

Constraints Affecting Nutritional Status of Women Farmers in Oyo State, Nigeria

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Abstract: Women play a significant role in agricultural production; their contribution is as high as between 60 and 90 percent of the total task for food production. This study focused on the constraints affecting the nutritional status of women farmers in Oyo State. Specifically, the study examined the socio-economic characteristics, investigated the food insecurity status, examined the nutritional status, and investigated the constraints affecting the nutritional status of women farmers. Using multistage sampling, 177 women farmers were selected. Data was collected via interviews and analysed with descriptive statistics (frequency and percentage) and Weighted Mean Score (WMS). The mean age was 48.25 years. About 68.4% were married with an average household size of 5. Household members have to eat a limited variety of foods due to resource constraints (WMS = 1.08). A positive and non-significant relationship exists between constraints and nutritional status ($r = 0.437$) and ($p = -0.059$). Extension workers and the government should provide assistance in helping them to have access to soft loans.

Key words: Women farmers, food insecurity, nutritional status and constraint

INTRODUCTION

According to the International Journal of Science and Research (n.d.) (2009), agriculture remains the dominant sector in the rural areas of Nigeria and provides for two-thirds of Nigerians who are low in income. According to Okunade (2021), women's involvement in agriculture goes beyond just farming; they are central to the three main components of food security: food availability, food accessibility, and food utilisation. This means that the role of women is not just about producing food but also about ensuring it's available in the market so that families can afford it and that it's properly prepared for consumption. Despite the critical role women play in food production and management of natural resources, the major barrier for women farmers is their lack of access to productive resources such as land, credit facilities, and modern farming technologies (Okunade, 2006). Land ownership is a particularly significant issue. In many patriarchal societies, customary laws and traditions prevent women from owning or controlling land, restricting their ability to make independent decisions or use land as collateral for loans (Okunade, 2006). This lack of access to financial resources also prevents them from investing in improved seeds, fertilisers, and labour-saving machinery, forcing them to rely on traditional, less efficient farming methods. Lack of access to and control over land has intensified women's difficulties, their access to credit and technical assistance, and their participation.

In Nigeria, the Women-in-Agriculture (WIA) model employs female extension agents to deliver culturally appropriate nutrition messaging, overcoming religious and social barriers that typically exclude women from mainstream advisory services (HarvestPlus CGIAR, 2022). These peer-led platforms enhance both information uptake and trust, making them a valuable route for expanding nutrition programming (Alemu *et al.*, 2025). Beyond knowledge transfer, such initiatives strengthen

women's agency in decision-making regarding food production, household dietary planning, and health-seeking behaviour (Akinyele *et al.*, 2022; FAO, 2023).

METHODOLOGY

The study was carried out in Oyo State, Nigeria. Oyo State consists of 33 local government areas. Oyo State is made up of four agricultural zones, namely the Ibadan/Ibarapa zone, the Oyo zone, the Ogbomoso zone, and the Saki zone. In Oyo State, Ogbomoso and Oyo were selected based on rurality.

Multistage sampling technique was used in selecting respondents in the study area. The first stage involved random selection of 50 percent of agricultural zones, namely Ogbomoso Agricultural Zone and Oyo Agricultural Zone. The second stage involved random selection of three blocks from Ogbomosho and Oyo agricultural zones. The third stage involved random selection of 40 percent of the cells in each block, and the last stage involved random selection of 40 percent of registered rural women farmers from each of the selected cells, therefore making a total number of 177 respondents who were sampled.

Primary data was collected through the use of a well-structured interview schedule, which was subjected to both descriptive (frequency, percentage, and Weighted Means Score (WMS)) and inferential (Pearson Product Moment Correlation (PPMC)) statistical tools were used for the analyses. The Food and Nutrition Technical Assistance (FANTA) scale was used to measure food insecurity. It was measured on a three-point rating scale of Not at all = 0, Sometimes = 1, Often = 2, and Very often = 3. The maximum score was 27, while the minimum score was zero. The mean score was 6.41; high was 20.3%, moderate was 32.2%, and low was 47.5%, respectively.

The dependent variable of the study is the nutritional status of the women farmers, and this was

measured with the use of consumption patterns. This was measured on a five-point rating scale with the scoring order of every day = 4, once a week = 3, two to four times a week = 2, once a month = 1, and several times a month = 0, respectively. The source of information was measured as either yes or no. Thereafter the mean and standard deviation were used to categorise the respondents into high, medium, and low. The minimum score was zero (0), while the maximum was 112.

RESULT DISCUSSION

Socioeconomic characteristics of women farmers

Table 1 revealed that respondents' mean age, household size, and farm size were 48.25 years, 5 members, and 2.0 hectares of land, respectively. This implies that the majority of the respondents are in their active and productive age as average household members with a farm size less than or equal to 2 hectares, practicing subsistence farming with a mean annual income of 561114.29 naira, which may not adequately cater for their needs. This

finding is in line with Dube (2020), that the majority of farmers tend to be in the 35-60 age range, which is indicative of the ageing nature of rural populations in many developing countries.

This implies that farmers in the study area are dominated by aged women. About 68.9% of the respondents were married, which is expected to influence the level of food provision to the household this finding corroborates with the findings of Akintonde *et al.* (2019) that being married as a status suggests a high degree of level of responsibility and a great capability for sound rational decisions. Married individuals are more likely to participate in agricultural activities and experience higher agricultural productivity due to shared responsibilities and experiences. It was also revealed in the study that about 37.1% of the respondents spent between 1 and 6 years in school. This result is consistent with studies indicating that low educational attainment among rural farmers can limit access to new agricultural techniques and hinder productivity (Ganiyu and Rahman, 2021).

Table 1: Socioeconomic characteristics of women farmers (n = 177)

Variable categories	Socioeconomic characteristics	Frequency	Percentage	Mean
Age	≤ 34	3	1.7	48.25
	35 – 45	75	42.5	
	46 – 56	72	40.7	
	57 – 67	26	14.7	
	≥ 68	1	0.6	
Marital Status	Single	12	6.8	5.38
	Divorced	12	6.8	
	Widowed	21	11.9	
	Separated	11	6.2	
	Married	121	68.4	
Household size	≤ 3	6	3.4	2.166
	4 – 5	92	52.0	
	6 – 7	72	40.6	
	8 – 9	7	4.0	
Farm size (hectares)	≤ 2	118	66.8	561.114
	2.1 – 4	44	24.8	
	4.1 – 6	10	5.6	
	6.1 – 7	5	2.8	
Income	≤ 200,000	6	3.4	10.33
	201,000 - 400,000	53	29.9	
	401,000 - 600,000	63	35.5	
	601,000 - 800,000	37	20.9	
	801,000 – 1,000,000	10	5.6	
	1200000 – 1,400,000	6	3.4	
	≥ 2,600,000	2	1.1	
Years of schooling (years)	≤ 0	4	2.3	10.33
	1 – 6	61	34.5	
	7 – 9	4	2.3	
	10 – 12	67	37.9	
	13 – 15	17	9.6	
	16 - 18	24	13.6	

Source: Field Survey, 2025

Respondents' household food insecurity status

Table 2 showed that household members must eat a limited variety of foods due to lack of

resources, which ranked first with a WMS of 1.08. This is followed by household members eating non-preference food with WMS of 1.01. Next, household members have to eat fewer meals in a day because there was no enough food (WMS = 0.95), and household members eating smaller meals than the members wanted because there was no enough food (WMS = 0.84). Others are in the following order: worry that household members will not have enough food (WMS = 0.81), lack of resources to get food of any kind (WMS = 0.74), also ate foods that were not

satisfying to them due to lack of resources (WMS = 0.42), household members going to sleep at night without eating any food, hence no enough food in the house (WMS = 0.21) and household spend a full day and night without eating because there was insufficient food ranked (WMS = 0.20).

This also shows the unavailability of the required quantity of food the household needs to function rightly, and this means the households may not be able to sustain themselves for a long period of time, which is a sign of poverty.

Table 2: Distribution of respondents according to rank order of household food insecurity status.

Scale	WMS	Rank
In the past 4 weeks, did you worry that your household would not have enough food?	0.42	7 th
In the past 4 weeks, were you or any household member not able to eat the kinds of food you preferred because of lack of resources?	1.01	2 nd
In the past 4 weeks, did you or any household member have to eat a limited variety of foods due to lack of resources?	0.84	4 th
In the past 4 weeks, did you or any household member have to eat some foods that you really did not want to eat because of lack of resources to obtain other types of food?	1.08	1 st
In the past 4 weeks, did you or any household member have to eat smaller meal than you felt you needed because there was not enough food?	0.95	3 rd
In the past 4 weeks, did you or any household member have to eat fewer meals in a day because there was not enough food?	0.81	5 th
In the past 4 weeks, was there ever no food to eat of any kind in your household because of lack of resources to get food?	0.74	6 th
In the past four weeks, did you or any member of your household spend a full day and night without eating because there was insufficient food?	0.21	8 th

Source: Field Survey, 2025

WMS: Weighted mean score

Rank order of constraints to nutritional status

Table 3 shows that lack of credit facilities was the most ranked of all the constraints, with a WMS of 2.46. This is closely followed by poor road network (WMS = 2.26), and next to it is the poor storage (WMS = 2.07). Other constraints are in the following order: Pest and disease (WMS = 2.00), Lack of input (WMS = 1.98), Nomadic invasion of farmland (WMS = 1.85), Low processing capacities (WMS = 1.80), crop failure and food to keep during farming season in preparation for scarcity (WMS = 1.72) Absence of value addition (WMS = 1.71), poor transportation (WMS = 1.65), poor family income (WMS = 1.62), low income of household head and technical know-how (WMS = 1.60), unstable market situation (WMS = 1.58), absence of varieties of food

(WMS = 1.44), societal value (WMS = 1.37), societal consideration (WMS = 1.16), keeping of more dependants than the family can cope with (WMS = 1.14), and bad relationship (WMS = 0.89) while spouse irresponsibility ranked lowest with WMS of 0.68. Access to credit would enable farmers to invest in better tools, fertilisers, and irrigation systems, which are essential for increasing food production and improving the nutritional status of their families (Akinmoladun *et al.*, 2016).

This implies that women farmers in the study are being faced with constraints that have a direct implication on the agricultural production systems, the availability and accessibility of food, and the general welfare of respondents.

Constraints affecting nutritional status of women farmers in Oyo State, Nigeria

Constraint	WMS	RANK
Lack of credit facilities	2.46	1 st
Lack of input	1.98	5 th
Poor storage	2.07	3 rd
Crop failure	1.72	8 th
Low processing capacities	1.80	7 th
Poor transportation	1.65	11 th
Pests and diseases	2.00	4 th
Spouse irresponsibility	0.68	21 st
Nomads' invasion of farmland	1.85	6 th
Technical know-how	1.60	13 th
Societal consideration	1.16	18 th
Unstable market situations	1.58	15 th
Absence of value addition to agric. products to increase shelf-life	1.71	10 th
Societal value	1.37	17 th
Poor road network	2.26	2 nd
Bad relationship	0.89	20 th
Keeping of more dependants	1.14	19 th
Low income of household head	1.60	13 th
Poor family income	1.62	12 th
Absence of variety of food	1.44	16 th
Food to keep during farming season in preparation for scarcity	1.72	8 th

Source: Field Survey, 2025

WMS: Weighted mean score

Nutritional status of respondents

Table 4 showed that palm oil ranked first with WMS of 3.20. This is followed by vegetable with WMS of 3.06. Next is well water (WMS = 2.97). Others are in the following order: Garri (WMS = 2.94), Yam (WMS = 2.88), Bread (WMS = 2.79), Vegetable (WMS = 2.69), Vegetable oil (WMS = 2.68), Fruits (WMS = 2.68), Meats (WMS = 2.64), Fish (WMS = 2.40), Maize (WMS = 2.39), Rice (WMS = 2.18), Melon (WMS = 2.10), Borehole (WMS = 1.97), Pure water (WMS = 1.95),

Banana (WMS = 1.84), Beans (WMS = 1.80), Iru (Locust bean) (WMS = 1.79) Potato (WMS = 1.72), Fufu (WMS = 1.69), Seed nut (WMS = 1.67), Egg (WMS = 1.58), rainwater (WMS = 1.00), Coconut oil (WMS = 0.88), Cocoyam (WMS = 0.79), Fat and Oil (WMS = 0.60) and Tap water rank lowest with (WMS = 0.60) respectively. Vegetables such as leafy greens provide essential nutrients like folate, potassium, and vitamin C, which support immune function, blood pressure regulation, and digestive health (Akinmoladun *et al.*, 2018).

Table 4: Nutritional status of the respondents

Food Items	WMS	Rank
Yam	2.88	5 th
Maize	2.39	12 th
Rice	2.18	13 th
Potato	1.72	20 th
Plantain	1.64	23 rd
Banana	1.84	17 th
Cocoyam	0.79	27 th
Bread	2.79	6 th
Garri	2.94	4 th
Fufu	1.69	21 st
Beans	1.80	18 th
Egg	1.58	24 th
Meat	2.64	10 th
Fish	2.40	11 th
Vegetables	3.06	2 nd
Seed (Nut)	1.67	22 nd
Palm Oil	3.20	1 st
Vegetable Oil	2.68	8 th

Food Items	WMS	Rank
Fat and oil	0.60	28 th
Coconut Oil	0.88	26 th
Melon	2.10	14 th
Fruits	2.66	9 th
Iru (Locust Beans)	1.79	19 th
Tap Water	0.43	29 th
Well Water	2.97	3 rd
Rainwater	1.00	25 th
Boreholes	1.97	15 th

Source: Field Survey, 2025

WMS: Weighted mean score

Test of hypothesis

There is no significant relationship between constraints and nutritional status of the respondents.

The result of the Pearson Product Moment Correlation (PPMC) in Table 5 shows the relationship between the constraint and nutritional status of the respondent. Pearson correlation ($r=0.437$, $p=-0.059$) indicates a positive significant between constraints and nutritional status among women farmers. Practically, this means that constraints such as lack of credit facilities, lack of input, poor storage, low processing, poor transportation, pests and diseases, unstable market price, poor roads, and absence of varieties reduce

both on-farm production and household purchasing power and so tend to lower dietary diversity and increase vulnerability to undernutrition. This suggests that constraints contribute to poor nutritional outcomes among women farmers (Pierotti *et al.*, 2022; Salawu *et al.*, 2021). The constraints are likely to increase food production and income that promotes better diets, yet those gains must be deliberately translated into nutrition outcomes. Thus, interventions should address constraints alongside other socio-economic and health-related factors for meaningful improvement in nutritional status.

Table 5: Relationship between constraints and nutritional status of the respondents (PPMC)

Variable	r – value	p – value	Remark
Constraints and Nutritional status of the respondent	0.437	- 0.059	NS

Source: Field Survey, 2023

CONCLUSION AND RECOMMENDATIONS

Based on the findings of the study, women farmers are faced with limited access to education in the sense that low educational attainment among respondents can limit access to new agricultural techniques and hinder productivity. Also, since lack of credit facilities, poor road networks, and poor storage are major constraints faced by women farmers on food insecurity, farmers' families should be sensitised to be involved in the maintenance of roads leading to their various communities, and extension workers and the government should provide assistance in helping them to have access to soft loans, good road networks, and good storage facilities in the study area. It is recommended that government agencies intervene on sensitive nutrition components like nutrition education, promotion of dietary diversification, and support for women's decision-making power over household food and income resources.

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