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Contribution of Home Gardening to the Welfare of Rural Households in Osun State Nigeria

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ABSTRACT

Purpose: *This study describes the socio-economic characteristics of rural households, identifies the agricultural activities practiced in the home gardens, examines the respondents' perception of home gardening, determines the contribution of home gardening to the households' welfare, and investigates constraints to the practice of home gardening in the studied area.*

Research Method: *A sample of 150 rural households from three Agricultural zones (Osogbo, Ife-Ijesha, and Iwo) was selected using a multistage sampling procedure. Data were collected through a structural interview schedule comprising both open and close-ended questions and the data were summarized using descriptive statistics such as frequency, percentage, mean and standard deviation; along with inferential statistics like Chi-Square and Pearson Product Moment Correlation.*

Findings: *The result revealed that the mean age of household heads was 45.09±15.08 years. Additionally, the majority had received their first experience of home gardening in childhood (71.2%) and expressed willingness to continue home gardening practice (92.4%). Furthermore, they engaged in plantain cultivation (x = 2.50) always and fowl rearing (x = 2.16) often in their home gardens, among other activities. The majority (90.7%) was favourably disposed to home gardening and indicated a high contribution (86.4%) of home gardening to their households' welfare. In addition, pilfering (x = 1.51) was identified as a serious constraint to the practice of home gardening.*

Research Limitation: *The economic importance and marketing aspect of home gardening are not covered due to limited resources.*

Originality/ Value: *The study provides insight into how home gardening could be incorporated into the extension activities of relevant organizations to enhance the full exploitation of the potentials inherent in the practice.*

Keywords: *Extension activities, Home gardening, Nigeria, Rural households, Welfare..*

INTRODUCTION

Home gardens have been utilized worldwide as a significant supplemental food source to enhance the nutritional diversity and food security of households. According to Niñez (2017), it represents the oldest agricultural production system and the most environmentally friendly type of agriculture. Mondal (2019) defined home gardens as places where small-scale farmers have produced plants and animals for domestic use on parcels of land close to or around their homes. They also provide spices, medicines, herbs, flowers, fuel, fodder, and firewood (Kabir *et al.*, 2010).

In addition to their proximity to dwellings, home gardens possess several characteristics, including high plant diversity (Ali, 2005, Tynsong and Tiwari 2010).

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Production is often supplemental to family consumption and income (Legesse, *et al.*, 2016, Mattsson *et al.*, 2018), and they typically occupy small plots (Pritchard *et al.*, 2019). Home gardens have low barriers to entry even for low-income households (Galhena *et al.*, 2013), and are primarily planned for home feeding and use (Furness and Gallaher, 2018, Landon-Lane, 2011). They have the potential to contribute to various aspects, such as increasing food security, improving nutrition, providing supplementary income, enhancing rural employment, reducing the risk of failure, promoting environmental benefits, encouraging physical activity, fostering contact with nature, and strengthening social relations (Machida, 2019; Katz, 2020; Darly *et al.*, 2021). This underscores the inherent multifunctional roles that home gardening could play in enhancing the welfare of households, especially in rural settings.

Development policymakers favor commercially focused field agriculture and have often overlooked small-scale home gardening as a viable food production strategy (Aziz *et al.*, 2020). Despite identifying food security as a crucial policy goal in Africa, many African countries continue to face food insecurity, especially among the urban poor (Olajide-Taiwo *et al.*, 2010). This trend can be reversed through the deliberate integration of home gardening strategies into both rural and urban development plans (Krishnal *et al.*, 2012). The inclusion of the eradication of hunger and extreme poverty in the Millennium Development Goals (MDGs) and the National Economic Empowerment and Development Strategy (NEEDS) of Nigeria underscores the need to examine the inherent potential of home gardening in realizing these goals, particularly in its contribution to the welfare of rural households. Therefore the objectives of this study were to describe the socio-economic characteristics of the rural household in Osun state; identify the agricultural activities practiced in the home gardens by the respondents; examine the respondents' perception of home gardening; determine the contribution of home gardening to rural households' welfare; and investigate constraints to respondents' practice of home gardening in the study area.

MATERIALS AND METHODS

The Area of Study

The study was carried out in Osun State, Nigeria. The state is situated within the forest region of the Southwestern part of the country. The State covers a land area of approximately 14, 875 square kilometers and has an estimated population of 4,435,800 (National Bureau of Statistics 2018).

Sample Selection

The studied area is divided into three Agricultural zones namely Osogbo zone, Ife-Ijesha zone, and Iwo zone. The Osogbo, Ife-Ijesha, and Iwo zones comprise 13, 10, and seven Local Government Areas (LGAs) respectively. A multi-stage sampling procedure was adopted to select the sample for the study. At the first stage, a purposive sampling technique was used to select two LGAs with the preponderance of rural communities in each zone, to make a total of six LGAs. In the second stage, a proportionate sampling method was used to select three communities from each of the LGAs under Osogbo and Ife-Ijesha, one community from Iwo, and two communities from Ola-Oluwa making a total of 15 communities. In the third stage, a simple random sampling technique was used to select 10 rural households from each community, giving a total of 150 as shown in Table 01. The rural household heads represented each of the chosen households.

Data Collection and Analysis

A pre-tested, validated, and well-structured interview schedule was used in gathering data about the socio-economic characteristics of the respondents, agricultural activities practiced in the home garden, perception of the respondents on the contribution of home gardening on household welfare, contribution of home gardening and constraints to practice of home gardening. Data collection was carried out from 10th of March to 15th of April 2024. Data were summarized using frequency, percentage, mean, standard deviation, and charts. Moreover, appropriate inferential statistics like Chi-Square and Pearson Product Moment Correlation were used in hypotheses testing. Statistical Product and Service Solution (SPSS) Version 23 Software was used in data analyses.

Measurement of Variables

Households' perception on home gardening was assessed based on their responses to sixteen declarative perception statements prepared through literature and interaction with members of rural household during a reconnaissance survey. The reactions were recorded on a Likert-type scale, ranging from strongly disagreed (1) to strongly agreed (5) for positive statements, with scores reversed for negative statements. Their perceptions were subsequently categorized as unfavourable, indifferent, or favourable, using an equal interval approach, as employed by Adeloye *et al.* (2022). The contribution of home gardening to households' welfare was measured through respondents' reactions to three

Table 1: Distribution of Selected LGAs, Communities, and Respondents

Source: Field survey, 2023

Agricultural Zones	Selected LGAs	Selected Communities	Names of Selected Communities	Selected No. of Respondents/ Households
Osogbo	Ede-South	3	Oloki-Ede	10
			Idi-Awe	10
			Elewure	10
	Irepodun	3	Arinkinkin	10
			Iludun	10
			Bolorunduro	10
Ife-Ijesha	Obokun	3	Alafon-Ijesha	10
			Iregun-Ijesha	10
			Ora	10
	Atakumosa West	3	Afon	10
			Akeredolu	10
			Ayorunbo	10
Iwo	Iwo	1	Fessu	10
	Ola-Oluwa	2	Bode-osi	10
			Amere	10
Total	**15**			**150**

household welfare indexes developed by Moratti and Natalia (2012). Responses were recorded on a rating scale ranging from never (0) to very often (3). The contributions were further categorised into low and high contributions using an equal interval approach.

RESULTS AND DISCUSSION

Socio-economic Characteristics of the Respondents

The result in Table 02 showed the mean age of the respondents to be 45.09±15.08 years. This implies that the rural household heads in the study area are of middle age and still have the strength to participate in home gardening activities. It also revealed that the majority (62.7%) of the respondents were male. This implies that male household heads were more prominent than their female counterparts in the study area. This agrees with the study of Adeloye and Adisa (2020) who stated that females are not interested in farming activities because of its tedious nature. The result further showed that a majority of the respondents were married (82.6%), had formal education (76.7%), had first experience with home gardening during their childhood (71.2%), and were willing to continue practicing home gardening (92.4%). This might be connected with the multi-functionality of home gardening as reported by Lal, (2020) and Cerda *et al.* (2022). The mean of the household size and those involved in the home gardening activities were 6.07±3.17 and 3.93±2.19 persons respectively. This implies that not all the household members are involved in home gardening activities and it is safe to say that the practice of home gardening supports households with large sizes. The mean annual income from the home gardening activities was ₦45,489.93±35,807.21. This served as an additional (passive) source of income apart from their regular occupation. A majority (82.7%) of the respondents have traveled out of their community within the last three years. Besides, a majority (74.0%) of the respondents practiced home gardening to make ends meet while some practiced it for leisure. This is in line with the findings of Sofo and Sofo, (2020) that home gardening served as a means of survival, especially in difficult times like the COVID-

Table 2: Distribution of rural households by their socio-economic characteristics (n=150)

Variable	Frequency	Percentage (%)	Mean
Age of Household Head (Years)			45.09 ± 15.08
30–39	40	26.7	
40–49	56	37.3	
50 & above	54	36.0	
Sex of Household Head			
Male	94	62.7	
Female	56	37.3	
Marital Status of Household Head			
Married	124	82.6	
Divorced	13	8.7	
Widowed	13	8.7	
First Home Gardening Experience			
Childhood	107	71.2	
Youth	29	19.5	
Adulthood	14	9.3	
Willingness to Continue Home Gardening Practices			
Yes	139	92.4	
No	11	7.6	
Household Size			6.07 ± 3.17
1–5	82	54.7	
6–10	51	34.0	
11 & above	17	11.3	
Number of Household Members Involved			3.93 ± 2.19
0–4	101	67.3	
5–9	45	30.0	
10 & above	4	2.7	
Income from Home Gardening Per Annum (₦)			$45,489.93 \pm 35,807.21$
$< 20,000$	75	50.0	
20,000–70,000	55	36.7	
$> 70,000$	20	13.3	
Cosmopoliteness of Household Head			
Never	41	27.3	
Occasionally	61	40.7	
Frequently	32	21.3	
Always	16	10.7	
***Reasons for Practicing Home Gardening**			
To make ends meet	111	74.0	
Personal interest	103	68.7	
For leisure	73	48.7	
Have no choice	50	33.3	
To maintain family succession	47	31.3	

*Source: Field survey, (2023). *Multiple responses*

19 pandemic period.

Agricultural Activities Practiced in the Home Gardens

Results in Table 03 show that the respondents cultivate Plantain ($\overline{x} = 2.50$), Tomatoes ($\overline{x} = 2.54$), and Pepper

Table 3: Distribution of respondents according to agricultural activities practiced in home gardens

*Agricultural Activities	Always F(%)	Often F(%)	Rarely F(%)	Not at All F(%)	Mean	Remarks
Fruit Crops						
Plantain	66 (44%)	58 (38.7%)	16 (10.7%)	10 (6.7%)	2.50	Always
Pawpaw	84 (56%)	19 (12.7%)	20 (13.3%)	27 (18%)	2.26	Often
Banana	57 (38%)	44 (29.3%)	30 (20%)	19 (12.7%)	1.92	Often
Orange	33 (22%)	42 (28%)	47 (31.3%)	28 (18.7%)	1.53	Often
Pineapple	33 (22%)	46 (30.7%)	34 (22.7%)	37 (24.7%)	1.50	Often
Cashew	44 (29.6%)	25 (16.7%)	32 (21%)	49 (32.7%)	1.42	Rarely
Coconut	25 (16.7%)	36 (24%)	43 (28.7%)	46 (30.7%)	1.26	Rarely
Guava	29 (19.3%)	34 (22.7%)	28 (18.7%)	59 (39.3%)	1.22	Rarely
Leafy Vegetables						
Bitterleaf	79 (52.7%)	35 (23.3%)	27 (18%)	9 (6%)	2.22	Often
Waterleaf	57 (38%)	45 (30%)	26 (17.3%)	22 (14.7%)	1.91	Often
Ugu	58 (38.7%)	29 (19.3%)	39 (26%)	24 (16%)	1.80	Often
Amaranthus	40 (26.7%)	58 (38.7%)	27 (18%)	25 (16.7%)	1.75	Often
Jute	56 (37.3%)	29 (19.3%)	24 (16%)	41 (27.3%)	1.66	Often
Solanum/eggplant	28 (18.7%)	45 (30%)	36 (24%)	41 (27.3%)	1.40	Rarely
Fruit Vegetables						
Tomato	106 (70.7%)	26 (17.3%)	11 (7.3%)	7 (4.7%)	2.54	Always
Pepper	87 (58%)	40 (26.7%)	17 (11.3%)	6 (4%)	2.50	Always
Okro	76 (50.7%)	35 (23.3%)	27 (18%)	12 (8%)	2.16	Often
Melon	54 (36%)	41 (27.3%)	30 (20%)	25 (16.7%)	1.82	Often
Garden Egg	46 (30.7%)	19 (12.7%)	46 (30.6%)	39 (26%)	1.69	Often
Pumpkin	16 (10.7%)	26 (17.3%)	34 (22.7%)	74 (49.3%)	0.89	Rarely
Watermelon	13 (8.7%)	21 (14%)	45 (30%)	71 (47.3%)	0.84	Rarely
Cucumber	17 (11.3%)	22 (14.7%)	29 (19.3%)	82 (54.7%)	0.82	Rarely
Food Crops						
Cassava	92 (61.3%)	29 (19.3%)	16 (10.7%)	13 (8.7%)	2.33	Often
Maize	82 (54.7%)	40 (26.7%)	14 (9.3%)	14 (9.3%)	2.26	Often
Yam	64 (42.7%)	41 (27.3%)	30 (20%)	15 (10%)	2.02	Often
Potato	42 (28%)	56 (37.3%)	28 (18.7%)	24 (16%)	1.77	Often
Cocoyam	44 (29.3%)	47 (31.3%)	27 (18%)	32 (21.3%)	1.68	Often
Livestock						
Fowl	84 (56%)	27 (18%)	18 (12%)	21 (14%)	2.16	Often
Goat	76 (50.7%)	32 (21.3%)	21 (14%)	21 (14%)	2.08	Often
Duck	13 (8.7%)	21 (14%)	45 (30%)	71 (47.3%)	0.84	Rarely
Sheep	41 (27.3%)	29 (19.3%)	27 (18%)	53 (35.3%)	1.38	Rarely
Pig	1 (0.7%)	0 (0%)	1 (0.7%)	148 (98.6%)	0.46	Rarely
Rabbit	0 (0%)	2 (1.3%)	0 (0%)	148 (98.6%)	0.45	Rarely
Snail	0 (0%)	1 (0.7%)	1 (0.7%)	148 (98.6%)	0.44	Rarely

*Remarks: Not at all = 0, Rarely = 0.5–1.4, Often = 1.5–2.4, Always = 2.5–3.0. *Multiple responses. Source: Field survey, 2023.*

($\overline{x} = 2.50$) always in their home gardens. Also, they cultivated Pawpaw ($\overline{x} = 2.26$), Bitter leaf ($\overline{x} = 2.22$), Cassava ($\overline{x} = 2.33$), Maize ($\overline{x} = 2.26$), and rearing of Fowl ($\overline{x} = 2.16$) often in their home gardens. While they cultivated Cashew ($\overline{x} = 1.42$), Eggplant ($\overline{x} = 1.40$), and reared Snail ($\overline{x} = 0.44$) rarely in their home gardens. This implies that the choice of home garden agricultural activities is determined by the household's available labour resources, the household's food preferences, and the need for cash income as indicated by Furness and Gallaher (2018). Also, the respondents might be into many of these home gardening activities due to their very little capital investment and risk involved. In addition, there

were more crop-related activities than livestock; this might be connected to higher cost implications for livestock activities. This is in line with the study of Pandey (2007) and Mondal (2019) who noted that a home garden is part of a livelihood strategy and has therefore, gained prominence as a natural asset through which sustainable use of resources, particularly for the livelihood of the poor may be achieved.

Perception of Respondents about Home Gardening

The results in Table 04 revealed that the respondents strongly agreed with the fact that home gardening is an easy source of fresh food ($\overline{x} = 4.55$), relieves mental fatigue ($\overline{x} = 4.45$), empowers women ($\overline{x} = 4.64$), and builds physical fitness ($\overline{x} = 4.60$). They agreed that home gardening reduces the family food budget ($\overline{x} = 3.91$), serves as a pleasure/hobby ($\overline{x} = 4.00$), serves as a source of income generation ($\overline{x} = 4.36$), serves as environmental beautification ($\overline{x} = 4.41$), promotes family closeness ($\overline{x} = 3.51$), and boosts the immune system ($\overline{x} = 3.73$) among other benefits. The respondents were undecided ($\overline{x} = 2.94$) about the fact that home gardening contributes to more and better sleep. They disagreed with the fact that home gardening eases emotional stress ($\overline{x} = 1.77$) and strongly disagreed with the fact that home gardening is a waste of time ($\overline{x} = 1.18$).This agrees with the findings of the study conducted by Aziz *et al.* (2020) and Mattsson *et al.* (2018) that home gardens are known as the best supplementary food production system for a household and can be regarded as a source of fresh food.

Categories of Respondent's Level of Perception About Home Gardening

The result in Figure 01 reveals that 90.7 percent of the respondents had favorable perceptions about home gardening. While 1.8 percent had indifferent perceptions, 8.0 percent had unfavorable perceptions of home gardening. Mitchell and Hanstad (2014) stated that perception is an individual's view making it a powerful driving force for action.

Contribution of Home Gardening to Households' Welfare

The results in Table 05 revealed that home gardening is contributing financial savings ($\overline{x} = 2.53$), reduction in food purchases ($\overline{x} = 2.52$), and healthcare ($\overline{x} = 2.45$) very often to the household's welfare. Also, home gardening is contributing an increase in self-produced food ($\overline{x} = 2.22$), a reduction in the food consumed outside the home ($\overline{x} = 1.99$), and household members' education ($\overline{x} = 2.00$) among others often to the household's welfare. This implies that home gardening contributes immensely to the household's welfare by being a safety net during food deficit periods, increasing households' purchasing power, and reducing household expenditure, which constitutes the largest share of household spending. Moreover, it acts as a means of an additional source of veritable livelihood. It could be a potential poverty alleviation measure among rural households. Medicinal plants from home gardens could be used to treat various illnesses and diseases and to improve household health conditions as mentioned by Rao and Rajeswara (2016). This backs the findings of Torimiro *et al.* (2015) in a study conducted in the Kweneng District of Botswana which identified food production, income, payment of bills, and purchase of clothing and furniture as household benefits from backyard gardens.

Levels of Contribution of Home Gardening to Household Welfare

The result in Figure 02 reveals that while 12.6 percent of the households indicated a low contribution of home gardening to household welfare, the majority (87.4%) indicated a high contribution to household welfare. This might be connected to worthy characteristics of home gardening such as closeness to dwellings, low barriers to entry even for low-income households, and enhancement of food security among others as highlighted by Galhena *et al.* (2013) and Darly *et al.* (2021).

Constraints Experienced by Respondents' in Practicing of Home Gardening

Results in Table 06 show that pilfering ($\bar{x} = 1.51$) was a serious constraint to respondents in practicing home gardening. This may be connected to the fact that the majority of their residences do not have fences to guard produce from their home gardens against intruders and pilfers. Furthermore, destruction by animals ($\bar{x} = 1.22$), inadequate land space ($\bar{x} = 1.16$), disease infestation ($\bar{x} = 1.07$), and inadequate resources ($\bar{x} = 0.99$), among others, were mild constraints to respondents' practice of home gardening, while drought ($\bar{x} = 0.40$) was not a constraint to respondents' practice of home gardening because drought is not a common occurrence in the study area. This is in line with the findings of Katz 2020, Nicola *et al.* (2020), and Mullins *et al.* (2021) who identified disease infestation, inadequate space, pilfering, destruction by animals, and

Table 4: Perception of respondents about home gardening

Perceptional Statements	SD	D	U	A	SA	Mean	Remarks
Easy source of fresh food	0 (0%)	0 (0%)	6 (4%)	27 (18%)	117 (78%)	4.55	SA
Reduces family food budget	3 (2%)	7 (4.7%)	14 (9.3%)	71 (47.3%)	55 (36.7%)	3.91	A
Better nutrition	4 (2.7%)	4 (2.7%)	26 (17.3%)	47 (31.3%)	69 (46%)	3.50	A
Pleasure/Hobby	7 (4.7%)	20 (13.3%)	30 (20.0%)	41 (27.3%)	52 (34.7%)	4.00	A
Eases emotional stress	43 (28.7%)	44 (29.3%)	19 (12.7%)	15 (10.0%)	29 (19.3%)	1.77	D
Relieves mental fatigue	10 (6.7%)	21 (14%)	50 (33.3%)	34 (22.7%)	35 (23.3%)	4.45	SA
Income generation	6 (4.0%)	13 (8.7%)	33 (22.0%)	55 (36.7%)	43 (28.7%)	4.36	A
Conserves medicinal plants	9 (6.0%)	16 (10.7%)	47 (31.3%)	48 (32.0%)	29 (19.3%)	3.95	A
Environmental beautification	7 (4.7%)	26 (17.3%)	28 (18.7%)	46 (30.7%)	43 (28.7%)	4.41	A
Empowers women	23 (15.3%)	22 (14.7%)	36 (24.0%)	46 (30.7%)	23 (15.3%)	4.64	SA
Builds physical fitness	12 (8.0%)	18 (12.0%)	33 (22.0%)	48 (32.0%)	39 (26.0%)	4.60	SA
Enjoys nature experiences	10 (6.7%)	20 (13.3%)	31 (20.7%)	58 (38.7%)	31 (20.7%)	3.57	A
Promotes family closeness	14 (9.3%)	11 (11.3%)	35 (23.3%)	46 (30.7%)	38 (25.3%)	3.51	A
Contributes to more and better sleep	26 (17.3%)	32 (21.3%)	35 (23.3%)	38 (25.3%)	19 (12.7%)	2.94	U
Boosts immune system	15 (10.0%)	12 (8.0%)	18 (12.0%)	58 (38.7%)	47 (31.3%)	3.73	A
It is a waste of time	49 (32.7%)	44 (29.3%)	19 (12.7%)	21 (14.0%)	17 (11.3%)	1.18	SD

Remarks: SA – Strongly Agreed (4.5–5.0), A – Agreed (3.5–4.4), U – Undecided (2.5–3.4), D – Disagreed (1.5–2.4), SD – Strongly Disagreed (1.0–1.4).
Source: Field survey, 2023.

Table 5: Contribution of home gardening to households welfare

Household welfare	Very often F(%)	Often F(%)	Rarely F(%)	Never F(%)	Mean	Remarks
Food & nutritional welfare						
Source of a balanced diet	93(62)	44(29.3)	11(7.3)	2(1.3)	2.52	Very often
Increase in fresh produce	61(40.7)	63(42.0)	24(16.0)	2(1.3)	2.22	Often
Reduction in food consumed outside the home	58(38.7)	46(30.7)	33(22.0)	13(8.7)	1.99	Often
Source of medicinal herbs	48(32.0)	51(34.0)	32(21.3)	19(12.7)	1.86	Often
Non-food welfare						
Household's education	53(35.3)	51(34.0)	33(22.0)	13(8.7)	2.00	Often
Healthcare	43(28.7)	62(41.3)	34(22.7)	11(7.3)	2.45	Very often
miscellaneous goods and services	48(32.0)	48(32.0)	38(25.3)	16(10.7)	1.85	Often
Transportation	36(24.0)	53(35.3)	40(26.7)	21(14.0)	1.69	Often
Clothing & Footwear	53(22.1)	50(33.3)	47(31.3)	20(13.3)	1.64	Often
Rent	57(38.0)	40(26.7)	33(22.0)	20(13.3)	1.89	Often
Repair	32(21.3)	56(37.3)	41(27.3)	21(14.1)	1.66	Often
Decoration	40(26.7)	46(30.7)	30(20.0)	34(22.7)	1.61	Often
Utilities	34(22.7)	46(30.7)	32(21.3)	38(25.3)	1.40	Rarely
Socio-economic welfare						
Financial savings	93(62)	50(33.3)	11(7.3)	2(1.3)	2.53	Very often
Source of employment	51(34.0)	53(35.3)	33(22.0)	13(8.7)	1.99	Often
More disposable income	53(35.3)	36(24.0)	40(26.7)	21(14.0)	1.98	Often
Reduction in food purchases	93(62)	44(29.3)	11(7.3)	2(1.3)	2.52	Very often
Produce given out as payment in kind	51(34.0)	48(32.0)	32(21.3)	19(12.7)	1.87	Often
Produce given out as a gift	49(32.7)	61(40.7)	33(22.0)	7(4.7)	2.01	Often
Strengthening social relations	46(30.7)	40(26.7)	30(20.0)	34(22.7)	1.77	Often

Very often= 2.5-3.0, Often= 1.5-2.4, Rarely= 0.5-1.4, Never= 0-0.4

Source: Field Survey(2023)

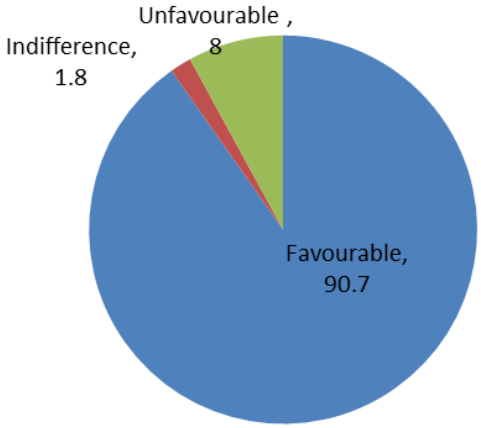

Figure 1: Distribution of households by categories of their perception
Source: Field survey, 2023.

Table 6: Constraints experienced by respondents' practice of home gardening

Constraints	Not a Constraint F (%)	Mild Constraint F (%)	Serious Constraint F (%)	Mean	Rank
Pilfering	13 (8.7)	62 (41.3)	75 (50.0)	1.51	SC
Destruction by animals	23 (15.3)	71 (47.3)	56 (37.3)	1.22	MC
Inadequate land space	30 (20.0)	66 (44.0)	54 (36.0)	1.16	MC
Disease infestation	31 (20.7)	78 (52.0)	41 (27.3)	1.07	MC
Insect attack	46 (30.7)	56 (37.3)	48 (32.0)	1.01	MC
Weed infestation	35 (23.3)	79 (52.7)	36 (24.0)	1.00	MC
Inadequate resources	44 (29.3)	64 (42.7)	42 (28.0)	0.99	MC
Drought	46 (30.7)	63 (42.0)	41 (27.3)	0.40	NC

Remarks: Not a Constraint (NC) = 0–0.4, Mild Constraint (MC) = 0.5–1.4, Serious Constraint (SC) = 1.5–2.0.
F = Frequency, % = Percentage.
Source: Field survey, 2023.

inadequate resources among others as barriers to home gardening.

Hypotheses of the Study

The result in Table 07 reveals that at 0.05 level of significance, household head marital status ($\chi^2 = 18.709$), cosmopolitanism ($\chi^2 = 28.832$), and reason for practicing home gardening ($\chi^2 = 19.355$) had a significant association with the contribution to household welfare. The contingency coefficient revealed a strong association between household head marital status ($C = 0.269$), cosmopolitanism ($C = 0.608$), and reasons for practicing home gardening ($C = 0.639$) and contribution to household welfare, based on Kerlinger (1986), which described C values of 0.28 as moderate relationships, and greater values as a strong association. Also, the result reveals that at 0.05 level of significance, household head age ($r = -0.322$), household size ($r = 0.483$), number of household members involved in home gardening ($r = 0.665$), and perception about home gardening ($r = 0.531$) had significant relationships with the contribution of home gardening to household welfare. The coefficient of determination reflects the percentage share of contribution to household welfare: the share of household head age was 10.4 percent ($r^2 = 0.1037$), the share of household size was 25.3 percent ($r^2 = 0.2530$), the share of the number of household members involved in home gardening was 44.2 percent ($r^2 = 0.4422$), and the share of perception on home gardening

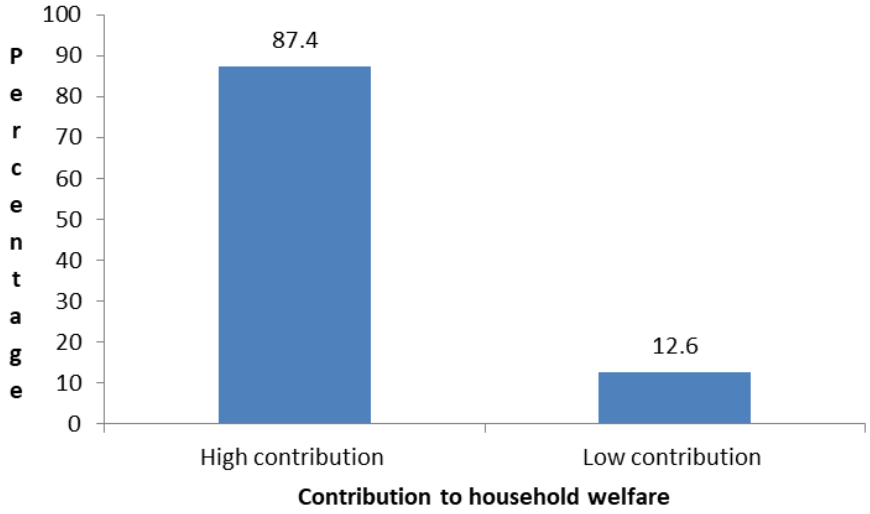

Figure 2: Distribution of households by level of contribution of home gardening to their welfare
Source: Field survey, 2023

Table 7: Distribution of respondents by test of hypotheses

Variables	χ^2 Value	DF	P-Value	C	r	r^2
Sex of household head	2.094	3	0.553	0.238		
Marital status of household head	18.709	6	0.001*	0.269		
Cosmopolitanism of household head	28.832	4	0.001*	0.608		
Reason for practicing home gardening	29.355	6	0.001*	0.639		
Household head age					-0.322*	0.1037
Household size					0.483*	0.2530
Number of household members involved in home gardening					0.665*	0.4422
Annual income from home gardening					0.180	0.0324
Perception about home gardening					0.531*	0.2820

*Notes: *$P \leq 0.05$, DF = Degree of Freedom, C = Coefficient of contingency, r = Correlation coefficient, r^2 = Coefficient of determination, χ^2 = Chi-Square. Source: Calculated from field survey, 2023.*

was ($r^2 = 0.2820$). This implies that the higher the household size, and the number of household members involved, the more favorable their perception of home gardening, the higher the contribution to the household welfare. In addition, the higher the household head age, the lower the contribution to the household welfare; this might be connected to the fact that the higher the age, the less the strength and capability to practice home gardening.

CONCLUSION

There are more male household heads than their female counterpart in rural communities of Osun State and the majority practice home gardening to make ends meet. They cultivate plantain and pepper always, bitter leaf and fowl rearing often, rear pigs and snail rarely. The majority is favourably disposed to home gardening and

affirme high contribution of home gardening to the household welfare. In addition, pilfering stands as a serious constraint to the practice of home gardening. It is recommended that home gardening should be incorporated into the extension activities of the relevant organizations and constraints to its practice addressed, to enhance full exploitation of its inherent potentials.

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