Applied Studies in Agribusiness and Commerce – APSTRACT
University of Debrecen, Faculty of Economics and Business, Debrecen
SCIENTIFIC PAPERS
DOI: 10.19041/APSTRACT/2025/1/1

FACTORS INFLUENCING FEMALE YOUTH PARTICIPATION IN AGRICULTURAL LIVELIHOOD GENERATING ACTIVITIES FOR SELF-CARE IN GWAGWALADA AREA COUNCIL, ABUJA, NIGERIA

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Abstract: *This study examines female youth participation in agricultural livelihood generating activities for self-care in Gwagwalada Area Council, Abuja. The objectives were to: examine the extent of female youth participation in agricultural livelihood generating activities and the income generated, determine the levels of female youth self-care responsibilities and perceived contribution of participation in agricultural livelihood activities on their wellbeing, determine factors influencing female youth participation in agricultural livelihood activities in the study area. A multistage sampling procedure was used to select 133 female youths from 13 registered youth associations. Structured questionnaire was used to collect data while descriptive statistics and Logit regression model were used to analyze the data. The results showed that 30.1% of the respondents were engaged in crop production and generated an average income of ₦420,093.02 while only 3.0% were engaged in crop produce processing and generated ₦29,250.74. Also, almost half (47.4) of them spent money to take care of themselves of between 3-4 self-care responsibilities and about 41.5 spent an average of 130,078.95 on food per day. It also showed The logit regression results indicated that factors influencing female youth participation in agricultural livelihood generating activities include age, educational status, household size, income, occupation, and distance. While the study indicates that a significant portion of female youths is engaged in crop and poultry production, their overall participation in agricultural activities is limited. The study provides critical insights into the potential of agriculture as a viable solution to youth unemployment and is an instrument of female vulnerability reduction in Nigeria. The study recommends implementing policies to improve land access for female youths, including land reform initiatives that prioritize youth ownership and leasing options. Additionally, it suggests exploring strategies to reduce production costs through input subsidies, partnerships with agricultural suppliers, and community-based resource-sharing initiatives.*

Keywords: *youth participation, agricultural livelihood, income generating activities, self-care, perceived contribution*
(JEL code: Q12, J13, J16)

INTRODUCTION

The word livelihood does not just mean what people do in order to make a living, but the resources that provide them with the capability to build a satisfactory living, the risk factors that they must consider in managing their resources, and the institutional factors that either helps or hinders them in their struggle in improving their living (Khan et al., 2020). In Nigeria people pursue multiple agricultural livelihood activities to enhance their level of living through the income they generate. The activities include crop farming, livestock rearing, trading, fishing, gathering of non-timber forest product, selling of cooked foods or snacks, food vending, tailoring and hairdressing among others (Nyitagher, 2019). Hence, the agricultural sector is viewed as an entire activities generating venture, giving the players an

ample opportunity to explore its potentials for their wellbeing and that of the society in general. It has been projected by McKinsey Global Institute, that Africa's agriculture will grow by 6% per year up to 2030 (FAO, 2020). This estimate could be realistic because of the growing number of females (youth and women) that are engaging in agricultural ventures, and are playing very important roles in all aspects of agriculture. They are undertaking in wide range of activities relating to food production, poultry, livestock, fishery production, processing, marketing among others. This is aside their role in labor supply in most agricultural operations such as ridging, planting, weeding, fertilizer application, harvesting, poultry management (WFP and WHO, 2020).

According to the 2009 gazzeted Nigerian national population headcount of 2006, by the National Population Commission, the population of youth between the ages of 20 to 40 years was 47% (ladies inclusive), thus, constituting a very important segment of the population (Adisa, 2019). This population segment provides the country the potential opportunities for higher growth of the economy and the impetus for poverty reduction, especially given the critical role of women in strengthening the nation's economy. So the need for female youth to engage in agricultural livelihood generating activities becomes very paramount (Abiala and Ojo, 2019; Fashogbon et al. 2023). This is because their engagements in agricultural livelihood provides a sort of social protection and addresses the problem of unemployment. It is indeed an openings in the agricultural sector through which the youth are inspired to venture into or participate in any area of agriculture to earn their living, which includes both on-farm and off-farm as well as non-economic activities which people indulge in to earn their income and for the future (Bello et al., 2021). Female youth are getting more involved in multiple agricultural livelihood generating activities to increase incomes and to reduce their vulnerability by bearing the responsibilities to carter for their needs. They are doing so amidst the declining returns on agricultural investment in Nigeria. This is predicated on the fact that the female youth possess innovative attributes, a fast-learning rate, unassuming endurance, knowledge acquisition propensity, minimal risk aversion, less fear of failure, capacity and ability to produce an excellent source of ideas in the agricultural sector (International Labour Organization (ILO, 2020).

Despite their contribution to the agricultural sector, female youth and women globally experience more challenges than their male counterparts. They face more restricted access to productive resources and assets, financial services, low provision of social protection (Fuhrman and Rhodes, 2020; ILO, 2020). At the same time, social norms, institutional barriers and laws limit their involvement in profitable work (Leon-Himmelstine & Phiona, 2021). It has been reported that female youth/young rural women (aged 15 to 24) globally are at a greater disadvantage than young men in terms of their participation in employment, education or training (ILO, 2020). This shows that gendered social norms have detrimental effects on female youth who are interested in participating in agricultural income generating activities and even in paid jobs. Thus, constituting serious setback to female youth and women empowerment in general. It is on this note that the study was conceived to specifically achieve the following objectives:

i. determine the extent of female youth participation in agricultural livelihood generating activities and the income generated;

ii. determine the extent of female youth self-care responsibilities and perceived impact of agricultural livelihood activities on their wellbeing, and

iii. determine the factors influencing female youth participation in agricultural livelihood generating activities.

MATERIALS AND METHODS

Description of the Study Area

The study was conducted in Gwagwalada Area Council of the Federal Capital Territory, Abuja. The area council lies in coordinates 8o57'2.9988" N and 7o4'36.2532' E and it is bordered by the Kwali Area Council in the north, by Niger State and Kuje Area Council in the east and Abuja Municipal Area Council in the north-east. Gwagwalada Area Council has a population of 507,000 people, a 6.74% increase from 2022 (Dutse et al., 2023). The area has ten wards which include: Zuba, Ibwa, Dobi, Kutunku, Tungan Maje, Gwako, Paiko, Ikwa, Staff Quarters and Gwagwalada Center. It has an alternate wet and dry season, with a mean annual rainfall of around 1500 mm and an average annual temperature which ranges from 30°C to 37°C, with the highest temperature in March. Because of the favourable climatic and soil conditions, agriculture is a prominent economic activity, aside civil and private sector's work in the Area Council. Thus, cultivating different and varying crops, livestock husbandry at small and large scale, fishing, logging, and irrigation farming. The primary food crops grown include Yam, maize, sorghum, millet, groundnut, rice, beans, melon, sweet potato, cassava, and vegetables like pepper and tomato.

Sampling Procedure and Sample Size

This study was conducted in Gwagwalada Area Council of Federal Capital Territory, Abuja. A multi-stage sampling procedure was used in selecting the respondents. In the first stage, 4 peri-urban communities having the highest registered female youth groups engaged in agricultural ventures in the Area Council were purposively selected. These are Dobi, Zuba, Paikonkore and Tunga maje Central. In the second stage, 5 official members and 5 other non-official members of each female youth groups/associations were also purposively selected from 13 youth groups, with additional 3 members selected from the largest group, giving a total sample size of 133 female youth. The selection was done based on the lists of registered female youth groups obtained from the Agricultural Development Project's (ADP's) office of the area council. A Structured questionnaire instrument was used to obtain responses from the respondents.

Method of Data Analysis

Descriptive statistics such as frequency distribution, percentages and mean were used to describe the livelihood activities engaged by the respondents and the income generated. Income generated and income spent on self-care were meas-

ured based on averages per year, season, weeks and days respectively. While a 3 Point-type Likert Scale (Agree=3, Neutral= and Disagree=1) was used to measure perceived impact of agricultural livelihood. A mean threshold (MTH) of 2.0 was obtained from the 3point scale: 3+2+1=6 divide by 3=2. Any weighted mean greater than 2.0 constitutes agree and any mean less constitute disagree in the perception index. Also, Logit regression model was used as the inferential component to analyze the data. The cumulative logistic probability function is stated as:

$$P_i = F(Y_i) = F(\alpha) + \sum \beta_t X_{ti} = \left(\frac{1}{1 + e^{-(\alpha + \sum \beta_t X_{ti})}}\right) \quad 1)$$

Where:

e is the base of natural logarithms; X_ti denotes the tth explanatory variable (t=1,2, 3, …, k) for the ith individual; P_i is the probability that ith individual will make a certain choice (in this case participate or do not participate in agricultural livelihood generating activities) given k explanatory variables; α and β_t are parameters to be estimated (t=1,2, 3, …, k; k is number of explanatory variables). Stating the logistic model in terms of odds and log of odds will make the interpretation of the coefficients clearer (Sperandei, 2014). The odds ratio indicates the ratio of the probability that an individual would select an option (P_i) to the probability that he or she would not select it (1-P_i). When expressed in terms of odds ratio, the logit model has the following form:

$$Y_i = ln\left(\frac{P_i}{1-P_i}\right) = \alpha + \beta_1 X_{1i} + \beta_2 X_{2i} + \cdots + \beta_k X_{ki} + \varepsilon_i \quad (2)$$

Consequently, equation (2) was applied in this study and was treated against potential variables assumed to influence participation in agricultural livelihood generating activities. The model was estimated using the iterative maximum likelihood estimation procedure which yields unbiased and asymptotically efficient and consistent parameter estimate (Ketema et al., 2021). The explanatory variables used in the regression analysis were measured as:

X1 = Age (in years)
X2 = Marital Status (Married = 1, Otherwise = 0)
X3 = Years of formal education (in years)
X4= Household size (Numbers)
X5 = Income of respondents (Naira)
X6 = Poverty status (poor=1, non-poor=0)
X7 = Primary occupation (Farming = 1, Non-Farming = 0)
X8 = Location/Distance to Local or State Headquarters (Km)
X9 = Access to credit facility (No=1, Yes=0)
X10= cooperative membership (in years)
εi = Error Term

RESULTS AND DISCUSSIONS

Extent of Female Youth Participation in Agricultural Livelihood Income Generating Activities and Income Generated. Results from Table 1 shows the various activities from which the respondents derived their agricultural livelihood. It indicates that 30.1% of the respondents were involved in crop farming, with an average income of ₦420,093.02 in a year and 14.3% of them were into poultry production and earned an average income of ₦216,000.00 while only 3.5% and 4.5% were engaged in crop product processing and poultry product marketing and earned ₦29,250.74 and ₦14,166.67 in a day respectively. Crop farming and poultry production have traditionally been the dominant agricultural activities engaged by farmers even in areas surrounded by urban cities. Perhaps this is so because there is always a ready market for such ventures as a result of consistent food demand throughout the year, thus considered as a very potential income-generating activity that people can be more interested. This result is in conformity with findings of Osabohien et al., (2020) and Abiala and Ojo (2019), who reported that crop farming and processing are the major agricultural livelihood generating activities engaged by female farmers in rural communities in Osun State.

Poultry product marketing (meat or egg) offers moderate but substantial income that could be used as copping strategies needed to cushion the effects of social and economic and shocks (Dutse, et al., 2024). Poultry marketing is a source of income diversification within the poultry sector, which can contribute to overall financial stability. This result is in line with FAOSTAT (2019) who stated that livestock poultry business is a lucrative business amongst young women in developing community.

However, only a few (6.8%) of the respondents were brokers or marketing agents but realized an average income of ₦4,550,500.51 in a year. This activity stands out with an exceptional high income earnings, because of high cost of livestock in the peri-urban areas which is associated with low supply to meet increased demand. This results highlight the potentials of women in moving agriculture to its adjudged position to move most developing countries economy to higher ground, Nigeria in particular (Kadzamira, et al., 2024)

Table 1: Extent of participation in agricultural livelihood income generating activities and income generated by respondents

Variable	Frequency*	Percentage	Average income (₦)
Crop farming	40	30.1	420,093.02(per yr)
Poultry production	19	14.3	216,000.00(per yr)
Livestock rearing	11	8.3	420,000.00(per yr)
Poultry marketing- meat or egg	6	4.5	14,166.67(per day)
Farm product processing	4	3.0	29,250.74(per day)
Meat marketing	11	8.3	145,050.12(per wk)
Marketing of products	9	6.8	294,444.45(per wk)
Farm labour	8	6.0	20,000.00(per season)
Food vendors/ restaurants	7	5.3	22,909.09(per day)
Brokers/market agents	9	6.8	4,550,500.51(per yr)
Fruit juice making	14	10.6	116,020.43(quarterly)
Frying of eatables	16	12.0	296,486.13(per yr)

*Multiple responses allowed.
Source: Field Survey, 2023

Extent of Female youth self-care responsibilities

Table 4 showed that a lot of female youth shouldered the responsibilities of taking care of themselves, indicating a level of self-independence in meeting their own needs. A significant number (47.4) of female youth have 3-4 self-care responsibilities which they spent money, with others having up to 5 and above (29.3) self-care responsibilities. This implies that almost all the female youth are either partially or completely independent of themselves with little or no support from others. This can be established as a measure of female economic resilience to survive even at the sudden economic upheaval. The result further showed that majority (45.1%) of them spent an average amount of ₦130,078.95 for food per day and only few (15.0%) of them spent an average of ₦183,033.15 for residential/shops accommodation a month and a very decima (3.8% and 3.0%) of them spent an average of ₦14,065.38 per term and ₦40,000.15 on books and other items from their livelihood earnings respectively. Other responsibilities include spending on clothing/shoes (15%) and make-up (18.0%) as well as for transport (6.0%) expenses respectively, for beautification or personal grooming and for good appearance and for easy movement to their places of livelihood to and fro and personal visits. Also 30% and 9% of the female were responsible for Airtime/data and cellphone expenses. Thus, stresses the importance of staying connected and accessing information, because access to airtime and data is crucial for communication and accessing online information sources or digital marketing, particularly among farmers or students and also for livelihood businesses. The results provides critical insights on the quest to engage the youth in agricultural economic activities so that they can potential provide for some of their needs rather than indulging in behavior that is inimical to societal development. The results is in consonance with findings of Akinpelu (2020) who reported that majority of female youth gender shouldered the various responsibilities of catering and caring for themselves with little or no support from families or relatives and also meets up with other responsibilities. Similarly, Salisu et al.,(2017) expressed that livelihood activities are income pathways through which women make use of it to take care of their needs.

Table 2: Self-care responsibilities by female youth

Variables	Frequency	Percent	Amount spent (₦)
Levels of self-care responsibility			
1-2	31	23.3	
3-4	63	47.4	
5 and above	39	29.3	
Total	133	100.0	
Female youth self-care responsibilities			
Food	60	45.1	130,078.95/a day
Cell phone	12	9.0	81,081.02/6month
Shelter	20	15.0	183,033.15/month
Airtime/data	40	30.0	5,250.00/a day
Clothing	20	15.0	30,000.24/month
Make-up	24	18.0	15,004.36/a week
School fees	13	9.8	121,928.57/a term
Transportation	8	6.0	10,000.00/a day
Books	5	3.8	14,065.38/a term
Others	4	3.0	40,000.15/a month
Total	206*		630,441.82

Multiple responses allowed.

Source: Field Survey, 2023

Perceived contribution of participation in agricultural livelihood activities on female youth wellbeing

Table 4.3 showed that, of the nine (9) perceived contribution statements of participation in agricultural livelihood activities on female youth wellbeing, 8 perceived statements were agreed by the female youth that participating in agricultural livelihood activities has contributed in their lives and only 1 one statement was not perceived or disagreed. It indicates that female youth agreed that participation in livelihood has contributed in increased sources of income (3.0), enhances social networking and good relationship (2.9), reduces relegation of women in decision making (2.8), and improve level of and general standard of living. Only statement on the contribution of participation in livelihood create and opens good opportunities was disagreed with a weighted mean of 1.9. The results reveals a good expression of satisfaction by the female youth engaging in agricultural livelihood activities and are filled with a sense of fulfillment and pride of what they are doing to assist themselves and perhaps others in order to live a more descent and responsible life.

This also points to the potentials that abounds in agriculture which have the capacity to provide women with various empowerment schemes/activities for both adult and younger women to achieve their aspirations and dreams, thus, contributing their quarter in national development. This results concord the findings of Dutse et al (2024) and Lachaud et al. (2018) among female youth in Kaduna State who reported that a very significant number of female youth were engaged in agribusiness strongly agreed of the positive impact in participating in agricultural livelihood

Table 3: perceived contribution of agricultural livelihood activities on female youth wellbeing

Perceived impact statement	AG	N	DS	WTS	Mean	MTH
Increased my sources of income	396	0	1	397	3.0	
Improved my level of and general standard of living	294	26	22	342	2.6	
Reduces my dependency on parents and relations	282	14	32	328	2.5	
Enhances self-reliance on my ability, capacity and skills	252	36	31	319	2.4	
Create equity and open opportunities	177	16	66	259	1.9	2.0
Reduces relegation of female in decision making	348	6	14	368	2.8	
Enhances my chances of accessing medical needs	261	18	37	316	2.4	
Increases my livelihood diversification	249	24	38	311	2.3	
Enhances my social networking and relationship	384	6	2	392	2.9	
Total						

*Multiple responses

Source: Field Survey, 2023

Factors Influencing Female Youth Participation in Agricultural Livelihood Generating Activities

The result of Logit regression analysis in Table 2 revealed the Chi-square value (P<0.01) to be highly significant

at 1 % level of probability, indicating that the parameters included in the model taken jointly are significantly different from zero and predict participation in agricultural livelihood generating activities. Six variables, out of the ten explanatory variables hypothesized to influence participation in agricultural livelihood generating activities, were found to be statistically significant at different levels of probability. These variables include age, income, household size, primary occupation and distance.

Age had a positive and significant effect on participation in agricultural livelihood generating activities. As age increases by one year, the odds in favor of participating in agricultural livelihood generating activities increases by a factor of 1.106 (equivalent to an increase of about 10.6%). This is because age is can serve as a proxy for experience and evidence of human capital acquisition. Thus, as age increases farmers accumulate experience and become more willing to participate in agricultural livelihood generating activities. This result agrees with the findings of Daudu et al. (2023) and Etim et al. (2018) for Nigeria and Ketema et al. (2021) for Eastern Ethiopia, who reported a positive and significant relationship of farmers' age on participation in agricultural activities.

The results show that education status had positive and significant effect on t participation in agricultural livelihood generating activities. Relative to illiterates, educated female youths had 52% higher odds of participation. This result is in line with that of Daudu et al. (2023) who reported that average education positively affected participation in agricultural activities. This is because of the fact that education enables farmers to obtain and analyze relevant farm information from different sources for engaging in agricultural livelihood activities. This implies that educating farmers would improve participation and increase crop productivity and thereby improve food security situation.

The result of this study also revealed that engaging in farming as a primary occupation had a negative and significant influence on participating in agricultural livelihood generating activities. The odds-ratio in favour of participating in agricultural livelihood generating activities indicates that, with other factors being kept constant, the odds of female youth whose primary occupation is farming participating in agricultural livelihood generating activities is lesser by a factor of 0.88 relative to female youth who have other primary occupations. Primary occupation is the potential source of a starting and supportive capital for other livelihood generating activities to thrive and sustained and when it is lost it affects the entire livelihood chain.

Household size had a positive and significant influence participation in agricultural livelihood generating activities. This suggests that, relative to smaller households, having a larger household increases participation in agricultural livelihood generating activities. As the household size increases by one person, the odds of participating in agricultural livelihood generating activities increases by about 15.9%. Thus, there is the tendency of female youth with larger household size to have a higher likelihood of participating in agricultural livelihood generating activities than smaller household size because of increased responsibilities. Increase in household size may also increase labour availability and quality, which will make it easier for the female youth to participate in agricultural livelihood generating activities. This result is in consonance with the findings of Samuel and Sylvia (2019) who reported that relatively larger household size enhances the availability of labor for increased efficiency in production among farmers. This result also corroborates the argument that many farmers give birth to more children in order to augment their labour force (Agyeman-Boaten et al., 2022).

Income had a positive and significant relation with participation in agricultural livelihood generating activities. This implies that participation is likely to increase as income increases. The odds-ratio suggests that participation in agricultural livelihood generating activities is likely to increase by 26.3% if income increase. Increased income is a crucial factor when deciding to engage in a livelihood activity. A possible explanation for these results may be that increased income may help to alleviate the problem of low access to credit. Thus, it can provide the necessary input and can allow the adoption of improved technologies to enhance productivity (Fasakin et al., 2022). Rationally, as income increases, the chances of increasing agricultural investments becomes eminent and through which individuals are able to acquire basic necessity of life and build assets, for future investment, acquire livelihood asset on their own (Tesfaye, 2022). This finding is in line with those obtained by Twumasi et al. (2019) and Magagula and Tsvakirai (2020) for Ghana and South Africa, respectively.

Similarly, location and distance had a negative and significant relationship with the probability of participation in agricultural livelihood generating activities. The result revealed that for each additional distance from the area of participation in livelihood generating activities, the odds of participation decrease by 93%. This implies that the further the location of residence to the area of activities, the more it discourages participation in agricultural livelihood activities. This result is in consonance with findings of Beriso et al. (2023) which reported that women living closer to the place of their livelihood activities were more likely to be empowered and participate than those living farther away. Similar findings were reported by Ketema et al. (2021).

Table 4: Logit model estimate of the factors influencing female youth participation in Agricultural livelihood generating activities

Variables		Standard error	P>|z|	Odds ratio
Age	0.101***	0.025	0.000	1.106
Sex	0.053	0.475	0.907	1.054
Marital status	0.277	0.470	0.437	1.319
Education	0.419*	0.382	0.096	1.520
Household size	0.148*	0.097	0.078	1.159
Income	0.233***	0.077	0.000	1.263
Primary occupation	-0.129***	0.023	0.000	0.879
Location/Distance	-0.073***	0.025	0.007	0.930
Access to credit	-0.057	0.042	0.209	0.945
Years of cooperative	0.010	0.035	0.760	1.010
Constant	-5.521***	0.008	0.002	0.004
Observations	133			

LR Chi2 (10)	104.660
Prob>Chi2	0.000
Log likelihood	-76.477
Pseudo R^2	0.406

Note: *** and * significant at 1 percent and 10 percent levels of probability

Source: Field Survey, 2023

CONCLUSIONS AND RECOMMENDATIONS

The findings revealed that female youths in Gwagwalada are actively engaged in more than one agricultural activities, particularly engaged in crop and poultry production, which contributes to their income. The income generated is useful in taken care of their needs and female youth were perceiving the contribution of livelihood activities to their wellbeing. The Logit regression analysis highlights that factors such as age, education, household size, income, occupation, and location significantly influence participation levels. The study, therefore, recommends the implementation of policies that facilitate easier access to land for female youths. This could involve land reform initiatives that prioritize youth ownership and leasing arrangements, ensuring that young women can secure land for agricultural activities or shop space for agribusinesses. Also, strategies to reduce the high cost of production through subsidies for inputs, partnerships with agricultural suppliers, and the promotion of community-based resource-sharing initiatives could be explored. Also, engaging youth as brokers or marketing agents should be encouraged through institutional support by establishing, for instance, modern marketing facilities such as the animal stalls and slaughter houses should be private by government and private organizations, to attract more female youth in the venture for further exploration and also provide training in agribusiness to make them more efficient in their ventures.

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