AWARENESS AND PERCEPTION OF URBAN FORESTRY AND GREENING AMONG DWELLERS IN IBADAN METROPOLIS- AN IMPLICATION FOR PSYCHOLOGICAL WELLBEING

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ABSTRACT

One out of the many natural components with multiple functions is urban forestry and greening. It plays important roles in social, cultural, economic and landscape enhancement. It also provides recreational facilities, as well as environmental development of urban dwellers in Nigeria as a whole and Ibadan in particular. Apart from all these benefits, a forest experience is considered to be an approach to promoting positive moods in modern urban dwellers, which is important in relieving depression and other common mental health problems. This study was undertaken to ascertain the level of awareness and perception of Ibadan urban dwellers about the psychological implication of urban forestry and greening. One hundred (100) questionnaires were administered to the respondents to assess their awareness and perception of urban forestry and greening in fostering psychological wellbeing. The study reveals that dwellers in Ibadan Metropolis are aware of the fact that urban forestry and greening improve psychological well-being and promote positive moods. Despite their awareness and perception, the result of the study reveals that the practice of urban forestry and greening has not been well embraced. Therefore, this study put forward some recommendations to promote the practice of urban forestry and greening among the dwellers.

Keywords: *Urban forestry, Greening, Psychological well-being, Perception and Awareness*

INTRODUCTION

The rapid urbanization and growing world population occasioned by the demographic switch from rural to urban have led to the destruction and disappearance of the natural forest ecosystem and a threat to forest resources. Increased urban dwellers and wide spread deforestation caused by human activities have also impacted negatively on the forest ecosystem, thus arousing serious concern globally (Fuwape and Onyekwelu, 2011; United Nation, 2007). The increase in the rate of construction and industrial activities has led to so much forest exploitation in the urban areas, hence the advocacy for urban forestry. The 2019-2024 Canadian Urban Forest Strategy (CUFS) defines urban forestry as "the sustained planning, planting, protection, maintenance, management and care of trees, forests, green space along with related resources in and around cities as well as communities for economic, environmental, social, and public health benefits for people. Like many modern societies, Ibadan city is urbanizing rapidly. Forest is an important resource for the millions of urbanites seeking more quality of life; hence the need to introduce forest to the urban areas in the form of urban forestry is crucial.

Extensive research has provided empirical evidence that a forest experience or the viewing of forest scenes contributes to reducing stress, promoting more positive moods and feelings and possibly it may facilitate recovery from illness (Ulrich, 1984, Cimprich, 1993, Shin, 1993, Shin, 1996 and Shin, 2007). The therapeutic effects of urban forest can be considered to be the results of a health treatment in a forest environment. It is possible that a forest and green environment may provide opportunities which foster the establishment of more efficient and active behavior, thereby enhancing mental and physical health and psychological functioning. Most of the studies carried out to date (Urich, Simons, Losito, Florito, Miles and Zelson, 1991), appraised the values of forest-related clinical programs in improving the effective performance of delinquents, in- and out-patients of psychiatric institutions, including emotionally disturbed children, alcohol abusers, or people with other clinical mental health problems. It also plays a vital role in the enhancement of human well-being given the social benefits and recreational opportunities they offer for inhabitants (Tyrvainen, Ojala, Korpela and Lanki, 2014).

Another meta-analysis (Lee and Maheswaran, 2011) found linkages between various measures of psychological health and urban forestry and greening (Maas, Verheij and Groenewegen, 2009; Ohta, Mizoue, Mishima, and Ikeda, 2007) in a major Dutch study Van den Berg, Maas, Verheij, and Groenewegen, 2010) showed that respondents with more green space in or near their homes were less affected by a stressful life event than those with a low green space access, suggesting that green space buffers stress. Psychological health is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community (WHO, 2014). Psychological wellness can also be referred to as positive mental states, such as happiness or satisfaction. The practice of urban forestry, it is suggested, will therefore, generally improve the psychological wellness of the urban dwellers (Barton and Pretty, 2010; Ernstson, 2012).

Psychological disorders are not uncommon, and the global burden of this disorders is projected to reach 15% by the year 2020. By this time, it is estimated that common psychological disorders such as depression, anxiety, and substance abuse-related disorders, will disable more people than complications arising from AIDS, heart disease, accidents, and wars combined (Ngui, Khasakhala, Ndetei and Roberts, 2010).This is an astonishing statistics and poses questions as to why psychological disorders are not given much more attention that it currently receives. There is an increasing need for the use of natural components and their multiple functions to address the issues urban areas are facing throughout the world, Nigeria inclusive (European Commission, 2015).

In Nigeria, an estimated 20%-30% of our population is believed to suffer from psychological disorders (Onyemelukwe, 2016). This is a very significant number considering that Nigeria has an estimated population of over 200 million. Unfortunately, the attention given to psychological health disorders in Nigeria is minimal (Ministry of Health and WHO; 2006); the level of awareness of the Nigerian public on psychological or mental health issues is also understandably poor (Uwakwe, 2007), and the misconceptions regarding psychological and mental health have continued to flourish. Psychological disorders at its peak result into suicidal attempt (WHO, 2016). The statistics is alarming and worrisome. In the light of the recent suicidal episodes recorded in parts of Ibadan and other places in Nigeria (Adebayo, 2018, Adebayo, 2019), all efforts and approaches should be put in place to enhance mental health. Since the forest has been found to possess therapeutic effect on psychological disorders and a considerable number of studies have shown that visiting green spaces and being exposed to natural element can reduce fatigue, psychological strain and stress, prevent disease, maintain healthy blood pressure, increase energy levels and also support recovery from illness (Hansmann, Hugs and Seeland, 2007; Riediker and Koren, 2004; Kaplan, 2001; Parson, 1998), it is pertinent to assess the level of the awareness of the urbanites as related to urban forestry and its psychological implications.

This write up hereby seeks to assess the awareness and perception of the populace of Ibadan metropolis on urban forestry with importance to its psychological implication and also to ascertain the key challenges faced by the dwellers towards adopting urban forestry.

OBJECTIVES
1. To assess the level of awareness of urban forestry and greening among urban dwellers in Ibadan and its psychological implications.
2. To assess the Ibadan urban dwellers perception of urban forestry and its psychological implications
3. To ascertain the practice of urban forestry and greening among dwellers
4. To examine their perceived benefit for urban forestry and greening
5. To ascertain the challenges the dwellers have with urban forestry and greening

Hypotheses of the study

H_01: There is no significant relationship between the demographic features of respondents and their perception of the psychological implication of urban forestry and greening

H_02: There is no significant difference between the level of awareness of urban forestry and greening and the planting of trees by the respondents

H_03: There is no significant relationship between the perceived benefit of urban forestry and its practice

H_04: There is no significant difference in the level of challenges faced on urban forestry and greening across the local government in Ibadan metropolis

METHODOLOGY

The study was carried out in Ibadan Urban. Originally, Ibadan City has eleven local governments; five (5) of which constitute the urban local governments, while the remaining six (6) form the peri-urban or rural local governments Local Governments (Fig.1). The selected Ibadan urban local governments have an estimated 1,338,659 populations going by National Population Census of 2006. The city of Ibadan is located approximately on longitude 3°5East of the Greenwich Meridian and latitude 7°2 North of the Equator at a distance of some 145 kilometres east of Lagos. The Ibadan metropolitan area covers a total land area of 3,123.30 km², out of which the urban local government areas cover about 463.33km². A multistage sampling technique was used in identifying the five urban local governments in Ibadan, namely: Ibadan North West, Ibadan North, Ibadan South East, Ibadan North East and Ibadan South West. There are 11 wards each in Ibadan North West and Ibadan South East while Ibadan North, Ibadan North East and Ibadan South West have 12 wards each. Then, four (4) wards were selected from each of the five identified Urban Local Governments. This represent thirty-six percent of the wards selected. Five respondents were randomly selected from each ward. This implies twenty respondents from each local government, making a total of hundred (100) respondents.

Data for this research was collected through questionnaires administered to respondents to measure their awareness and perception of urban forestry and greening with its implication for psychological well-being as well as the challenges facing them in their practice of urban forestry. Out of the 100 questionnaires administered, 19 questionnaires were retrieved each from Ibadan North, Ibadan Northwest, Ibadan Northeast, Ibadan Southeast and 18 from Ibadan Southwest. A total of 94 questionnaires were retrieved in all. Data collected were analysed using descriptive statistics, such as frequencies and percentages to describe the variables in the specific objectives of the study. While inferential statistics, such as the Spearman rank correlation, Chi square and T- test were used to draw inferences between the variables in the hypotheses.

Fig 1: Five Urban Local Government Areas in the context of the Ibadan Metropolis
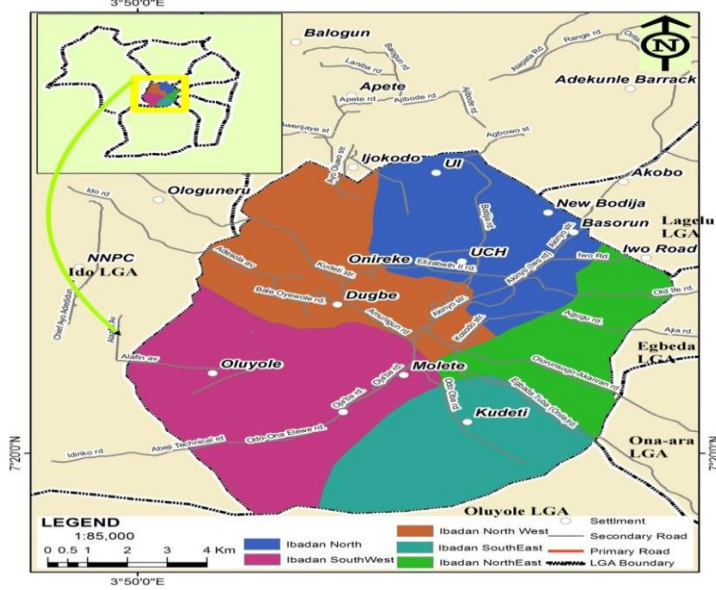
Source: Department of Geography, University of Ibadan (2015)

RESULT AND DISCUSSION

Table 1: Distribution of respondents by socioeconomics characteristics

Characteristics	Frequency	Percentage
Age		
21-30	29	30.9
31-40	33	35.1
41-50	24	25.5
51-60	3	3.2
61-70	5	5.3
Total	94	100.0
Sex		
Male	45	47.9
Female	49	52.1
Total	94	100.0
Educational status		
Primary	2	2.1
Secondary	17	18.1
Tertiary	75	79.8
Total	94	100.0
Marital Status		
Single	37	39.4
Married	55	58.5
Widow/widower	2	2.1
Total	94	100.0
Occupation		
Civil servant	31	33.0

Work with private firm	28	29.8
Sole Proprietorship	15	16.0
Others	20	21.3
Total	94	100.0
Residential Apartment		
Personal	26	27.7
Rented	68	72.3
Total	94	100.0

Source: Computed from Field Survey (2019)

Socioeconomics characteristics of respondents

Results in Table 1 showed that most of the respondents (35.1%) are between the ages of 31 and 40 years, while 30.9% of them are between the age bracket of 24 and 30. This means most of the respondents are fairly young This implies that they are in their active age. The results also show that 25.5% of the respondents fell between the age of 41 and 50 years, while 5.3% of them fell between 61 and 70 years and finally 3.2% fell between the age bracket of 51 and 60.

The problem in this data is that majority of them were young respondents who may not fully realize the impact of nature to be able to comprehend the concept under investigation, older respondents would do better, except you have literature to support this. If you do, then bring age as a factor into what you suspect might influence psychological wellbeing vis-à-vis greening

The table also shows that the females have the highest percentage of 52.1% and only 47.9% of them are males. By implication more of the respondents were females. Also, the highest number of respondents attained tertiary education with 79.8% and this implies that majority of the respondents are relatively educated and this is expected to assist them in their awareness about urban forestry and greening. The result also indicated that 18.1% had secondary education and 2.1% of them had primary education. This means that all the respondents had various forms of formal education.

It is evident from the results in the table that most 58.5% of the respondents are married while 39.4% of them are single, while only 2.1% are widows and widowers. This show most of the respondents are married. On the respondents' occupation status, the results showed that 33.0% of the respondents are civil servants, 29.8% are those who work with private establishments and 21.3% of them are non-workers while 16.0% of the respondents are sole proprietors. The study also revealed that majority (72.3%) of the respondents stay in rented apartments while 27.3% have their personal apartments. This implies that most of the respondents live in rented house.

Table 2: Distribution of respondents on awareness of urban forestry and greening

Variables	Frequency	Percentage
Have you heard about urban forestry and greening?		
Yes	74	78.7
No	20	21.3
Are you aware of the benefits of urban forestry?		
Yes	80	85.1
No	14	14.9
Are you aware that urban forestry and greening promote psychological wellness?		
Yes	78	83.0
No	16	17.0
How do you know about these?		
Friends and Family	13	13.8
School	16	17.0
Tree planting Campaign	18	19.1
Radio	19	20.1
Television	14	14.9
Newsprint	4	4.3
Internet	12	12.8
Social media	20	21.3
Do you have trees in your house premises?		
Yes	50	53.2
No	44	46.8
Who planted the tree?		
I planted the tree	14	14.9
I met the tree there	35	37.2
I planted the tree in conjunction with some individuals	5	5.3
Who is responsible for the maintenance of the tree?		
Myself	7	7.4
My family members	7	7.4

Myself and family members	8	8.5
Gardener hired by house dwellers	19	20.2
Nobody	1	1.1

Source: Computed from Field Survey (2019)

Table 2 shows that majority of the respondents (78.7%) have heard about urban forestry and greening while only 21.3% of the respondents have not heard about urban forestry and greening. This shows that most of the respondents are aware of urban forestry and greening. It also reveals that 85.1% respondents are aware of the benefits of urban forestry while only 14.9% are not aware of the benefits of urban forestry. It shows that most of the respondents are aware of the benefits of urban forestry. The table also revealed that 83% of the respondents are aware that urban forestry and greening promote psychological wellness while 17% are not aware that urban forestry and greening promote psychological wellness. This implies that majority of the respondents are aware that urban forestry and greening promote psychological wellness. In terms of source of information of the respondents, the result showed that 21.3% of the respondents know about the benefits of urban forestry and greening through the social media followed by radio 20.1% and tree planting campaign 19.1% while school, television, friend and family, internet and Newsprints are 17%, 14.9%, 13.8%,12.3% and 4.3% respectively. This indicate that majority of the respondents know about the benefits of urban forestry and greening through the social media. Findings also show that 53.2% of the respondents planted trees in their house premises while 46.8% did not plant trees in their house premises. This indicates that most of the respondents planted trees in their house premises because of they are aware of the benefits of urban forestry and greening.

The data also revealed that 37.2% of the respondents met the tree in their house premises, 14.9% planted the trees themselves while 5.3% planted the trees in conjunction with some individuals. According to the result 20.2% of the respondents hired gardener in maintaining the trees. Relatively, this show that most of the respondents are elites. Result also show that 8.5% of the respondents maintain the trees themselves with the assistance of family members, 7.4% maintain the trees themselves alone so also 7.4% of the respondents indicated that it is their family members that maintain the trees while 1.1% do not care in maintaining the trees in their house premises.

Table 3: Distribution of respondents on perception of the psychological implication of urban forestry and greening

Variables	Strongly agree	Agree	Disagree	Strongly disagree	Weighted score
Can promote more positive moods and feeling	11 (11.8)*	46 (49.5)	6 (6.5)	30 (32.3)	24.15
May possibly facilitate recovery from illness	26 (28.0)	28 (30.1)	9 (9.7)	30 (32.2)	25.4
Can relieve one of stress	13 (13.8)	44 (46.8)	9 (9.6)	28 (29.8)	24.95
Can promote mental wellness	13 (13.8)	46 (48.9)	7 (7.4)	28 (29.8)	25.45
Can reduce irritability and fretfulness	11 (11.8)	35 (37.6)	13 (14.0)	34 (36.5)	21.9
Is of benefit to depressed patients	12 (12.8)	35 (37.2)	11 (11.7)	36 (38.3)	22.35
Task one's mental acumen leading to mental breakdown	23 (24.5)	31 (33.0)	3 (3.2)	35 (38.3)	25

Have any positive influence on psychological well being	29 (30.9)	34 (36.2)	9 (9.6)	22 (23.4)	28.05

Source: Computed from Field Survey (2019)
*Figures in parenthesis are percentages

Table 3 shows the respondents' perception of psychological implication of urban forestry and greening. The psychological implication that were mostly felt by the respondents, as given in table 3, are those that bother on having positive influence on psychological well being, facilitating recovery from illness, promoting mental wellness, relieiving one of stress and tasking one mental acumen, leading to mental breakdown. The implication of this result is that those that centered on having positive influence on psychological well being, facilitating recovery from illness, promoting mental wellness, relieiving one of stress as well as tasking one mental acumem leading to mental breakdown. constitute the major psychological implication of urban forestry and greening.

Table 4: Results of Spearman rho rank correlation analysis of relationship between demographics characteristics and psychological implication of urban forestry and greening

Variables	r- value	p- value	Remark
Age	-0.216*	0.0372	Significant
Sex	0.014	0.8932	Not Significant
Education status	-0.078	0.4555	Not Significant
Marital status	-0.259*	0.0121	Significant
Occupation	0.021	0.8352	Not Significant
Residential apartment	0.090	0.3871	Not Significant
Land Space	0.254*	0.0136	Significant

Source: Computed from Field Survey (2019)

Table 4 is the result of test for relationship between demographics characteristics and psychological implication of urban forestry and greening. The dependent variable in the hypothesis i.e. psychological implication of urban forestry and greening was tested against socioeconomic characteristics of the respondents using Spearman rank correlation. Result shown in Table 5 showed that psychological implication of urban forestry and greening is significantly related to age (r=-0.277; p=0.0068), marital status (r=-0.259; p=0.0121) and land space (r=0.254; p=0.0136). This implied that age, marital status and land space are determines the respondents' perception of psychological implication of urban forestry and greening.

Table 5: Results of Chi-square analysis showing relationship between the level of awareness about urban forestry and its greening and psychological perception

Variables	Pearson Chi-Square	*P*- value	Decision
Awareness Versus Perception of urban forestry and greening	9.386[a]	.052	Significant

Source: Computed from Field Survey (2019)

Table 5 shows that there is significant relationship between the level of awareness of respondents about urban forestry and greening and its psychological perception. The Pearson Chi-square value is 9.386 and the significance value is 0.052 (*p*>0.05).

Table 6: Results of T-Test analysis for test of relationship between the perceived benefit of urban forestry and its practice

Variables	t- value	p- value	Df	Remark
Revenue generation	2.898	0.006	36	Significant
Provision of fruits, leafy vegetables and herbs	3.606	0.001	65	Significant
Aesthetics value	1.000	0.329	15	Not Significant
Wind break	1.000	0.329	20	Not Significant
Shade	2.659	0.012	33	Significant
Firewood	2.652	0.012	34	Significant
Timber	1.837	0.083	18	Significant
Soil improvement	1.000	0.339	11	Not Significant
Physical wellness	2.169	0.42	20	Significant
Psychological wellness	1.837	0.83	18	Not Significant

Source: Computed from Field Survey (2019)

This tested for relationship between the perceived benefit of urban forestry and its practice. The dependent variable in the hypothesis i.e. urban forestry practice was tested against the perceived benefit of urban forestry using T-test. Result shown in Table 8 revealed that the urban forestry practice is significantly related to revenue generation (t=2.898; p=0.006), provision of fruits, leafy vegetables and herbs (t=3.606; p=0.001), shade (=2.659; p=0.012), firewood (t=2.652; p=0.083), timber (t=1.837; p=0.083) and physical wellness (t=2.169; p=0.42). The implication of this result is that revenue generation, provision of fruits, leafy vegetables and herbs, shade, firewood, timber and physical wellness are the ones that constituted significant perceived benefit of urban forestry.

Table 7: Results of T-Test analysis for test of relationship between the challenge of urban forestry and its practice

Variables	t- value	p- value	Df	Remark
Inadequate land space	1.443	0.161	25	Not Significant
Inadequate public enlightenment	1.787	0.083	33	Not Significant
Unavailability of seeds and seedlings	1.437	0.473	26	Not Significant
Low private participation	2.309	0.040	12	Significant
Poor government policies	2.485	0.21	21	Significant
Lack of individual interest	2.659	0.012	33	Significant
Maintenance problems	1.809	0.083	24	Not Significant

Source: Computed from Field Survey (2019)

This tested for relationship between the challenges of urban forestry and its practice. The dependent variable in the hypothesis i.e. urban forestry practice was tested against the challenges of urban forestry using T-test. Result shown in Table 9 revealed that the urban forestry practice is significantly related to low private participation (t=2.309; p=0.040), poor

government policies (t=2.485; p=0.21) and lack of individual interest (t=2.659; p=0.012). This implied that low private participation, poor government policies as well as lack of individual interest are the ones that constituted significant challenges of urban forestry.

CONCLUSION

Based on the empirical evidence, the study found out that urban forestry and greening have positive influence on psychological well being, facilitating recovery from illness, promoting mental wellness, relieving one of stress as well as tasking one's mental acumem leading to mental breakdown. Besides majority of the respondents are aware that urban forestry and greening foster psychological wellness and are of many benefits to human existence such as revenue generation, provision of fruits, leafy vegetables and herbs, shade, firewood, timber and physical wellness.

However not many of the respondents are involved with the practice of tree planting in their houses or neighbourhood. Majority of the respondents are just involved with the maintenance of already existing trees through one medium or the other. Their challenges for poor practice are numerous, ranging from poor government policies, individual lack of interest and maintenance problems.

RECOMMENDATIONS

- ✓ Mental health Institutions and related Non-governmental organizations should be get involved in urban forestry and greening by declaring a tree planting day in their establishments and also donating tree seedlings to individuals to plant in their houses and environs for psychological wellness.
- ✓ Psychiatrists and psychologists should emphasize to the families of depressed as well as other mentally disturbed patients, the importance of keeping the patients in a green environment, after being discharged from the hospital to prevent a relapse, this is best achieved through urban forestry and greening.
- ✓ Urbanites should be sensitized through the landlord-tenant associations on the need to maintain trees in the neighbourhood for psycho logical wellbeing.

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