardens at the University of Ibadan. I regularly go to UI to relax” (Male, 35 years, Odo-Ona).

The positive educational outcomes of nature effects on students were also mentioned by Mathewson et al (2012). Similarly, regular visit to gardens in the university was reported as relaxing by this respondent which aligns with the findings of Martin et al. (2020) that

visiting natural spaces at least once a week and feeling a sense of connectedness to nature tend to promote better psychological and physical well-being.

“When I was younger, I could spend hours watching armies of ants transferring their foods from one ant hill to another. Later, I would go fishing and hunting for squirrels, rats, alligator lizards and other small animals with my friends in the village. Reflecting on my childhood experiences, I really missed nature. It was fun” (Male, 49 years, Gbekuba)

This result of enjoyable childhood experiences in nature found support in the findings of Larouche et al (2016) that the green outdoor settings provide great fun for children and adolescents. Similarly, positive experiences and emotional connections to nature in childhood have been shown to increase the likelihood of positive attitudes towards the environment in adults (Sedawi et al., 2020).

Unpleasant Connectedness to Nature

For some respondents, the natural space is a source of irritation and fear. Unpleasant connectedness to nature contains themes with destruction, fear, scariness, superstition and irritation. Unpleasant connections are likely to cause “extinction of experience” as urban centers forsake their natural diversity and citizens in cities reduced their contact with nature and natural space (Soga & Gaston, 2016). A respondent commented on the insufficient supply of natural space:

“What is there to experience in nature? Where is even the nature you are asking about? Everywhere is built up now. The river? Come during raining season and see flooding. Uncle, my natural world is my iPhone” (Female, 22 years, Apete).

The finding that high rate of urbanization in Ibadan is reducing opportunity to experience nature is supported by Areola and Ikporukpo (2020) which revealed loss of green spaces in the metropolis. Unpleasant connections due to disasters, flooding in this case, are less likely to reduce personal connection with nature (Soga & Gaston, 2016).

These following respondents saw nature as sources of negative spiritual connection. They stated their opposition to nature during the interview:

“This is not America! What is to enjoy in nature? There is no enjoyment o. The Community Development Association is raising funds to cut all those trees. There are wild animals like snakes there. I always plead the blood of Jesus when passing beside it” (Female, 38 years, Gbekuba).

“I’m scared of nature, especially all those big Iroko trees, they are usually possessed by ‘spirits.’ I don’t visit natural spaces ooo” (Male, 23 years, Omi-Adio).

The fear of conserved forests and trees around urban centers agreed with the reports of Barau et al (2013) that some natural spaces were previously sacred sites and grooves. Superstitious beliefs, myths, and cultural pressure that certain natural spaces are possessed by evil spirits can cause people to express hatred and fear for such forest, animal, rivers or mountain which can have negative effect on such people’s connectedness to nature (Prokop & Tunnicliffe 2008).

“I’m allergic to nature. The natural environment irritates me, it’s filled with mosquito and insects that bite me” (Female, 33 years, Odo-Ona).

The finding agreed with Johnson-Pynn et al., (2004) who identified negative attitude to animals and pest among many indigenous Africans but contradicted the assertions of Clayton (2007) and Wilson (1993) that human beings have innate tendency to connect with nature or the report of Simaika and Samways (2010) that people learned concern for nature. Although natural places are identified as pleasant and favorite places across cultures (Newell, 1997), some respondents perceived natural environment negatively. Such attitude tends to disconnect humans from nature and it is perceived to be at the heart of the current global environmental crisis (Zylstra et al, 2014).

Ambiguous Connectedness to Nature

Ambiguous connectedness to nature were from the bitter-sweet themes of both pleasant and unpleasant connections experienced by respondents due to changes in nature. Certain natural spaces that were flourishing and enjoyed some years ago are now degraded and diminished in terms of biodiversity and natural character. This respondent complained of personal alienation from nature:

“When last did you hear birds sing? they used to wake us up with their songs when I first moved into this community. Since they cut the trees, they have gone, we are missing the beauty of nature and its animals” (Male, 42 years, Ajibode).

Some of our respondent are in dilemma and expressed their disappointments at the trend towards people losing touch with the natural world (Soga & Gaston, 2016).

“When I was sick, my father took me to the village for traditional health treatment. I discovered that the forest is home to many medicinal plants. I

was saddened when I heard that the village chiefs have sold all the virgin forests to an estate agent” (Female, 25 years, Ajibode).

This also agrees with the assertion of Pyle (2003) that as cities are forsaking their natural diversity, people in cities are becoming less likely to have personal contact with nature and more likely to have “extinction of experience”.

“Previously, I regularly travel of Opara Forest Reserve to enjoy nature and wildlife because I am a licensed game hunter. But with the challenges of killer herdsmen, kidnapers and bandit, I have stopped going into the forest reserve to hunt” (Male, 55 years, Old Bodija).

The increased levels of insecurity in the country is adversely affecting visits to natural spaces. This in turn is a source of worries because indigenous farmers and hunters are afraid of connecting with nature.

Another respondent criticized the inadequacy in the curriculum of environment education as diminishing student’s knowledge that may help promote pro-environmental actions:

“You, Indomie children know next to nothing about nature. You don’t know what you are missing. I think it is important for Agriculture Science practical, Integrated Science, and Biology lessons, even Yoruba classes, to include environmental education so that young people can know about nature, desire to visit it, and grow to care about it” (Female, 57 years, Eleyele).

The comment by this respondent on lack of exposure to nature among young people is supported by a study conducted in East Africa which recommended environmental education for youth (Johnson-Pynn et al., 2004)

A respondent noted that as some people appreciate nature and some other people do not..

“When I first moved to this area, I used to go to the bamboo grove near the river to meditate, now they have turned it into a dumpsite. I use my money to clear the waste every month. People don’t really care about the environment” (Male, 51 years, Orogun).

This was supported by the findings of McCunn (2020) on public appreciation of nature among some people during the lockdown while some were ambivalent. The result also suggested that nature experiences tend to promote a deep sense of connection to nature which is linked to environmental concern and environmentally responsible behaviors (Rosa et al, 2018).

Conclusion and Recommendations

Connectedness to nature is an indication of a relationship between a person and his/her natural environment. The study concluded that city dwellers around floodplains in Ibadan reported varied experience of nature that is associated with pleasant, unpleasant and ambiguous connectedness to nature. People who have pleasant connectedness to nature are more likely to prefer greener neighbourhoods, contribute to the greenness of their neighbourhood by planting trees and maintaining gardens, and report better psychological well-being. Individuals with unpleasant connectedness to nature tend to fear nature and get irritated by natural spaces. Such individuals are likely to support the unsustainable destruction of nature. Those who reported ambiguous connectedness to nature are usually angry that they are losing touch with the nature they previously enjoyed which are now degraded.

Governmental and Non-Governmental Organizations should intensify their enlightenment campaigns on connectedness to nature and educate city dwellers about the values of nature. The Town Planning Authorities should bring nature into the city by planting trees and creating parks at strategic locations and set aside plots for green areas within estates. Police and other security agencies should keep the forest reserves safe and secured. Ministries of Education should embed outdoor learning and nature-based education within the curriculum. Community Development Association and landowners should encourage gardening and greening of the community rather than “concretizing” everywhere. Parents should exposure their children to nature, keep pets, and regularly visit gardens, parks, water fronts, and other nature sites. Early pleasant connectedness to nature could enhance one’s support for nature conservation. Gardening, animals’ husbandry and hunting, and valuing the nature beyond sources of getting “things”, but as theirs, are critical to building sustainable and resilient cities.

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