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Perception of Garden Owners on the Health and Nutritional Importance of Home Gardens in Nigeria

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Abstract

The study examined the perception of garden owners on health and nutritional importance of home gardens. Data was collected from 347 respondents from communities surrounding the National Horticultural Research Institute (NIHORT) stations across Nigeria (Oyo, Imo, Kano and Gombe States). Descriptive statistics was used for data analysis. Respondents were mostly male (79.5%), 75% had at least secondary education; 46.1% had 5-9 years of experience in gardening while 76.7% use between half and one-quarter of their residence land area as garden. The perception of garden owners about the health and nutritional benefits of home gardens include the fact that they are an avenue for planting and collection of medicinal herbs. Also, respondents were of the opinion that consumption of garden products could promote health. In the same vein, home gardens could also be a source of fresh fruits, vegetables, spices and animal protein. The study thus recommends that garden owners should be encouraged to continue home garden cultivation and sensitize their neighbors who were yet to have gardens on the perceived benefits of home gardens.

Keywords: Nutritional benefits, Gardening, Garden owners, NIHORT-neighborhood communities.

Introduction

Home gardens are “one of the oldest forms of managed land-use systems” in the tropics (Ambrose, 2016). They are also defined as “agro-bio-diverse hotspots with cultural significance” such that “by spending work and leisure time in home gardens, families and communities turn them into culturally constructed spaces where ethno-botanical knowledge is actively preserved....different crops or varieties are maintained because of the significance of each in a family’s traditions or preferences” (Eyzaguirre and Linares, 2004 in (Ambrose, 2016).

Furthermore, a home garden may be regarded as a $\pm 150\text{m}^2$ piece of land at a resident’s home used for production of vegetables, fruits, chickens and small animals such as rabbits, mainly for personal consumption, but the surplus can be sold (Nell *et al.*, 2000). Home gardening contributes to nutrition, health and household food security by providing quick and direct access to different foods that can be harvested, prepared and eaten by family members often daily. Even, landless or near landless and very poor people practice home gardening on small patches of homestead land, roadsides, edges of field, vacant plots or in containers (AVRDC, 2014). There are several benefits of home gardens as it provides health and enjoyment to garden owners as well as environmental impact. It gives easy access to fresh produce, helps households save money on food, helps maintain the environment through the reduction of household waste (wastes are recycled to make compost

needed to add nutrient to the soil). Home gardens are also a source of moderate outdoor exercise and enjoyment for the garden owners and households (Shelley, 2018).

In a small scale qualitative study, Pettigrew and Roberts (2008), found gardening to be one of the activities that can ameliorate loneliness in older age – which is increasingly understood to be as damaging to health for older people as behaviors such as smoking (Holt-Lunstad *et al.*, 2010).

Homestead vegetable gardening helps in ensuring food and nutrition security as well as generates income in the households. In 2012, the World Vegetable Center in conjunction with a non-governmental organization BRAC Agricultural Research and Development Centre, Bangladesh established 300 homestead gardens. Proceeds from the garden were used by the women to feed their families, distribute to relatives and neighbors and sold a significant quantity of the vegetables produced (AVRDC, 2013).

Previous studies related to home gardens and its health and nutritional benefits such as Mutambara *et al.* (2013) assessed the contributions of nutritional gardening on household nutritional status in Nyanga North District, Zimbabwe. In their study, Algert *et al.* (2016) looked at how community and home gardens increase vegetable intake and food security of residents in San Jose California. Moreover, Landry *et al.* (2015) analyzed the perceived effects of community gardening in lower Mississippi Delta gardening participants. However, none of these studies were carried out in Nigeria; these studies did not specifically examine the perception of gardeners on the nutritional and health benefits of home gardens. As such, it is important to examine the perception of garden owners in the neighbourhood of National Horticultural Research Institute stations across the country on the health and nutritional benefits of home gardens.

The study therefore examined the perception of garden owners on the nutritional and health benefits of the home gardens. The specific objectives were to:

- i. Profile of the personal characteristics of respondents and their home gardens.
- ii. Assess the perception of garden owners on the health and nutritional benefits of home gardens.

Methodology

Study Areas and sampling procedure

The study was carried out among residents of communities around the stations of the National Horticultural Research Institute across the country (Oyo, Imo, Kano and Gombe States).

Respondents were sampled from communities within 10km radius of the National Horticultural Research Institute in the various states across the country comprising the headquarters (Ibadan) and substations located at Imo, Gombe and Kano states. They were participants invited to a sensitization workshop on home garden for food and nutrition security. Structured interview schedule were administered to the participants to capture their socio-economic characteristics, perception on the health and nutritional importance of home gardens as well. A total of 417 participants responded to the interview schedule in all the locations however; those having completed and relevant information useful for analysis were 347. Data were analyzed using descriptive statistics.

Personal characteristics of Home Garden Owners

The result revealed that most of the respondents were male (79.5%), 88.7% were more than 30 years and 85.9% were married (Table 1). Seventy-five percent of the respondents had at least secondary education with 44.7% having farming as their occupation. The level of education of respondents observed as well as their occupation could influence their perception of the health and nutritional importance of home gardens.

In the same vein, Table 2 shows that about half (46.1%) of the respondents had 5-9 years of experience in home gardening. Most of them own their houses (84.10%), they live in Bungalows (63.70%) and 76.70% use up to one-quarter of their house area as garden. As the results showed, respondents participation in home gardening could be because they own their houses where they use a quarter of the space as garden.

Table 1: Personal characteristics of respondents

Variable	Frequency	Percentage (%)
Sex		
Male	276	79.50
Female	71	20.50
Age (in years)		
<30	39	11.2
30-39	89	25.7
40-49	64	18.4
50-59	80	23.1
>59	75	21.6
Marital status		
Single	38	10.95
Married	298	85.88
Others	11	3.17
Educational qualification		
None	23	6.6
Primary	64	18.4
Secondary	127	36.6
Post-secondary but not University	78	22.5
University/ Post graduate	55	15.9
Occupation		
Civil service	87	25.07
Trading	63	18.16
Farming	155	44.66
Others	35	10.09
No response	7	2.02

Source: Field survey, (2017)

Table 2: Characteristics of home gardens

Variable	Frequency	Percentage (%)
Years of experience in gardening		
<5	49	14.12
5-9	160	46.11
10-19	35	10.09
20-24	51	14.69
25-29	14	4.03
30-34	8	2.31
35-39	26	7.49
House ownership		
Rented	32	9.20
Owned	292	84.10
No response	23	6.70
Type of housing		
Bungalow	221	63.70
Storey building	54	15.60
Hut	39	11.20
Others	26	7.50
No response	7	2.00
Garden to house ratio		
1:2	114	32.90
1:3	76	21.90
1:4	76	21.90
1:5	52	14.90
Others	12	3.50
No response	17	4.90

Source: Field survey, (2017)

Perception of garden owners on health and nutritional benefits of home gardens

In order to measure the perception of garden owners on the health and nutritional benefits of home gardens, six positive and negative statements respectively were given (Table 3).

A critical value of 3.0 was obtained from the 5-point likert scale responses on which the mean score of each statement was based. The results implied that participants were not favorably disposed to statements with mean scores below the critical value while the inverse was the case for mean scores above the critical value. The results revealed that garden owners agreed with nine of the twelve statements made and disagree with only three of the statements. They disagree with the fact that integrated farming in home garden can improve family food intake (2.99). Garden owners do not also agree that home gardens cannot be relied upon as a convenient spot to meet emergency food needs in time of financial inadequacy (2.97). This implies that garden owners opined that home gardens can assist the family in time of financial inadequacy. Moreover, they disagree with the fact that planting/consumption of appropriate crops from the home gardens cannot reduce stunting, underweight and obesity in children under 5 years (2.92).

Past studies have corroborated these findings on perception of the nutritional and health benefits of home gardens. According to Ghalena *et al.* (2013), home gardens provide enhanced food and nutritional security and improve family health and human capacity. They also give access to fresh plants and food products; while items from home gardens add substantially and sustainably to the family’s energy and nutritive requirements. Kumar and Nair (2004) also revealed that home gardens can serve as source of vitamins to the household. Furthermore, Abdoellah *et al.* (2001), Pulami and Poudel (2004) affirmed that through home gardens, households can achieve balanced diets.

Table 3: Perception of garden owners on health and nutritional benefits of home gardens

Perception statements	Mean score	Decision
Planting and collection of medicinal herbs is possible in home gardening	4.34	Agree
Home gardening could be a ready source of fresh fruits, vegetables, spices and animal protein	3.91	Agree
Fresh fruits and vegetables in home garden could be a ready source of vitamins and minerals	3.92	Agree
Consumption of garden plants could promote health	3.94	Agree
Integrated farming in home garden can improve family food intake	2.99	Disagree
Home garden can improve the nutrition of nursing/lactating mothers	3.65	Agree
Fortification of family diets with nutrient-dense plants cannot be achieved in home gardening	3.01	Agree
Planting of medicinal plants in home garden cannot serve as a first aid remedy in treatment of diseases	3.17	Agree
Home garden cannot serve as an avenue to maintain constant provision of nutrient-rich food throughout the year	3.05	Agree
In time of financial inadequacy, home garden could not be relied on as a convenient spot to meet emergency food need	2.97	Disagree
Regular consumption of home garden products cannot prevent diet-related health challenges	3.58	Agree
Planting/consumption of appropriate crops in home garden cannot reduce stunting, underweight and obesity in children under 5 years	2.92	Disagree

Scores; 1=strongly disagree, 2= disagree, 3=undecided, 4=agree, 5=strongly agree.

Mean score= 15/5=3.0.

Conclusion and recommendation

Home gardens have great health, nutritional and therapeutic and other benefits. Most of the respondents were males, married, aged between 30-39 years with secondary education and farmers. A large number of the respondents have between 5-9 years of experience in gardening. Garden owners have the right perception about home gardens- it allows the consumption of fresh fruits and vegetables, thus improving the nutritional status of the households, among others.

The study therefore recommends that households should be encouraged to continue the cultivation of home gardens in view of its immense benefits, also as a key cardinal aspect of urban agriculture towards improved livelihoods. They should also be encouraged to sensitize neighboring households in their communities who are yet to have home gardens on the realized benefits.

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