



GENDER ISSUES OF LABOUR PARTICIPATION IN VEGETABLE PRODUCTION IN IKORODU LOCAL GOVERNMENT AREA OF LAGOS STATE

Omowumi A. Olowa^{1†} --- Olatomide W. Olowa²

^{1,2}Department of Agricultural Education, Federal College of Education (Technical) Akoko, Lagos State, Nigeria

ABSTRACT

The study was conducted to identify and specify gender tasks and roles in vegetable production with ultimate goal of better targeting the resources in agricultural sector. One hundred and twenty vegetable farmers were surveyed in Ikorodu local government area of Lagos State. Multistage stage sampling technique was used to select one hundred and twenty (120) vegetable farmers as the sample for the study. Data was collected by means of structured questionnaire. Percentages, Means and Frequencies were the main descriptive statistical tools utilized while Pearson's correlation coefficients were estimated to ascertain the association between women participation and selected socioeconomic variables. The findings revealed that 87.50% of females and 91.07% male vegetable farmers fall between the ages of 20-50 years with a mean age of 50.85 years. 65.61% of females and 30.36% of males' vegetable farmers had formal education while none of the vegetable farmers receive post-secondary education. The role of women in majority of the cases was supportive in nature while the dominative role in most of the cases was performed by men. Correlation analysis revealed that Age, marital status, farming experience and Farm size were positively related with women participation in vegetable production. Education had no relationship with women participation in vegetable production. It was suggested that projects and programmes that aim to increase vegetable production should be designed to address the complementary roles that men and women farmers play.

Keywords: Gender, Vegetable production, Labour, Participation, Lagos State, Ikorodu LGA.

Contribution/ Originality

This study documents that although women dominated in some operations of vegetable cultivation but in totality male participation was more prominent. The roles of women in majority of the cases were supportive in nature while the dominative roles in most of the cases were performed by men. The study further revealed that age, marital status, farm experience and farm size were positively related to women participation in vegetable production in the study area while education was negatively related to women participation in vegetable production.

1. INTRODUCTION

The means of livelihood of more than two-third of Nigeria's population residing in rural areas continues to revolve around agriculture and related activities [1]. Although men are believed to be the major actors in agricultural activities, yet female active participation in farming activities is an important characteristic of Nigeria's agriculture and therefore, cannot be overemphasized [2, 3]. Family farming system is predominantly patriarchal in nature in which both males and females contribute their labour input. Males are expected to play dominant role in farming because of their access to farm resources, production technologies, output and influence on decision making process [4]. Ironically, women are known to be more involved in agricultural activities than men in sub-Saharan African (SSA) countries, Nigeria inclusive. According to World Bank Statistics, women perform two third of entire world's work and produce more than half of food in most of developing countries. As much as 73 % of women were involved in cash crops, arable and vegetable gardening. In some states rural women have virtually taken over the production and processing of arable crops being responsible for as much as 80 % of the staple food items [5].

The horticultural crops especially vegetables which are widely cultivated in most parts of Nigeria, as a cheap and reliable source of protein, vitamins, zinc and iron which also constitute between 30% and 50% of iron and vitamins A sources in poor diet are more laborious than other crops and women contribute towards all vegetable production activities. Activities such as weeding, fertilizer application, harvesting and cleaning are predominantly female activities. However, males are playing leading role in ridge making and irrigating fields [6, 7]. The questions are what was the extent of involvement of women in vegetable cultivation when compared to their male counter-part? What were the characteristics of the women? What were the relationship between the selected characteristics of the women and their participation in vegetable cultivation? Thus, an attempt has been made in this paper to analyze the demographic and other related characteristics of vegetable farmers; to examine the pattern of gender participation in different activities involved in vegetable production and the association between women participation and various socio-economic variables.

2. LITERATURE REVIEW

Sultana [8] stated that homestead vegetables and fruits from an integral part of the family diet and a part of them enter the commercial market. All through every member of the family has

some contribution the major labor input was contributed by women. Most of the homestead agricultural activities, including seed preparation, land preparation; transplanting, watering and harvesting are done by women. Men usually help in fertilizer and pesticide application. Akanda [9] in his study found that highest proportion of the rural women had high participation in vegetable cultivation while only 0.5 percent of them had high participation in the cultivation of fruit trees. Halim, et al. [10] reported that in Bangladesh, women produced Indian spinach, amaranths, okra, gourd, cucumber, and pumpkin during summer season and Country bean, brinjal and tomato during winter season in their homestead garden successfully. Shah [11] observed that the age of rural women was negatively related to increase the extent of their participation. Devi [12] found that education of women had a significant positive impact on labor force participation. Rahman [13] observed that level of education of the women had positive relationship with their participation in rural development activities. Parvin [14] found that there was a significant positive relationship between family size of the farm women and their awareness and knowledge on environmental degradation. Rao [15] reported that rural women's participation in agriculture was positive correlated with the size of their family. Nahar [16] in her study found that family income had negative relationship with their participation in homestead vegetable cultivation, post-harvest practices, poultry rearing and goat rearing. Salauddin [17] in his study found that the family income of rural women had significant positive relationship with their involvement in homestead vegetable production. Akanda [9] in his study mentioned that farm size was one of the activities of rural family and it influenced all over variable. The rural women with bigger farm size had more participation in homestead vegetables cultivation, fruit tree cultivation and non-farm household activities. The reasons were that these families had more opportunities, more education, more agricultural knowledge and better extension contact. Karim [18] concluded from a study there was a significant difference in the agricultural knowledge of farmers is sugarcane cultivation. Ahsan [19] observed that organizational participation of rural women had significant positive relationship with their participation in homestead vegetable production.

2.1. Statement of Hypothesis

A hypothesis simply means a mere assumption or some supposition to be proved or Disproved. The following null hypothesis was formulated to explore the association between selected characteristics of the women.

1. "There was no relationship between age of the women and their involvement in vegetable cultivation."
2. -"There was no relationship between education of the women and their involvement in vegetable cultivation"
3. -"There was no relationship between marital status of the women and their involvement in vegetable cultivation"
4. -"There was no relationship between farming experience of the women and their involvement in vegetable cultivation"

5. -"There was no relationship between farm size of the women and their involvement in vegetable cultivation"

3. MATERIALS AND METHOD

The study was conducted in Ikorodu Local Government Area of Lagos State. Multistage sampling technique was used to select sample for the study. In the first stage, Ikorodu was purposively selected based on high concentration of commercial vegetable farmers in this Local Government Area. In the second stage, Sabo and Odogunyan areas known for high population of vegetable farmers were purposively selected. For the last stage.60 vegetable farmers each were randomly selected from Sabo and Odogunyan to make the One hundred and twenty (120) vegetable farmers used as sample for the study. Data were collected through a structured questionnaire which was administered to vegetables farmers. Information on age, marital status, years of formal education, farming experience, gender contribution in vegetable production were obtained from the vegetable farmers and pooled for further analysis. The data collected was subjected to Gender-based analysis to highlight gender based division of labour in vegetable production focusing on workload, access to and control over productive resources and different needs, constraints and opportunities of males/females. Association between women participation and various socioeconomic variables were ascertained by estimating Pearsons' correlation coefficients employing following formula:

$$r = \frac{\sum \bar{X}\bar{Y} - n\bar{X}\bar{Y}}{\sqrt{(\sum X^2 - n\bar{X}^2)(\sum Y^2 - n\bar{Y}^2)}}$$

Where, r = correlation coefficient, X and Y are the variables between which association is to be estimated while \bar{X} and \bar{Y} are their mean values.

4. RESULTS AND DISCUSSION

4.1. Selected Characteristics of Vegetable Farmers

One of the objectives of the study is to examine demographic and other related characteristics of vegetable farmers in the study area. The selected characteristics are age, years of formal education, farming experience, marital status and farm size. They are hereby discussed.

A good number of the statistics in Table 1 reveal some interesting facts about vegetable growers in the study area. First, the percentage of females (53.33%) is more than that of males. This indicates that Vegetable production is not gender exclusive but is mostly carried out by the female folk. Secondly, the percentage of males (91.07%) within the age range of 20-50 years of age is higher than that of females within the same cohort of age. This should be expected since it is the males that majorly carry out the land preparation activities which are more tedious. This conforms to the findings of [Busari Ahmed, et al. \[20\]](#) that in Osun State, Vegetable farmers are mostly between 41 and 50 years of age. While the percentage of married females is a little above average (51. 56 %), the percentage is as high as 80.36 for males.

Table-1. Selected Characteristics of vegetable farmers

	Female		Male	
	Frequency	Percentages	Frequency	Percentages
Number of vegetable grower	64	53.33	56	46.67
Age (years)				
20-30	10	15.63	8	14.29
31-40	34	53.12	30	53.56
41-50	12	18.75	13	23.22
>50	08	12.50	5	8.93
Marital Status				
Single	18	28.13	04	7.14
Married	33	51.56	45	80.36
Divorced	13	20.31	07	12.50
Educational Status				
No formal education	22	34.38	39	69.64
Primary education	28	43.75	12	21.43
Secondary education	14	21.86	05	8.93
Post-Secondary education	0	0	0	0
Farming Experience (years)				
0-5	12	18.75	05	8.93
6-10	20	31.25	07	12.50
11-15	07	10.94	03	5.36
16-20	07	10.94	06	10.72
>20	18	28.12	35	62.50
Farm Size (Ha)				
< 0.5	36	56.25	3	5.36
0.5-1	20	31.25	31	55.56
1.1-1.50	6	9.37	16	27.57
>1.50	2	3.13	7	11.51

Source: Field survey

Females are more educated than males as depicted by the higher percentage (53.33%) of the former that possess primary and secondary education. It shows that females are more educated than males. However, none of the vegetable farmers receives post-secondary education. Females also have higher years of farming experience than males perhaps due to the fact that females are shown (in the Table) to be more than males in vegetable production. This implies that Vegetable farming is not only an occupation but a way of life of the people in the study area.

Data furnished in Table 6 indicated that the highest proportion (56.25%) of women belonged to the small farm category compared to 39% having medium farm size and only 4 percent high farm size. Thus, most (96%) of the respondent women were in small to medium farm category. It indicated that majority of the farmer are becoming landless for various reasons of which fragmentation of land due to inheritance is major.

4.2. Land holding and Land use Pattern of Farmers

Table 2 above shows that average farm size in the study area was 0.88 hectare (ha) which comprises owned area with an average size of 0.8ha and rented areas with an average size of 0.07ha. This reveals that majority of the farmers in the study area own less than one hectare of land. On an average 11.24 percent of operational holdings was irrigated. Farmers in the area

allocated comparatively more land to Pumpkin with an average of 0.39ha the least to pepper with an average of 0.06ha.

Table-2. Landholding size and distribution

Characteristics	Mean Hectare
Farming Size and Composition	
Operating Holdings	0.88
Owned Area	0.81
Rented Area	0.07
Irrigated Area	0.10
Area Under Vegetable Farming	
Amaranthus (Tete)	0.12
Celosia (Soko)	0.08
Okra	0.15
Pumpkin	0.39
Tomatoes	0.08
Pepper	0.06

Source: Field survey

Table-3. Contribution of Male and female to Vegetable Production (man days)

Vegetable	Family Labour		Hired Labour		Total		Overall Total
	Male	Female	Male	Female	Male	Female	
Amaranthus	46	41	86	60	101	132	233
Celosia (Soko)	24	36	78	43	79	102	181
Okra	20	22	100	71	120	93	213
Pumpkin	40	42	121	50	161	92	253
Tomatoes	16	18	59	55	75	73	148
Pepper	10	13	69	76	71	89	160

Source: Field survey

Table-4. Distributive Share by Gender in Vegetable Farming

Activities	Total Time Required (hour)	Male (hour)	Female (hour)
Land clearing	287	238	49
Stumping	167	137	30
Bed making	252	194	58
Plating	92	49	43
Fertilizer application	83	21	62
Watering	203	46	157
Weeding	119	54	65
Thinning	90	48	47
Supplying	93	39	54
Harvesting	139	62	77
Transportation	129	75	54
Marketing	173	58	115
Total time	1827	1041	786

Source: Field survey

Data in Table 3 indicated that family females and hired male labour was mostly used in commercial vegetable production. In Pumpkin, Okra and Tomatoes production men have a reasonable involvement and were contributing 161, 120 and 75 man days while females have

more involvement in Amaranthus, Celosia (Soko) and Pepper production. Overall 253 man-days are involved in Pumpkin production which is the highest while the least man-day (148) was devoted to tomatoes production. The result presented in table 4 above shows that while men are heavily involved in vegetable production activities such as land clearing, stumping, bed making and transportation, women are more involved in crop management activities of production such as weeding, watering, supplying, transplanting, harvesting and marketing. This conforms to the result of Hassan, et al. [6] and Mofeke, et al. [7].

Table-5. Estimates of correlation between women participation and selected socio-economic variables

Variable	Participation
Age	0. 648**
Education	-0.014
Marital Status	0.726**
Farming Experience	0.735**
Farm Size	0.563**

Source: Field survey. ** Significant at 1% level of probability

Pearson correlation coefficient of the relationship between selected characteristics of participants and vegetable farming are reported in Table 5. The significant level was set at 0.01 level of probability for all relationship examined thus. For the first null hypothesis—"There was no relationship between age of the women and their involvement in vegetable cultivation", the concerned two variables were positively related and significant as the computed value of "r" = 0.648 was higher than tabulated value with 98 degrees of freedom at 0.01 level of probability. Hence, the concerned null hypothesis was rejected. It was concluded that age of the women had significant positive relationship with their participation in vegetable production. The interpretation is that the people who were aged have much involvement with the activities. Because aged women are eager to increase their family income. Second null hypothesis states "There was no relationship between education of the women and their participation in vegetable production". The relationship between the concerned two variables was negative and insignificant as the computed value of "r" = -0.014 was lower than tabulated value with 98 degrees of freedom at 0.01 level of probability. Hence, the concerned null hypothesis could not be rejected. It was therefore, concluded that education of the women had no significant relationship with their participation in vegetable production. The third hypothesis that "There was no relationship between marital status of the women and their participation in vegetable production" was rejected because the relationship between the concerned two variables was positively significant as the computed value of "r" = 0.726 was higher than tabulated value with 98 degrees of freedom at 0.01 level of probability. It was, concluded that marital status of the women had significant positive relationship with their participation in vegetable production. This indicates that respondents who are married participate more in vegetable production. On the fourth hypothesis, "There was no relationship between farm experience and their participation in vegetable production"; the computed value of "r" = 0.735 was higher than tabulated value with 98 degrees of freedom at 0.01 level of probability. Hence, the concerned null hypothesis was rejected because of the significantly

positive relationship between the two variables. It was concluded that farm experience had significant positive relationship with their participation in vegetable production, indicating that the more experienced the women are, the more will be their participation in vegetable production. Finally, the hypothesis that "There was no relationship between farm size of the women and their participation in vegetable production" was tested. The relationship between the concerned two variables was positively significant as the computed value of " r " = 0.563 was higher than tabulated value with 98 degrees of freedom at 0.01 level of probability. Hence, the concerned null hypothesis was rejected. It was concluded that farm size had significant positive relationship with participation in vegetable production. This indicates that the women with large farm size tend to participate more in vegetable production. This might be as a result of the fact that, the women who have large farm size are able to grow cereal crops and can easily get involved in vegetable production.

5. CONCLUSION AND RECOMMENDATION

This study analyzed gender issues of labour participation in vegetable production in Ikorodu local government area of Lagos State. From the study, it can be concluded that although women dominated in some operations of vegetable cultivation but in totality male participation was found more prominent. The role of women in majority of the cases was supportive in nature while the dominative role in most of the cases was performed by men. Tested hypothesis revealed age, marital status, farm experience and farm size are positively related to women participation in vegetable production in the study area while education is negatively related to women participation in vegetable production. It is suggested that projects and programmes that aim to increase vegetable production should be designed to address the complementary roles that men and women farmers play.

REFERENCES

- [1] D. A. Kotze, "Role of women in the household economy, food production and food security: Policy guidelines," *Outlook on Agriculture*, vol. 32, pp. 111-121, 2003.
- [2] B. Nnadozie and I. Ibe, *Women in agriculture: Problems and prospects*, In: *Agricultural transformation in Nigeria*, Ed., A. C. Nwosu; C. U. Nwajuba and J. A. Mbanasor. Owerri, Nigeria: Novelty Industrial Enterprises, 1996.
- [3] S. A. Rahman, "Women's involvement in agriculture in Northern and Southern Kaduna state," *Journal of Gender Studies*, vol. 17, pp. 17-26, 2008.
- [4] F.A.O., "A synthesis report of the African region: Women, agriculture and rural development," Report Prepared Under the Auspices of FAO's Programme of Assistance in Support of Rural Women in Preparation for the Fourth World Conference of Women; Food and Agriculture Organization of the United Nations, Rome, Italy, 1995.
- [5] M. M. Afolabi, "Women as pillars of national economy in Nigeria: A study of economic activities of rural women in six local government areas of Ondo State," presented at the IAFFE Summer Conference, International Association for Feminist Economics, Torino, Italy, 2008.

- [6] T. Hassan, N. Akmal, and S. Taj, *Perception of gender dimensions in Rainfed Pothwar.* K. M. Aujla, W. Malik and M. Ashraf (Ed). *Socio economic research studies. 2003-04.* Islamabad: Pakistan Agricultural Research Council, 2002.
- [7] A. Mofeke, A. Ahmada, and O. Mudiane, "Relationship between yield and seasonal water use for tomatoes, onions, and potatoes grown under fadama irrigation," *Asset Series A*, vol. 3, pp. 35-46, 2003.
- [8] P. Sultana, "Gender roles in agricultural production," presented at the Crop Diversi-Fication Programme Workshop on Social and Gender Analysis and Gender Awareness Building, Held During 1-2 December, Dhaka, Ban-gladesh. Workshop Hand Book Part 1, 1993.
- [9] W. Akanda, "Participation of rural women in different farm and non-farm activities in two selected villages of Mymensingh district," M S. Thesis, Dept. Agril. Extn. Edu, Bangladesh Agricultural University, Mymensingh, 1994.
- [10] A. Halim, B. S. Nahar, and A. B. M. M. Alam, "Research on women in agriculture: The experiences of BAU farming system and envi-ronmental studies," presented at the Paper Presented in the Workshop on Women in Agriculture: The Challenges. BARC, 23-24, March, Dhaka Bangla-desh, 1994.
- [11] W. A. Shah, "Participation of rural women in the homestead vegetable farming system of Bangladesh," *Journnal for Farming System Research Extension*, vol. 4, pp. 89-92, 1994.
- [12] L. K. R. Devi, "Determines of lab our force participation among women in Karalla. Some evidence from a micro level study," *Asian Economic Review*, vol. 38, pp. 102-115, 1995.
- [13] M. H. Rahman, "Participation of women in rural development: An experience of comprehensive village development programmer," *Bangladesh Rural Development Studies*, vol. 6, pp. 47-57, 1996.
- [14] S. Parvin, "Attitude of rural women towards homestead agricultural production," M. Sc.(Ag. Ext. Ed) Thesis, Department of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, 1993.
- [15] D. R. Rao, "A qualitative exploration of some socio-economic issue in South Uddarndi," Matlab, RDP Annual Report: Dhaka, Bangladesh Rural Advancement Committee, 1994.
- [16] K. Nahar, "Participation of rural women in homestead agriculture in a selected area of Gazipur district," M. S. (Ag. Ext. Ed) Thesis, De-partment of Agricultural Extension Education, Bangladesh Agricul-tural University, Mymensingh, 1996.
- [17] M. Salauddin, "Involvement of rural women in homestead vegeta-ble cultivation in a sleeted area of Ghoraghat Upazila under Dinajpur district," M. S. (Ag. Ext. Ed) Thesis. Department of Agricultural Extension Education, BAU, Mymensingh, 2003.
- [18] M. M. Karim, *Assessment of farmers agricultural knowledge in sugarcane cultivation.* Gazipur: Dept. Extn. Edu., IPSA, Salna, 1993.
- [19] S. Ahsan, *The marmas of Bangladesh.* Dhaka: HRDC, Winrock International, BARC, Farm Gate, 2002.
- [20] O. Busari Ahmed, K. M. Idris-Adeniyi, and J. O. Oyekale, "Economic analysis of vegetable production by rural women in Iwo zone of Osun state, Nigeria," *Greener Journal of Agricultural Sciences*, vol. 3, pp. 006-011, 2012.

Views and opinions expressed in this article are the views and opinions of the author(s), Current Research in Agricultural Sciences shall not be responsible or answerable for any loss, damage or liability etc. caused in relation to/arising out of the use of the content.