



Original Article

Assessment of Effects of Economic Empowerment Programmes On Rural Women in Kachia Local Government Area in Kaduna State, Nigeria

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ABSTRACT

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This study examined the assessment of the effects of economic empowerment programme on rural women in Kachia Local Government Area of Kaduna State. Multi-stage sampling procedure was used to select 408 farmers for this study. Data were collected through interview schedule using structured questionnaire and Focus Group Discussion (FGD). Both descriptive and inferential statistics was used to analyze the data. Result of the findings reveals that, late loan disbursement, poor extension services and inadequate storage facilities; while inadequate fertilizer supply, poor marketing and inadequate storage facilities were found to be the key impediments to full actualization of Fadama III Development Project in Kachia LGA. The study concludes that the Women Helping Women intervention projects in the study area had more effect on the beneficiaries than Fadama III Development Project being carried out. The study recommends that, Women Helping Women intervention projects should help farmers' established cooperative association, provision of loans and farm inputs (fertilizers, seeds) and disbursed on time at the onset of farming season to farmers and farmers should form smaller production cluster to improve their market intelligence.

INTRODUCTION

Many people in rural Nigeria today are not economically empowered owing to several factors which include inadequate skill to engage in non-farm activities and low productivity from farm activities. Thus poverty abounds in most of these places (Haruna, 2006). These situations are typical of rural areas in Kachia Local Government Area (LGA) of Kaduna State. One of the major targets of Nigerian government is to improve the quality of life in the rural areas and reduce the level of poverty particularly

among women (Biwe and Suleh, 2013; Adamu, 2019). Most women suffer disproportionately from rural poverty hence particular programmes on women empowerment have been pursued. In order to fast track economic empowerment of rural women in Kachia LGA participation in the National Fadama Development Programme (NFDPP) and activities of NGOs such as Women Helping Women (WHW) are key interventions. Non-governmental organizations (NGO) intervene in the needs of women; contribute to their socio-economic



empowerment; create health awareness; and general sensitization on education, employment etc., and their role ranges from fulfilling the basic necessity of women to empowering them toward improving quality of life of their families. It is believed that empowerment programmes for women has a multiplier effect. It has a positive effect on the women and their households, as their living conditions such as access to improved housing, sanitary facilities, health services, education and nutritional diet. (Soh Wenda *et al.*, 2024). Over the years, women have developed valuable experience and knowledge which according to Pesticide Action Network Asia and Pacific (PANAP) (2012) include being custodians of seed, conservers of biodiversity and traditional veterinarians. Women play significant role in supplying major ingredients crucial to achieving sustainable food security in Nigeria. They therefore desire empowerment from both government agencies and NGOs. It is noteworthy that the effect of NGO's and government interventions on rural women empowerment through various strategies should continuously be assessed at local levels in order to be adequately conceptualized into meaningful policy framework. It is against this background that this study assesses the effectiveness of rural women economic empowerment programmes in Kachia LGA of Kaduna, Nigeria.

Statement of the Research Problem

Nigerian women form an indispensable part of human resources for development because without their contribution, the economy will be difficult to propel to a higher level (Adamu, & Michael 2023). According to UNDP, women play great role in agriculture in Nigeria and are believed to make up to 60–80% of the agricultural workforce. FAO (2023) reported that about 70% of women live in rural areas and contribute about 44% of family feeding and income through agriculture. Past administrations in Nigeria used different empowerment programmes have emerged. Prominent among these are the women in agriculture (WIA) established in the early 60s, Better Life for Rural Women (1987), and also, Family Economic Advancement Programme (1997). Some of the programmes related to women empowerment in Kachia Local Government Area, on food security are Fadama I, II and III by the Kaduna State Agricultural Development Programme in conjunction with World Bank; N²Africa (an NGO supported by Bill Gate Foundation) which is in charge of giving out hybrid seeds to farmers for planting; National Directorate for Employment; Save the child under Care Links Resource Foundation which main aim is adding nutritional value to the indigenous crops for example Moringa and Jute and Soil testing plan. These are some of the programmes which are carried out in Kachia LGA by government and non-governmental organizations. The extent to which these empowerment programmes have improved the, living condition of women need is yet to be ascertain. Though some literatures have revealed weak synergy between government and NGO's in delivering mandates of empowering women economically in one hand, and in another, there exists a proliferation in

the coordination of the economic programmes by local agents of international donor agencies (Arum, 2010; Literature has also revealed that the empowerment of women in the study area through Fadama I and II have been effectively achieved. Thus, the study envisages to identify the research questions: What are the effects of Women Helping Women and Fadama Development Programmes on beneficiaries in the study area and identify the constraints faced by women empowerment programmes in the study area.

AIM AND OBJECTIVES

The aim of this study is to assess the economic benefits of empowerment programmes on rural women in the study area; the specific objectives are;

- i. assess the effects of Women Helping Women and Fadama Development Project on women beneficiaries in the study area, and
- ii. identify the constraints faced by women empowerment programmes in the study area.

Hypothesis

H₀. There is no significance difference between the economic impacts of women helping women and Fadama beneficiaries in Kachia local government area, Kaduna state.

H₁ There is a significance difference between the economic impacts of women helping women and Fadama beneficiaries in Kachia local government area, Kaduna state.

The Study Area

Kachia Local Government Area (LGA) of Kaduna State is located between latitudes 9°33'0"N and 10°11'0"N and longitudes 7°10'0"E and 8°08'0"E. It is bordered to the north by Chikun LGA, to the north-east by Kajuru LGA and Zangon-Kataf LGA to the east. To the south are Jaba and Kagarko LGAs, while to the west is Niger State. With a land area of about 5101km². The 2006 National population census shows that Kachia LGA had a population of 244,274 with 124,655 males and 119,619 females according to the 2006 census (FRN, 2012). Kachia is the third largest LGA in the State, only smaller than Birnin Gwari and Chikun LGAs. The LGA has a total of 12 electoral wards namely: Agunu, Ankuwa, Awon, Bishini, Doka, Gidan Tagwai, Gumel, Kachia, Katari, Kurmin Musa, Kwaturu, and Sabon sarki wards. Kachia LGA has a tropical continental climate (Aw type) according to Koppens classification, with distinct dry and wet seasons. The two seasons reflect the influence of the tropical continental airmass as well as the tropical maritime airmass during the respective seasons. The dry season is between November and April. It is dust-laden and creates subsidence that yield virtually rainless condition accompanied by harmattan, while the wet season commences between April and May.

Kachia LGA generally falls between 715-750 meters with projections such as the Kwagiri (about 790 meters), Jaba Kogo (890 meters), Honbori (880 meters) hills. The area is drained by several rivers and streams such as River Kachia, Adamu Stream, River Rafi-Nabiyu, Ungwa Pa



River, Wawan Rafin Asbiti all of which drained into river Gurara. Most of the streams are seasonal- they are flooded during the high peaks of rainy season, thereby not only destroying nearby crops, bridges, but also make accessibility to the farms difficult during the farming season (Rimau, 2011).

MATERIALS AND METHODS

The research instruments adopted in this study are structured questionnaire and Focus Group Discussion (FGD) in the study area. The qualitative data on this research composed of Focus Group Discussions (FGDs), this fostered a proper understanding of the beneficiaries of the rural women empowerment programmes in the study area. The Focus Group Discussions (FGDs) was a participatory method which was conducted to explore issues, related to Women Helping Women NGO, Fadama III Development Project and beneficiaries of these women empowerment programmes in the study area. The respondents targeted were women participating in Women Helping Women NGO and Fadama III Development Programme. The discussions were flexible in order to accommodate unexpected issues that may come up.

Sampling Technique and Sample Sizes

A multi-stage sampling technique was used to select respondents. The first stage was purposive sampling, the selection of Kachia LGA; second stage was selection of twelve districts in Kachia LGA. These districts were selected because they are the beneficiaries of the Women Helping Women NGO and Fadama III. Third stage was to determine the sample size for this study, through the use of Yamane (1967) formula alongside the total number of beneficiaries of the NGO (571) in the selected districts. The population of beneficiaries was used to determine the sample size.

The Yamane (1967) formula is given as:

$$\text{Sample size } n = \frac{N}{1+N(e)^2} \dots\dots\dots 1$$

Where N - Total population of selected wards = error margin = 0.07 or 7%

The same number of sample drawn from Women Helping Women NGO beneficiaries was drawn from the Fadama III project making a total of four hundred and eight (408) beneficiaries selected from the study area.

Table 1: Equal Distribution of Respondents from Women Helping Women NGO and Fadama III Development Project

No.	Selected Districts	Respondents from Women Helping Women NGO		Respondents from Fadama III Development Project	
		Frequency	Percentage	Frequency	Percentage
1	Katari	4	2	4	2
2	Kwaturu	84	41.2	84	41.2
3	Ankwa	9	4.4	9	4.4
4	Sabon Sarki	9	4.4	9	4.4
5	Kachia	30	14.7	30	14.7
6	Gumel	7	3.4	7	3.4
7	Agunu	18	8.8	18	8.8
8	Gidan Mana	12	5.9	12	5.9
9	Gidan Tagwai	4	2	4	2
10	Jaba Kogo	16	7.8	16	7.8
11	Kurmin Gwaza	4	2	4	2
12	Kurmun Musa	7	3.4	7	3.4
	Total	204	100	204	100

Source: Modified from Women Helping Women NGO (2023).

Analytical techniques

Descriptive statistics, such as means, frequencies, tables, percentages, were used to achieved objective ii, while T-test statistic was to achieved objective i

. The T-test model is presented below:

$$t = \frac{M_x - M_y}{\sqrt{\frac{S_x^2}{n_x} + \frac{S_y^2}{n_y}}} \quad \begin{matrix} M = \text{mean} \\ n = \text{number of scores per group} \end{matrix}$$

$$S^2 = \frac{\sum (x - M)^2}{n - 1} \quad \begin{matrix} x = \text{individual scores} \\ M = \text{mean} \\ n = \text{number of scores in group} \end{matrix}$$

RESULTS AND DISCUSSION

Effects of the Benefits of Empowerment Programmes on Beneficiaries of Women Helping Women and Fadama III project.

The result of the paired sampled t-test shown in Table 2 compared the effects of the benefit of Women Helping Women and Fadama III project on women beneficiaries in Kachia LGA. The variables, mean values for both the Women Helping Women and Fadama III project, t-test and standard error were shown. Also, the variables that are significant at 5% are marked with asterisks.

Provision of insecticides and herbicides

The result for provision of insecticides and herbicides for Women Helping Women and Fadama III shows a T value of -1.512 and a P-value greater than P < 0.05 level of significance. The mean values are 0.21 and 0.27 for Women Helping Women and Fadama III respectively. It is found that there is no significant difference in provision of insecticides and herbicides between Women Helping Women and Fadama III Development Project, which



implies that both programmes had same impact on provision of insecticides and herbicides for rural women economic empowerment. This is corroborated by submission of beneficiaries during Focus Group Discussion session held in Gumel and Kachia wards:

"We often receive agricultural inputs like insecticides and herbicides from our empowerment programme" (Mrs. Amina Mamman from Women Helping Women and Mrs. Habiba Bala from Fadama III Development Project, 24th and 25th May 2024)

Provision of fertilizers

Provision of fertilizers has a T value of -3.797 and a P-value less than $P < 0.05$ level of significance at 5% level of significance and the mean values are 0.07 and 0.2 for Women Helping Women and Fadama III. Since the P-value is less than 0.05 level of significance and the T-value is negative, there is a significant difference in provision of fertilizers between Women Helping Women and Fadama III, implying that majority of the Fadama III beneficiaries had more access to fertilizers than beneficiaries of Women Helping Women NGO. This is in agreement with the study of Bature, Sanni and Adebayo (2013) who concluded that Fadama users have access to fertilizer than the non-Fadama users. This also corroborates with the submission of a discussant during Focus Group Discussion session held in Gumel ward:

"We often encounter inadequate supply of agricultural inputs like fertilizers from our empowerment programme" (Mrs. Amina Jatto from Women Helping Women NGO, 24th May 2024)

Provision of improved seeds

Provision of improved seeds T value of 1.442 and a P-value greater than $P < 0.05$ level of significance and the mean values are 0.67 and 0.60 for Women Helping Women and Fadama III project respectively.

Since the P-value is greater than $P < 0.05$ level of significance, there is no significant difference in provision of improved seeds between Women Helping Women and Fadama III project, which implies that both programmes had similar effect on their beneficiaries. The similarities in provision of improved seeds could be attributed to the major objectives of both empowerment programmes. The findings were corroborated by beneficiaries at the Focus Group Discussion session held in Gumel and Kachia wards:

"We are often provided with improved seeds sometimes for free or subsidized, but hardly ever enough for planting" (Mrs. Linda Gundiri from Women Helping Women and Mrs. Sarah Naman for Fadama III Development Project, 24th and 25th May 2024)

Trainings on Farm Record Keeping

Trainings on farm record keeping shows a T value of 24.41 and a P-value less than 0.05 level of significance and the mean values are 0.85 and 0.80 for Women Helping Women and Fadama III project respectively. Since the P-value is less than 0.05 level of significance, there is a significant difference in trainings on farm record keeping

between Women Helping Women and Fadama III project, which implies that Women Helping Women NGO had more impact on women economic empowerment in areas of trainings on farm record keeping than the Fadama III project. The ability to keep records means accounting and makes it easy for women in the NGO to monitor their progress and monitor wasteful spending.

Trainings on Application of Insecticides and Herbicides

The result for trainings on application of insecticides and herbicides revealed a T value of -4.592 and a P-value less than $P < 0.05$ level of significance and the mean values are 0.19 and 0.39 for Women Helping Women and Fadama III project respectively. The result shows a significant difference in trainings on application of insecticides and herbicides between Women Helping Women and Fadama III project, which implies that Fadama III project had more impact on women economic empowerment in areas of trainings on application of insecticides and herbicides than the Women Helping Women NGO. The beneficiaries of the Fadama III project had more access to trainings on application of insecticides and herbicides than beneficiaries of Women Helping Women. This also corroborates with the submission of a discussant during Focus Group Discussion session held in Kachia ward:

"The programme often carryout practical trainings on application of insecticides and herbicides during seminars and workshops" (Mrs. Mary Maiwada from Fadama III Development Programme, 25th May 2024).

Trainings on Application of Fertilizers

Trainings on application of fertilizers showed a T value of -4.735 and a P-value less than $P < 0.05$ level of significance and the mean values are 0.23 and 0.44 for Women Helping Women and Fadama III project respectively. The result shows there is a significant difference in trainings on application of fertilizers between both empowerment programmes, which implies that Fadama III project had more impact on women economic empowerment in areas of trainings on application of fertilizers than the Women Helping Women NGO. The beneficiaries of the Fadama III project had more access to trainings on application of fertilizers than beneficiaries of Women Helping Women.

Trainings on Use of Mechanized Farm Implements

From the result for trainings on use of mechanized farm implements, the T value of -4.691 and a P-value is less than $P < 0.05$ level of significance and the mean values are 0.64 and 0.99 for Women Helping Women and Fadama III project respectively. This shows a significant difference in trainings on use of farm implements between Women Helping Women and Fadama III project, which implies that Fadama III project had more impact on women economic empowerment in areas of trainings on use of farm implements than the Women Helping Women NGO. This is because of the series of workshops and seminars organized by the Fadama programme and their affiliates unlike the NGO. This is corroborated by submission of beneficiaries during Focus Group Discussion:



“During seminars and workshops, there are trainings on using farm tools and advised to employ their use in mechanized farming” (Mrs. Juliana Atado from Fadama III Development Project, 25th May 2024)

Trainings on Multiplication of Ginger and other Food Crops

The trainings on multiplication of ginger and other food crops shows a T value of 22.187 and a P-value are 0.88 and 0.14 for Women Helping Women and Fadama III project respectively. Since the P-value is less than $P < 0.05$ level of significance, there is a significant difference in trainings on multiplication of ginger and other food crops between Women Helping Women and Fadama III project, which implies that Women Helping Women NGO had more impact on women economic empowerment in areas of trainings on multiplication of ginger and other food crops than the Fadama project. This could be as a result of one of the core mandate of the Women Helping Women NGO in Kachia LGA which is to empower women in ginger production and marketing.

Trainings on Recommended Spacing and Method of Planting

Trainings on trainings on recommended spacing and method of planting shows a T value of -4.990 and a P-value less than $P < 0.05$ level of significance and the mean values are 0.68 and 0.89 for Women Helping Women and Fadama III project respectively. Since the P-value is less than $P < 0.05$ level of significance, there is a significant difference in trainings on recommended spacing and method of planting between both empowerment programmes, which implies that Fadama III project had more impact on their beneficiaries on recommended spacing and method of planting than the Women Helping Women NGO. This could be as a result of the frequent workshops and seminars conducted for beneficiaries of Fadama III project unlike the Women Helping Women NGO.

Trainings on Maize, Cassava, Ginger Processing and Utilization

The comparative analysis reveals a T value of 13.346 and a P-value less than $P < 0.05$ level of significance and the mean values are 0.91 and 0.38 for Women Helping Women and Fadama III respectively for trainings on maize, cassava, ginger processing and utilization. Since the P-value is less than $P < 0.05$ level of significance, there is a significant difference in trainings on maize, cassava, ginger processing and utilization between Women Helping Women and Fadama III project, which implies that Women Helping Women NGO had more impact on women economic empowerment in areas of trainings on maize, cassava, ginger processing and utilization than the Fadama III development project. This findings corroborate Adamu, 2019, in his study impact of Development Exchange Centre (DEC) on income, crop output and poverty status of women farmers in Kaduna State, Nigeria.

Ginger Entrepreneurship Training

The result for ginger entrepreneurship training from the analysis reveal a T value of 14.639 and a P-value less than $P < 0.05$ level of significance and the mean values are 0.98 and 0.44 for Women Helping Women and Fadama III project respectively. Since the P-value is less than 0.05 level of significance, there is a significant difference in ginger entrepreneurship training between Women Helping Women and Fadama III project, which implies that Women Helping Women NGO had more impact on women economic empowerment in areas of ginger entrepreneurship training than the Fadama III project. This result can also be linked to one of the core mandates of the Women Helping Women NGO in Kachia LGA which is to empower women in ginger production and marketing.

Linkage with Credit Institutions

The comparative analysis for linkage with credit institutions reveal a T value of 4.826 and a P-value less than $P < 0.05$ level of significance and the mean values are 1.00 and 0.90 for Women Helping Women and Fadama III project respectively. Since the P-value is less than 0.05 level of significance, there is a significant difference in linkage with credit institutions between Women Helping Women and Fadama III project, which implies that Women Helping Women NGO had more impact on women economic empowerment in areas of linking beneficiaries with credit institutions than the Fadama III project. The finding was corroborated by a discussant at the Focus Group Discussion session held in Gumel ward: “The NGO invites credit institutions over to advertise their products and services such as loans and their interest rates to us during our meetings” (Mrs. Alice James from Women Helping Women NGO, 24th May 2024)

Linkage with Produce Market

Linkage with produce market show a significant difference between Women Helping Women and Fadama III project with a T value of 17.56 and a P-value less than $P < 0.05$ level of significance and the mean values are 1.00 and 0.40 for Women Helping Women and Fadama III project respectively, which implies that Women Helping Women NGO had more impact on women economic empowerment in areas of linkage with produce market than the Fadama III project.

Linkage with Input Agencies

Comparative analysis between both empowerment programmes on beneficiaries’ linkage with input agencies reveals a T value of 4.312 and a P-value less than $P < 0.05$ level of significance and the mean values are 0.95 and 0.81 for Women Helping Women and Fadama III project respectively. Since the P-value is less than $P < 0.05$ level of significance, there is a significant difference in linkage with input agencies between both empowerment programme, which implies that Women Helping Women NGO had more impact on women economic empowerment in areas of linkage with input agencies than the Fadama III project. The beneficiaries of Women Helping Women are more linkage with input agencies than beneficiaries of the Fadama III project.

Linkage with Bank of Agriculture (NACRDB)



The result for beneficiaries' linkage with bank of agriculture for both empowerment programmes shows a T value of 1.901 and a P-value less than $P < 0.05$ level of significance and the mean values are 0.95 and 0.90 for Women Helping Women and Fadama III project respectively. Since the P-value is less than $P < 0.05$ level of significance, there is a significant difference in linkage with bank of agriculture between Women Helping Women and Fadama III project, which implies that Women Helping Women NGO had more impact on women economic empowerment in areas of linkage with bank of agriculture than the Fadama III project.

Participation in Joint Field Days

The result for participation in joint field days reveals a T value of -6.965 and a P-value less than 0.05 level of significance and the mean values are 0.74 and 0.94 for Women Helping Women and Fadama III project respectively. Since the P-value is less than $P < 0.05$ level of significance, there is a significant difference in participation in joint field days between Women Helping Women and Fadama III project, which implies that Fadama III project had more impact on women economic empowerment in areas of participation in joint field days than the Women Helping Women NGO. This is in contrast with the study of Bature, Sanni and Adebayo (2013) who concluded that fadama beneficiaries have no significant access to extension services. This maybe because of difference in location and purpose of study or the fact that outcome of the 2013 study has led to improvement in extension component of NDFP which manifest in the present study.

Participation in Farmer Exchange Visit

Comparison between both empowerment programmes on farmer exchange visit shows a significant difference with a T value of 3.936 and a P-value less than $P < 0.05$ level of significance and the mean values are 0.81 and 0.64 for Women Helping Women and Fadama III project respectively. This implies that Women Helping Women NGO had more impact on women economic empowerment in areas of participation in farmer exchange visit than the Fadama III project. The findings was corroborated by a discussant at the Focus Group Discussion session held in Gumel ward:

"We as beneficiaries of Women Helping Women NGO live as families and we are often encouraged to visit fellow beneficiaries farms to interact and advice" (Mrs. Lami Azumi from Women Helping Women NGO, 24th May 2024).

Participation in Workshops

The result in Table 2, reveals a T value of 0.603 and a P-value greater than $P < 0.05$ level of significance and the mean values are 0.80 and 0.77 for Women Helping Women and Fadama III project respectively. Since the P-value is

greater than 0.05 level of significance, there is no significant difference in beneficiaries' participation in workshops between Women Helping Women and Fadama III project, which implies that both Women Helping Women NGO and Fadama III project had similar impact in women economic empowerment in areas of participation in workshops. The findings was corroborated by a discussant at the Focus Group Discussion session held in Gumel and Kachia wards:

"Workshops are organized from time to time for use where we learn and introduced to new technologies, market windows and information that will improve our farming activities" (Mrs. Maryam Haruna and Mrs. Halisa Aliyu from Women Helping Women NGO and Fadama III Development Project, 24th and 25th May 2024).

Increment in Annual Farm Income as Index of Economic Empowerment

The beneficiary's increment in annual farm income reveals a T value of 9.25 and a P-value less than 0.05 level of significance and the mean values are 7.97 and 5.07 for Women Helping Women and Fadama III programme respectively. Since the P-value is less than 0.05 level of significance, there is a significant difference in beneficiary's annual farm income between Women Helping Women and Fadama III programme, which implies that Women Helping Women NGO had more effect on women economic empowerment in areas of increased earnings than the Fadama III programme.

This disparity in income of the beneficiaries could be attributed to the core mandate of the NGO which is to empower women in ginger production and marketing. Ginger is a high value and high income generating crop in Kachia LGA than other crops like maize, beans, cassava etc. mainly cultivated by beneficiaries of Fadama project. The finding was corroborated by a discussant at the Focus Group Discussion session held in Gumel ward:

"Since I joined this NGO, I have witnessed an increase in my annual income and my standard of living basically as a result of ginger cultivation and processing. But I will advise the officials of the NGO to do more to our farming activities" (Mrs. Beatrice Ibrahim from Women Helping Women NGO, 24th May 2024)

The result is consistent with the findings of Adegbite, Oloruntoba, Adubi, Oyekunle and Sobanke (2008) on an assessment on the impact of Fadama II on small-scale farmer's income in Ogun state which revealed no significant increase in the income of the Fadama beneficiaries when compared with non-beneficiaries. Also similar to the result is the study of Kudi et al., (2008) on the impact of Fadama II on poverty alleviation among farmers in Giwa Local Government Area of Kaduna State where they found that there was a little improvement in the income of farmers.



Table 2. Paired Sample T-Test Result of Effects of Women Helping Women NGO and Fadama III Development Project

Variables	Mean		Std. Error Difference	T-Test	P value
	Women Helping Women NGO	Fadama III Development Project			
Provision of insecticides and herbicides.	0.21	0.27	0.042	-1.512	0.0
Provision of fertilizers.	0.07	0.2	0.034	-3.797***	0.03
Provision of improved seed.	0.67	0.6	0.048	1.442	0.06
Trainings on farm record keeping.	0.85	0.8	0.032	24.408***	0.00
Trainings on application of insecticides and herbicides.	0.19	0.39	0.044	-4.592***	0.00
Trainings on application of fertilizers.	0.23	0.44	0.046	-4.735***	0.00
Trainings on use of farm implements.	0.64	0.99	0.024	-4.691***	0.00
Trainings on multiplication of ginger and other food crops.	0.88	0.14	0.033	22.187***	0.01
Trainings on recommended spacing and method of planting.	0.68	0.89	0.039	-4.990***	0.00
Trainings on maize, cassava, ginger processing and utilization.	0.91	0.38	0.040	13.346***	0.00
Ginger Entrepreneurship training.	0.98	0.44	0.037	14.639***	0.00
Linkage with Credit institutions.	1.0	0.9	0.021	4.826***	0.03
Linkage with produce market.	1.0	0.4	0.034	17.557***	0.02
Linkage with input agencies.	0.95	0.81	0.032	4.312***	0.00
Linkage with Bank of Agriculture (NACRDB).	0.95	0.9	0.026	1.901***	0.00
Participation in joint field days.	0.74	0.92	0.033	-6.985***	0.00
Participation in farmer exchange visit.	0.81	0.64	0.044	3.936***	0.00
Participation in workshops.	0.8	0.77	0.041	0.603	0.07
Increment on income.	7.97	5.07	0.314	9.249***	0.00

*** P<0.05 Source: Field Survey, 2024

Constraints of Beneficiaries of Women Empowerment Programmes

The constraint faced by the beneficiaries of the Women Helping Women NGO and the Fadama III project in the study area are presented in Table 3. The table shows responses ranked according to their order of severity. Based on this, first (1st) as the highest and eight (8th) as the lowest within the ranks. The result, shows that 26% of the beneficiaries of Women Helping Women NGO and 20% of the beneficiaries of Fadama III project in Kachia LGA ranked late disbursement of loan and inadequate fertilizer supply as the major constraints they faced. Approximately 24% of the beneficiaries in Women Helping Women NGO and 20% of the beneficiaries in Fadama III project ranked poor extension services and poor marketing as the second constraint faced. This agrees with the study of Adamu, (2019) who found that women farmers have inadequate access to extension services since they are engaged in both on and off activities, they do not have time

to enjoy the services offered by these non-governmental organizations. Also 7.2% of the beneficiaries in Women Helping Women NGO and 5.6% of the beneficiaries in Fadama III project in Kachia LGA ranked poor marketing and late loan disbursement as the sixth constraint faced. 1.7% and 4.3% of the beneficiaries in Women Helping Women NGO and Fadama III project ranked high cost of production and lack of land as the seventh constraint faced. Also 1.4% of the beneficiaries in Women Helping Women NGO in Kachia LGA ranked inadequate processing facilities as the eight constraint faced. The result concludes that late loan disbursement, poor extension services and inadequate storage facilities are the key constraints faced by the beneficiaries of Women Helping Women NGO, while inadequate fertilizer supply, poor marketing and inadequate storage facilities were found to be the key constraints faced by the beneficiaries of Fadama III development project in Kachia LGA similar to the study of Salau and Attah (2012).

Table 3.Constraint Faced by the Beneficiaries of the Empowerment Programmes

Constraints	Women Helping Women NGO			Fadama III Development Project			
	Frequency	Percentage	Rank	Frequency	Percentage	Rank	
Late loan disbursement	182	26*	1 st	Inadequate fertilizer supply	38	5.6	1 st
Poor extension services	173	24*	2 nd	Poor marketing	52	7.7	2 nd
Inadequate storage facilities	111	16*	3 rd	Inadequate storage facilities	110	16*	3 rd
Inadequate fertilizer supply	108	15	4 th	Inadequate processing facilities	136	20*	4 th
Lack of adequate farmland	63	8.9	5 th	High cost of production	29	4.3	5 th
Poor marketing	51	7.2	6 th	Poor extension services	124	18*	6 th
High cost of production	12	1.7	7 th	Late loan disbursement	92	14	7 th
Inadequate processing facilities	10	1.4	8 th	Lack of adequate farmland	96	14	8 th
Total	710	100			677	100	

Source: Field Survey, 2024; Multiple Response Allowed, * = Major Constraint

CONCLUSION AND RECOMMENDATION

Result of the findings reveals that, late loan disbursement, poor extension services and inadequate storage facilities; while inadequate fertilizer supply, poor marketing and inadequate storage facilities were found to be the key impediments to full actualization of Fadama III Development Project in Kachia LGA. The study concludes that the Women Helping Women intervention projects in the study area had more effect on the beneficiaries than Fadama III Development Project being carried out. The study recommends that farmers Women Helping Women intervention projects should help farmers' established cooperative association, provision of loans and farm inputs (fertilizers, seeds) and disbursed on time at the onset of farming season to farmers and farmers should form smaller production cluster to improve their market intelligence.

REFERENCES

Adamu, M.T., Biwe, E.R. and Suleh, Y.G. (2013). Impact of Community Driven Development Strategy of the National Fadama Development Programme in Billiri Local Government Area of Gombe State, Nigeria. *Pro Journal of Agricultural Science Research*. 1(3) 42-56.

Adamu, B.D (2019). Impact of Development Exchange Centre (DEC) on Income, Crop Output and Poverty Status of Women Farmers in Kaduna State, Nigeria. A PhD Thesis submitted to the Postgraduate School; Federal University of Technology Minna, Niger State, Nigeria.

Adamu, B.D and Michael H.Y (2023). The Role of Irish Potato Farmers of the Women-in-Agriculture and

Youth Empowerment (WAYE) Programme in Plateau State, Nigeria. Proceedings of the First Faculty of Agriculture International Conference, Nnamdi Azikiwe University, Awka, 22nd - 24th March, 2023

Adegbite, D.A., Oloruntoba, A.O, Adubi, K.O, Oyekunle, O. and Sobanke, S.B. (2008). Impact of National Fadama Development Project II on Small Scale Farmers in Ogun State: Implication for Agricultural Financing in Nigeria, *Journal of Sustainable Development in Africa, Clarion University, Pennsylvania*. 10(3):89 -112.

FAO. (2023). The Extraordinary Contribution of Women Food Farmers to African. <http://Africa.prize.org/99/overview.html> Last accessed 14 June 20.

Federal Republic of Nigeria (FRN) (2012). Federal Republic of Nigeria 2006 Population and Housing Census. Priority Table Vol. III. Abuja: National Population Commission.

Haruna, U. (2006). Analysis of farmers' poverty profile and its alleviation in Jos-North L.G.A; Plateau State, Nigeria. *Journal of Development Research*, 5(1); 68-75.

Kudi, T.M., Usman, I., Akpo, J.G. and Banta, A.L. (2008), Analysis of the Impact of National Fadama Development Project II (NFDP-II) in Alleviating Poverty Among Farmers in Giwa Local Government of Kaduna State, Nigeria, *Ozean Journal of Applied Science* 1(1). 1-8.

PANAP. (2012). Pesticide Action Network Asia and Pacific.

Rimau, A.B. (2011). A Comparative Analysis of people living with HIV/AIDS in Kachia and Giwa Local



- Government Area Kaduna State. An Unpublished M.Sc. Thesis Department of Geography. Ahmadu Bello University Zaria.
- Salau, E.S. and Attah, A.J. (2012). A socio-economic analysis of urban agriculture in Nasarawa State, Nigeria. *Production Agriculture and Technology Nassarawa State University, Keffi Journal*. 8(1): 17-29.
- Soh Wenda,B.D; Fon, E.D; Ernest, L.M and Longang G.L(2024). Women. Income use and nutrition quality: effects of woman's decision-making in rural households in Cameroon. *Agriculture & Food Security*. (2024):13:29.<https://doi.org/10.1186/s40066-02400480-6>.Retrieved on 26/7/2025.

