

Women's empowerment and food security in the South-South geopolitical zone of Nigeria

Pemberdayaan perempuan dan ketahanan pangan di zona geopolitik Selatan-Selatan Nigeria

Ejiroghene Augustine Oghuvbu 

Department of History and International Studies, Faculty of Arts, Delta State University
Address: P.M.B. 1, Abraka, Delta State, Nigeria
E-mail: eaoghuvbu@delsu.edu.ng

Article History: Received 13 November 2023; Accepted 14 August 2024; Published Online 17 September 2024

Abstract

The study investigated the linkage between food security and women's empowerment in Nigeria's South-South geopolitical zone. In the South-South geopolitical zone of Nigeria, 300 respondents participated in a cross-sectional survey designed utilising a method known as non-probability sampling to collect the data. Data analysis in this study used a linear regression test with the help of SPSS version 23 software. The study found food security and women's empowerment are linked in a substantial way. The study found that in Nigeria's South-South geopolitical zone, women's empowerment has a positive and statistically significant impact on food security. It also demonstrated how food security might result from the empowerment of women in the South-South geopolitical zone of Nigeria in terms of agricultural output and distribution. From the research findings, the study suggests that to improve the situation government policy on agriculture it is imperative to prioritise the advancement of women, since doing so will enhance their standing and boost agricultural output in Nigeria. Apart from that, legislative changes are also needed regarding easy access to resources, and government investment in rural women's education and health.

Keywords: food security; Nigeria; rural development; women's empowerment

Abstrak

Studi ini menyelidiki hubungan antara ketahanan pangan dan pemberdayaan perempuan di zona geopolitik selatan-selatan Nigeria. Di zona geopolitik selatan-selatan Nigeria, 300 responden berpartisipasi dalam survei cross-sectional yang dirancang menggunakan metode non-probability sampling untuk mengumpulkan data. Analisis data dalam studi ini menggunakan uji regresi linier dengan bantuan software SPSS versi 23. Studi ini menemukan bahwa ketahanan pangan dan pemberdayaan perempuan memiliki keterkaitan yang substansial. Studi ini menemukan bahwa di zona geopolitik selatan-selatan Nigeria, pemberdayaan perempuan mempunyai dampak positif dan signifikan secara statistik terhadap ketahanan pangan. Hal ini juga menunjukkan bagaimana ketahanan pangan dapat dihasilkan dari pemberdayaan perempuan di zona geopolitik selatan-selatan Nigeria dalam hal hasil dan distribusi pertanian. Dari temuan penelitian, studi ini menyarankan bahwa untuk memperbaiki situasi, kebijakan pemerintah di bidang pertanian harus memprioritaskan kemajuan perempuan, karena hal ini akan meningkatkan kedudukan mereka dan meningkatkan hasil pertanian di Nigeria. Selain itu, juga diperlukan adanya perubahan legislatif terkait kemudahan akses sumber daya, dan investasi pemerintah terhadap pendidikan serta kesehatan perempuan pedesaan.

Kata Kunci: ketahanan pangan; Nigeria; pembangunan pedesaan; pemberdayaan perempuan

Introduction

Women's empowerment means improving women's economic, political and social circumstances. As a result, it comprises conscientisation, group organisation, and enlightenment in order to reform patriarchal society, as well as collective action by women to reject patriarchal perceptions and opinions. However, prior to colonial rule, the rural women in Africa and Nigeria in particular have been distinctly victims of sexism, economic and religious discrimination because cultural practices reinforce male chauvinism. The term "rural woman" connotes poverty and is used to describe uneducated people, peasants, and downtrodden masses who live in villages and depend on subsistence farming (Ohwofasa et al. 2009).

The agricultural sector in Nigeria as the organ responsible for the provision of food has suffered years of neglect. The sector which is expected to provide livelihood for over 80 per cent of its population, solve the material needs for the acts as a potent source of the much needed foreign exchange and agro-allied industries is left to be handled by rural women, the infirm and the aged, and this has resulted in a tremendous decline in its contribution to national development and sustainable food security. The woes of the sector can be attributed to the epoch of oil boom (1972-1975) (Abuja 2010), mismanagement, unfocused government policies on rural development, lack of infrastructure and inadequate women's empowerment among others.

Studies in Nigeria have revealed that households under-invest on land owned by women, specifically farmers output, and this leads to inefficiency and productivity (Asadullah & Kambhampati 2021, Ashagidigbi et al. 2022, Jacob & Munuswamy 2022). In the home, where there are skewed social and cultural values, women and their wards' needs for food security are disregarded. Women in Nigeria have been subjected to discrimination for a long time when it comes to the distribution and management of productive resources, even though they play crucial roles in providing food security for families as well as for society at large. It is commonly acknowledged on a global scale that advancing gender equality increases food security and agricultural productivity.

Ensuring greater gender equality also increases food security for households, which is why it is a major theme in the global agenda for rural development policies that aims to achieve the first and second goals of the United Nations: zero hunger and zero poverty (Ashagidigbi et al. 2022, Jemanah & Shibeshi 2023). Furthermore, lower female representation in local institutions also affects agricultural productivity because women do not hold positions of responsibilities in the community and the fact that community is the *defacto* owner of agricultural land, women's rights are less severe and consequently are less likely to invest in long-term land improvement (e.g. fallow period) that can enhance agricultural productivity. These challenges hinder the economic and productive capacity of the people because a well-fed nation is a disease-free nation and a sure route to sustainable development (Ohwofasa et al. 2009).

According to reports, there represents a 25 million-person danger of food insecurity in Nigeria and about 80 per cent of the majority of the population lives on less than N200 (US\$ 0.55) per day, resulting in poverty and hunger. This supports the affirmation of the 'Food and Agriculture Organization' (FAO) (2023) that "Morocco, Bangladesh and Nigeria face impending food disaster, adding that the world food situation is in dire straits". Similarly, Ojo & Adebayo (2012) quoting Abba Ruma, Nigeria's former Minister of Agriculture, revealed that "65 percent of the Nigerian population is 40% of children under the age of five are deformed, and 25% are underweight because they are vulnerable to food insecurity".

Therefore, without women empowerment and rural development, food productivity would be stultified with a resultant effect of widespread poverty, inequality and acute unemployment with pronounced food insecurity. On a particularly note, FAO (1995) and Ugiagbe & Osunde (2006) as cited in Akpomuvie (2018:185) have argued that "Change in remote areas cannot be productive without acknowledging the involvement and contributions of rural women to agricultural production, as well as their critical efforts in guaranteeing the availability of food and well-being for the home". Therefore, literature on women empowerment and food security is replete and should be taken with all level of seriousness in the implementation of rural and national development programmes.

Several studies and consideration studies have been carried out for more specific research purposes. This research specifically aims to investigate the relationship between food security and women's empowerment in the sSouth-South geopolitical zone of Nigeria. In addition, this research also examines how to access the influence of women's empowerment on food security in the South- South geopolitical zone of Nigeria.

Research Method

In this study, a cross-sectional research approach was used. It was decided that this study strategy was appropriate to use since it offers the advantage of identifying traits common to a sizable population from a collection of individuals. The study's approach was appropriate given that it looked at how women's empowerment affected food security in Nigeria's South-South geopolitical zone. The systematic random sample approach was used in this investigation. This method's justification stems from the fact that it gives each topic in the sampling frame an equal chance to be chosen in an impartial and methodical way (Obasi 1984). Therefore, in order to carefully choose respondents from the South-South geopolitical zone of Nigeria, systematic random selection was used.

Through a survey of 300 persons, data from rural farmers in Nigeria's South-South geopolitical zone were gathered. Of the 300 questionnaires mailed, 263 were retrieved and evaluated, giving us an 88 per cent response rate. In addition, 91 male farmers and 172 female farmers were among the 263 responders. The responses to the measuring items ranged from (1) strongly agreed to (5) strongly disagreed on a 5-point Likert scale.

Model Specification (The model has the following mathematical functions):

$$FS = f(WE)$$

Econometrically, the model was specified as:

$$FS = \alpha_0 + \alpha_1 WE + \sum t$$

Where: FS = Food Security

WE = Women's Empowerment

α_0 = Intercept

α_1 = Coefficient and a priori signs of the independent variable

$\sum t$ = Error term

From the above model, the a priori expectation will be:

$$\text{Model: } \alpha_1 < 0$$

In order to guarantee the validity of the instruments for cross-examination, face validity was used in this study and exposed the instruments to independent assessors. Experts thoroughly examined and confirmed the research instrument used for this study, and their suggestions and edits were included into the final version. A pilot study was carried out to determine the reliability and test for internal consistency of the research instrument. Twenty-five copies of the questionnaire were administered randomly to female farmers in Delta State. This was to ascertain the respondents' understanding of the contents of the questions, and to assess for language, structure, relevance and biasness. The data gathered at this point did not form part of the data generated for this study. Based on the information retrieved from the recovered questionnaire, the Cronbach's alpha reliability test was utilised to evaluate the internal consistency of the questionnaire items; the table below displays the Cronbach's alpha value for each item on the questionnaire.

Table 1.
Reliability of instrument

Scale	No. of Items	Cronbach's Alpha
Women's empowerment	7	0.783
Food security	5	0.809

Source: Author's computation in 2024

Hypotheses of the study, for testing, the following null hypotheses were created:

H₁: There is no significant relationship between women empowerment and food security in the South-South geopolitical zone of Nigeria.

H₂: Women's empowerment does not have a significant effect on food security in the South-South geopolitical zone of Nigeria.

The pilot's results yielded coefficients of 0.783 and 0.809 (Table 1), respectively, which met the overall standard of 0.70 for the research indicators (Cronbach & Snow 1981). Experts from the College of Social Sciences also approved the instrument. As a result, the researcher was satisfied with the instrument's reliability and validity. For data analysis, the information gathered from the questionnaire was compiled, coded and input into the Statistical Package of Social Sciences (SPSS version 23.0). To evaluate the hypothesis, linear regression analysis and Spearman rank correlation were used at a 0.05 level of significance. These are found suitable for the nature of the study of this work. The main goals of the study and its null hypotheses were established based on the literature review.

Results and Discussion

This section elucidates the perspectives of the participants concerning an overview of women's empowerment and food security in Nigeria. Subsequently, the following section delineates the findings derived from the views of data obtained from Nigeria. The investigation revealed a multifaceted array of rationales underpinning women's empowerment and food security in South-South Nigeria. Furthermore, the section expounds upon how women contended with food insecurity during this period.

Definition and overview of women's empowerment

The root word of the word "empowerment" is "power". Giving someone or a group of people power, authority and the potential to acquire power is what it means to empower them. Munuswamy (2022:240) defines empowerment as "the individual or group of people becoming empowered had previously lacked power or authority, through circumstance, denial, or default". Empowerment is defined as "people taking charge of their lives, obtaining the capacity to accomplish things, establish their agendas, and affect events in a way that was previously missing" (Das & Singh 2020). This may entail exerting influence over other people and encouraging, whether consciously or unconsciously, behavioural changes.

Empowerment is defined as "a promise autonomy and the ability to design work in a way that not only reflects but also develops the talents, abilities, and ambitions of those who are empowered" (Aziz et al. 2022). By empowerment, we mean gaining the ability to make one's own decisions and pursuing a way of life that is consistent with one's own moral standards. Because policymakers have worked in a range of domains to obtain such authority for self-determination, scholars utilise these domains to assess the degree of empowerment in society.

These areas of empowerment include productivity, time, resources, leadership and revenue. Women's empowerment therefore requires influencing change in at least one of the highlighted domains for this gender group (Lufuke et al. 2022). The idea behind women's empowerment is based on the empirically supported theory that, when women achieve the ability to make their own decisions, social and economic advancements in a variety of fields are more likely to occur. Furthermore, since women typically donate a significant portion of their earnings to supporting their families, women's empowerment—particularly in the economic sphere—is seen as a means of raising household standards of living, which includes bettering nutrition and the discriminatory laws, customs, and behaviours that consistently affect the lives of women (Aziz et al. 2022).

The idea of "women's empowerment", according to Manjunatha (2024), refers to "authority, or the power bestowed on women who share indistinguishable rights." Women's empowerment is indirectly a prerequisite for global rural development (Urhibo & Orhero 2023). Unrestricted access to possibilities

Oghuvbu: “Women's empowerment and food security”

in a range of sectors, such as education, career and lifestyle, is a sign of empowerment for women. The empowerment of women is the most significant aspect in the overall development of a nation. Women account for roughly half of the country's population; while working women exist in urban areas, rural women are still confined to household chores. However, when given the chance, women have excelled in a variety of roles, including Prime Minister, entrepreneur, astronaut, and others. They excel at multitasking, handling multiple responsibilities ranging from household chores to child care (Oluwakemi et al. 2023).

Oluwakemi et al. (2023) identify three interrelated dimensions underpinning the ability to make choices: resources, agency, and achievements. These terms, along with others, are frequently used in literature to refer to women's power and influence over their lives. Moreover, it was explained that women's empowerment was multifaceted and multidimensional, and that it could be attained in both individual and group settings. To quantify women's empowerment, the results of these dimensions must be measured. Several indicators are needed to capture the various facets of women's empowerment and agency, one of which is their economic activity, which may be connected to sources of income like businesses.

Women's empowerment according to Essilfie et al. (2021) is “a procedure for increasing the ability of women, expanding their options, as well as ensuring that women make the most use of existing resources without limiting or sacrificing possibilities just because they are women”. Women's empowerment, according to the “Independent Commission on Population and Quality of Life” (1996, as cited in Kehinde et al. 2021), is a strategy for increasing women's involvement in all facets of a nation's economic, social and political life.

To be fully empowered, a person must have equal access to opportunities for using society's resources, be free from violence, be economically independent, be able to participate in all decision-making bodies, and be able to make decisions about their personal life (Muhammad et al. 2021). Therefore, empowerment is described as the outcome of an individual's strong emotional, social and financial standing; it promotes contentment and happiness among a group of people. This supports the claim made by Oluwakemi et al. (2023) that “empowering someone or a group of people implies that they have previously Lacking power or authority as a result of events, whether through fault or denial”. Hence, the definition of empowerment is the shift from a condition of powerlessness to one of authority or power. Women's empowerment, according to Beriso et al. (2023), is the process of taking on a larger share of authority over resources, such as financial resources like money and access to it, as well as material, human and intellectual resources like knowledge, information and ideas.

Collins (2022) supports this by stating that women's empowerment is the distribution of social power and resource control in favour of women, particularly those who reside in rural areas. The process of fostering an atmosphere where women can freely choose how to advance themselves and still be viewed as equals in society is known as women's empowerment (Kehinde et al. 2021). Women gain their unique individuality, respect themselves, enhance their self-esteem and self-confidence, and overcome their fear of feeling helpless as a result of the empowering process. Women's empowerment is based on the legal, social, economic, political and psychological freedom for women to make use of all of their resources, as well as procreative resources, to attain their objectives. Given the intimate relationship between women's lives and the socially constructed roles, responsibilities and gender norms, women's empowerment is defined in the context of this study as the process through which women take charge of their lives by expressing their own goals and implementing change management techniques in addition to having more choices available to them. In a nutshell, women's empowerment necessitates a transformation in power relations on four fronts: at home, in the community, in the marketplace, and in the state (Yila & Sylla 2020).

Material resource management, as well as a shift in women's self-perception and self-control, as well as a shift in self-perception and self-confidence, are all part of it. The objective is for women to go from a subservient to a dignified position, from statistically invisible members of society to acknowledged and respected members of society, frequently a key pillar of growth. As a result, women's empowerment implies improvements in their political and socioeconomic situations.

Definition and overview of food security

The various attempts in research to define food security show that it is a broad term. During the worldwide food crisis of the early 1970s, the idea of food security came into being around 50 years ago. According to FAO (1999, as cited by Berry 2022), “A scenario in which all persons have economic and physical contact to appropriate, secure, for a healthy and active life, as well as nutritional food at all times” is what is been referred to as food security. Stability, a fourth dimension, was added to this concept as a short-term temporal indicator of food systems’ resilience to shocks, whether natural or man-made, at the 2009 World Summit on Food Security (Berry 2022).

Food security, according to Zelda & Tari (2023), is defined as everyone having enough food all the time to live a healthy and active life. These criteria encompass a wide variety of themes, including food production and availability, as well as spatial and temporal food circulation, with manufacturers, who are farm workers, open to all. Thus, food security was defined by the 1996 World Food Summit as “a condition in which all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that fits their dietary needs and food preferences for a healthy life”, as stated by Alabi & Ngwenyama (2022). Thus, food security arises from ensuring that everyone has continuous access to enough wholesome food to fulfil their dietary needs, active lifestyle choices and high standards of living (Osabohien 2018, Elum 2021, Zelda & Tari 2023).

In the words of Olawuji & Ijila (2023:25), “A country is food secure when the majority of its citizens have access to sufficient and nutritious food in an acceptable quantity and quality at all times to maintain a good standard of living”. Thus, both quantity and quality food security necessitate a variety of dietary choices. Diet quality refers to the availability and consumption of total dietary energy, as well as the capacity of food to provide high-quality protein and an appropriate quantity of micronutrients like minerals and vitamins. Molotja et al. (2023), argue that “Food security is sustainable when everyone has economic, physical, and social access to secured, sufficient, and nutritious food to fulfil their nutritional needs at all times for a productive and healthy life now and in the future”. This means that the early warning system for food insecurity should keep track of indicators relating to food production, consumption and counter-insecurity initiatives.

Food is the most basic need of man. The growth of a country is determined by its endowment, which includes both non-human and human resources. Human resources are function of how well-fed the populace is. Thus, food according to Aryal et al. (2022), is defined as “the substance that permits man to develop and procreate itself”. It is in this regard that food security is invariably a human rights issue. Sultana et al. (2023:33) affirmed that “food insecurity has continued to be a major development issue all over the world, which has continued to undermine people’s health, productivity, and, in certain cases, survival are all affected”.

Ojo & Adebayo (2012) reported that, around the world, 800 million people suffer from acute malnutrition arising from hunger and starvation, making the right to food the most highly abused of all human rights. Therefore, the right to life can only be enjoyed when access to food of adequate quality, quantity, and safety is guaranteed (Ezzeddin et al. 2024). However, to fully understand food security in the context of Nigeria, other developmental questions such as changing family/household structures, sources of income, sustainable assets accumulation, nutritional knowledge, urban development and rural, retail markets, social protection, education, water and inputs as well as livelihood patterns must be answered by our political leaders.

A locality is considered to be food secure when the majority of its residents always have access to food that is both sufficient in quantity and quality, while a region is considered to be food secure when the majority of its residents always have access to food that is both sufficient in quantity and quality (Alabi & Ngwenyama 2022). National food security is a sign of a nation has enough food to fulfil its citizens’ food demands provided it is divided equitably. When the people of Nigeria have constant access to food in a reasonable amount and quality, they may be considered food secure.

Oghuvbu: “Women's empowerment and food security”

According to Glauber & Debucquet (2023), food security is the ability of all individuals to always have access to the food they need to live a healthy life. This implies that food that meets the body's nutritional requirements must be made available. Furthermore, it should be remembered that availability is influenced by consumer pricing, production, information flow and market dynamics (Zerbian & Romero 2023). Food insecurity results from a lack of access to adequate nourishment within a nation; this deficiency can be either temporary or persistent. Glauber & Debucquet (2023:89) state that a persistently insufficient diet is the result of chronic food insecurity, which is caused by a lack of means to create and purchase food. The four primary factors that determine food security are stability, availability, accessibility and utilisation (Berry 2022).

Nigeria's agricultural productivity and food security

That Nigeria as a nation is being confronted with issues of food security challenges is no gainsaying. It is no longer news that Nigeria is currently facing food crisis as many of her citizenry battle with diseases, malnutrition and sudden death arising from hunger and starvation. Agriculture was the foundation of Nigeria's economy and the primary source of foreign exchange earnings prior to colonialism and the period of reliance on oil revenue. Agriculture as a development issue and panacea for good insecurity will continue to be a major concern in the next decade in Nigeria. Osabohien (2018), argued that “Many farmers in Nigeria (including rural women) endure a harsh agroecology marked Low soil fertility, droughts and/or floods regularly, and increasingly unpredictable weather patterns linked to climate change”. “Deficiencies in technology heighten vulnerability” (roads and transportation networks, portable water and irrigation systems), which make farming arduous and unappealing to rural teenagers. Agriculture has lost both labour and investment as a result of this. In Nigeria today, the level of growth in food production has, nonetheless, not been able to keep up with the rise in consumption despite the agricultural and rural development policies of the present administration. With stagnant agricultural technology in Nigeria, maintaining food production for sustainable food security will be difficult.

However, Aryal et al. (2022) argued that the role of agriculture in sustainable food security in any country cannot be underestimated. It is very important to the extent that the sector, mechanised or not, determines the level and rate of manpower productivities in other sectors. All manpower resources in other sectors of the economy will only put in their best and intelligence to allow high productivities if they are well-fed.

Over the years, Nigeria has undertaken a number of initiatives to address the country's increasing food insecurity and restore an economically robust and self-sufficient society. The Agricultural Development Programmes (ADPs), River Basin Development Authorities (RBDAs), Green Revolution (GR), Operation Feed the Nation (OFN), and the Directorate of Food Roads and Infrastructure (DFRRI) are a few of the programmes that are part of the National Accelerated Food Production Programme (NAFPP). In spite of this, no policy has been created to support rural development and women's empowerment. Consequently, the impact of these measures on rural populations has been negligible (Nwajuiba 2020).

Women's empowerment and food security

It has been discovered that rural women in developing nations are heavily involved in agriculture. This statement is reinforced by a study of Urhibo & Orhero (2023) where women's participation in rural areas has a significant positive impact on rural development. This has evolved over time with women assuming more male-dominated tasks. Table 2 illustrates the relationship between food security and women's empowerment in Nigeria's South-South geopolitical zone. There is a significant positive high correlation between the independent and dependent variables ($r = 0.813$, $n = 263$ and $P 0.01$). This suggests that there is a positive and substantial relationship between food security and women's empowerment.

Table 2.
Correlation matrix

Variables		Women's Em- powerment	Food Security
Women's empowerment	Pearson Correlation	263	0.813**
	Sig. (2-tailed)		0.000
	N		263
Food security	Pearson Correlation	0.813**	1
	Sig. (2-tailed)	0.000	
	N	263	263

** At the 2-tailed 0.01 significance level, there is a correlation.

Source: Author's computation in 2024

This result suggests that women's empowerment in farm production and distribution in Nigeria's South-South geopolitical zone can lead to food security. The null hypothesis was thus rejected, and it was reaffirmed that there is a strong, positive, and significant relationship between food security and women's empowerment in Nigeria's South-South geopolitical zone. However, since correlation does not imply causation, a linear regression was used to estimate the influence of women's empowerment around food security in the South-South geopolitical zone of Nigeria as shown in Table 3.

Table 3.
Model Summary^b

Model	R	R ²	Adj-R ²	Std. Error of the Estimate
1	0.624	0.607	0.497	0.370

a. Dependent variable: Food security

b. Predictors: (constant), women's empowerment

Source: Author's computation in 2024

The results of the linear regression show that in Nigeria's South-South geopolitical zone, food security and women's empowerment have a statistically significant impact. Women's empowerment, the independent variable, and food security, the dependent variable, have a statistically significant correlation coefficient ($R = 0.624$). Furthermore, the deciding coefficient's value ($R^2 = 0.607$) shows that, among other factors not included in this model, women's empowerment accounted for 60.7 per cent of the variance in food security in Nigeria's South-South geopolitical zone.

Table 4.
ANOVA^a

Model	Sum of square	Df	Mean	F.	Sig.	Remark
Regression	8.537	2	3.619	23.638	0.000 ^b	Sig.
1 Residual	5.976	259	0.235			
Total	14.513	261				

a. Predictors: (constant), Women's empowerment

b. Dependent variable: Food security

Source: Author's computation in 2024

In addition, as can be seen Table 4, the variable ($F = 23.638$) at ($\text{sig.} = 0.000$) validates the regression's significance at the significance level ($\alpha < 0.05$). This implies that a one-unit rise in women's empowerment will result in a 67 per cent improvement in food security. Food security in Nigeria's South-South geopolitical zone is therefore significantly impacted by women's empowerment.

Oghuvbu: “Women's empowerment and food security”

Table 2 demonstrates the strong and positive correlation between food security and women's empowerment in the South-South geopolitical zone of Nigeria. The present discovery aligns with previous studies conducted by Essilfie et al. (2021), Collins (2022) and Jacob & Munuswamy (2022). Furthermore, a linear regression analysis reveals that 60.7 per cent of the variation in food security in Nigeria's South-South geopolitical zone can be attributed to women's empowerment. As a result of the research, it was discovered that women's empowerment had a statistically and positive important effect on food security. The study found that empowering rural women has a positive and statistically significant impact on rural development (Elum 2021, Aryal et al. 2022, Aziz et al. 2022, Yila & Sylla 2022). The present discovery aligns with the opinions of Oluwakemi et al. (2023) which state that “empowering women plays a significant role to participate more actively in all facets of a country's household food production, harvest activities, livestock husbandry, and farm product marketing”. As a result, the Nigerian government must refocus public policies and services towards rural women and disadvantaged groups in the country. Government incentives and services, such as agricultural subsidies, finance, and land, should be available to rural women.

In spite of this high involvement, evidence from studies have shown that women are generally underprivileged in their right to use agricultural production and processing therefore posing a major challenge to food security in the developing world, Nigeria inclusive. Rural women have always been at the forefront of food production in Nigeria, and, almost without exception, the arduous task of land preparation, transplanting and weeding are done by women. They are necessary for domestic food production, post-harvest chores, animal care, and the marketing of agricultural goods. Thus, women accounted for 60 to 70 per cent of agricultural labour force and slightly higher when subsistence farming alone is considered (Olawuyi & Ijila 2023, Sultana et al. 2023, Ezzeddin et al. 2024). The position that rural women should be empowered for sustainable agricultural is unarguable. Thus, some of the strategies that can be used to empower rural women and boost agricultural productivity include:

Self-help development strategy

Self-help development is a poverty alleviation strategy initiative with a focus on rural women, children and other vulnerable groups of society. The strategies include FEP (Family Economic Advancement Programme) FSP (Family Support Programme), and BLRW (Better Life for Rural Women), and are three programmes that help rural women improve their lives (FEAP). These institutional initiatives provide means of improving skill and training for increased income generation through productive agriculture and improving nutrition through accessibility of secured food. The Better Life Programme (BLP), according to Sultana et al. (2023), was instituted to stimulate agricultural activities by providing loans through cooperative ventures directly to rural women/widows to run cottage industries like cassava processing machines and to buy agricultural supplements.

Farmers' cooperative societies

A farmers' cooperative society is a voluntary organisation where people involved in rural agricultural activities come together to exchange their socioeconomic status, and their political and religious ideologies. Its aim is to increase food production by making inputs and modern technology readily available to members. Thus, women should be empowered so that they can play an active role in the formation of farmers' cooperative societies in Nigeria. According to Olawuyi & Ijila (2023) farmers' cooperative societies help members to maximise profit and enhance food security in the country.

Access to credits and land

Agriculture, like any other business requires capital for its operation. Berry (2022) opined that “discriminatory access to resources, such as land and finance, disproportionately affects women. Given that the majority of food in rural regions is farmed by women, all legal, social, and economic barriers for

women to access land must be removed. In order to fund their agricultural, food processing, and trade operations, rural women also require improved access to financing". Modernisation of the agricultural sector which entails the use of improved technologies relative to provision of seeds, herbicides, vaccines, pest and disease control chemicals, improved breeds of animals, efficient market and marketing processes and machinery on the farm is hinged on the availability of huge amount of credit (Sultana et al. 2023). Adequate credit made available to rural women will also enable them acquire large tracts of land to farm and this will make a significant difference in terms of improving the situation of food production and security in Nigeria.

Extensive education

According to Obetta (2009:358), "poor human capital development is an important part of empowerment". This involves improving their health and education, as well as improving social service access like safe drinking water and sanitation, as well as reproductive healthcare for rural women. Education, therefore, is a dynamic instrument of change that develops the totality of mind. The extension of education is thus essential if the goal of empowering dwellers in rural communities is to be realised. Therefore, if good skills are successfully acquired by rural women, it will alleviate poverty. Agricultural extension service is essential for the improvement of high standard of living of the rural women through educating them on new technologies that will improve their production level, thereby increasing their level of income and/or family food security (Olawuyi & Ijila 2023). In Nigeria today, inadequate access to agricultural extension service is a major challenge facing rural women.

Conclusion

The previous discussion made it abundantly evident that there exists a strong positive relationship between women's empowerment, food production and security. It also had a favourable impact on the development in Nigeria's South-South geopolitical zone, indicating that global rural development is contingent upon the empowerment of women in rural areas. Based on the results of this study, we draw the conclusion that the empowerment of women significantly contributes to the development of the South-South geopolitical zone.

Based on the results and conclusions of the study, it therefore suggests the following policies: First, the government's agricultural policies should constantly prioritise the advancement of women, since this would enhance their status and boost Nigeria's agricultural output. Second, it is necessary to legislative changes and measures to help rural women acquire access to resources like land, credit as well as additional financial services and there should be a monitoring mechanism to check corruption and unscrupulous diversion of agricultural fund and inputs to private pockets by government officials. Third, government should invest in rural women's education and health in order to improve their wellbeing and their human capital stock through extension education.

References

- Abuja FO (2010) Women participation in food production in Nigeria. The Punch Newspaper.
- Akpomovie O (2018) The challenges of rural women participation in development in Delta State. *International Journal of Gender and Women's Studies* 6 (1):185-189.
- Alabi MO & Ngwenyama O (2022) Food security and disruptions of the global food supply chains during COVID-19: building smarter food supply chains for post COVID-19 era. *British Food Journal* 125 (1):167-185. <https://doi.org/10.1108/BFJ-03-2021-0333>.
- Aryal JP, Manchanda N, & Sonobe T (2022) Expectations for household food security in the coming decades: A global scenario. *Future foods*. Academic Press. 107-131. <https://doi.org/10.1016/B978-0-323-91001-9.00002-5>.

Oghuvbu: "Women's empowerment and food security"

- Asadullah MN & Kambhampati U (2021) Feminization of farming, food security and female empowerment. *Global Food Security* 29: 100532. <https://doi.org/10.1016/j.gfs.2021.100532>.
- Ashagidigbi WM, Orilua OO, Olagunju KA, & Omotayo AO (2022) Gender, empowerment and food security status of households in Nigeria. *Agriculture* 12 (7):956. <https://doi.org/10.3390/agriculture12070956>.
- Aziz N, He J, Raza A, & Sui H (2022) A systematic review of review studies on women's empowerment and food security literature. *Global Food Security* 34: 100647. <https://doi.org/10.1016/j.gfs.2022.100647>.
- Beriso G, Amare A, & Eneyew A (2023) Women empowerment in agricultural activities and its impact on farming household food security: The case of Anna Sorra District, Guji Zone, Oromia regional state, Ethiopia. *Cogent Food & Agriculture* 9 (2):2263952. <https://doi.org/10.1080/23311932.2023.2263952>.
- Berry EM (2022) Food security and nutrition as the neglected missing links in cultural evolution: The role of the sociotype. *Rambam Maimonides Medical Journal* 13 (3). <https://doi.org/10.5041%2FRMMJ.10477>.
- Cronbach LJ & Snow RE (1981) *Aptitudes and instructional methods: A handbook for research on interactions*. New York: Irvington Publishers, Inc.
- Collins AM (2022) Empowerment, rights, and global food governance: Gender in the UN Committee for World Food Security. *Globalizations* 19 (2):220-237. <https://doi.org/10.1080/14747731.2021.1877006>.
- Das J & Singh A (2020) Women empowerment and its impact on livelihood and food security of households: A review. *Current Journal of Applied Science and Technology* 39 (40):19-28. <https://doi.org/10.9734/CJAST/2020/v39i4031108>
- Elum ZA (2021) Gender and poverty: its influence on household food security in Africa. In: Leal Filho W, Azul AM, Brandli L, Lange Salvia A, & Wall T (ed). *Gender Equality*. Cham: Springer. 399-411.
- Essilfie G, Sebu J, Annim SK, & Asmah EE (2021) Women's empowerment and household food security in Ghana. *International Journal of Social Economics* 48 (2):279-296. <https://doi.org/10.1108/IJSE-05-2020-0328>.
- Ezzeddin N, Kalantari N, Abdollahi M, Amiri P, Amini B, & Zayeri F (2024) Outcomes of a homestead food production program on nutritional knowledge, dietary diversity, food security and empowerment of rural women in Tehran province, Iran. *BMC Public Health* 24 (1):118. <https://doi.org/10.1186/s12889-024-17658-z>.
- FAO (2023) *World food summit*. Rome: DAO Publications.
- Glauber JW & Debucquet D (ed) (2023) *The Russia-Ukraine conflict and global food security*. Washington, DC: International Food Policy Research Institute.
- Jacob J & Munuswamy S (2022) The role of micro-enterprises in the four-dimensional framework of women's empowerment. *International Journal of Professional Business Review* 7 (4):e0539-e0539. <https://doi.org/10.26668/businessreview/2022.v7i4.e53>.
- Jemaneh SA & Shibeshi EM (2023) Women empowerment in agriculture and its effect on household food security: evidence from Gamo Zone of Southern Ethiopia. *Agriculture & Food Security* 12 (1):37. <https://doi.org/10.1186/s40066-023-00437-1>.
- Kehinde MO, Shittu AM, Adeyonu AG, & Ogunnaike MG (2021) Women empowerment, land tenure and property rights, and household food security among smallholders in Nigeria. *Agriculture & Food Security* 10 (1):25. <https://doi.org/10.1186/s40066-021-00297-7>.
- Lufuke M, Bai Y, Fan S, & Tian X (2022) Women's empowerment, food security, and nutrition transition in Africa. *International Journal of Environmental Research and Public Health* 20 (1):254. <https://doi.org/10.3390/ijerph20010254>.
- Manjunatha J (2024) *India's Contribution to Global Governance*. New Delhi: Interdisciplinary Institute of Human Security & Governance.

- Molotja MC, Masekoameng MR, & Ntuli CHS (2023) Ubuntu: A strategy for empowering rural women and transforming lives through food security projects. In: Mayer C, Vanderheiden E, Braun-Lewensohn O, Chen G, Sueda K, Mangolotho B, Safdar S, & Kim S. *Women's Empowerment for a Sustainable Future: Transcultural and Positive Psychology Perspectives*. Cham: Springer International Publishing. 153-166.
- Muhammad F, Bano K, Muhammad K, & Baig T (2021) Women empowerment in Pakistan: Assessing the socio-economic determinants. *Estudios de economía aplicada* 39 (3):19. <https://doi.org/10.25115/eea.v39i2.3884>.
- Munuswamy S (2022) The role of micro-enterprises in the four-dimensional framework of women's empowerment. <https://doi.org/10.21203/rs.3.rs-1861289/v1>.
- Nwajuiba C (2020) *Nigeria's Agriculture and Food Security Challenges*. Lagos: Semi Urban Publications.
- Obetta K (2009) Women empowerment as an effective strategy for enhancing the community management of developmental projects in Enugu state. *International Journal of Research in Arts and Social Sciences* 1 (2):343-363.
- Obasi E (1984) *The economics of teacher supply in Nigeria*. Dissertation, University of London, London.
- Ohwofasa WU (2009) Urban and peri-urban agriculture: Strategy for sustainable national development. *Mosoga Journal of Science Education* 2 (1):47-55.
- Ojo EO & Adebayo FP (2012) Food security in Nigeria: An overview. *European Journal of Sustainable Development* 1(2):199-222. <https://doi.org/10.14207/ejsd.2012.v1n2p199>.
- Olawuyi SO & Ijila OJ (2023) Correlates of farmers' resilience to food insecurity in South-West Nigeria. *International Journal of Research in Business and Social Science* (2147-4478) 12 (2):330-341. <https://doi.org/10.20525/ijrbs.v12i2.2376>.
- Oluwakemi RA, Györke DK, & Gubacsi F (2023) Entrepreneurship as a tool for women empowerment in Nigeria. *Studia Mundi–Economica* 10 (1):3-13. <https://doi.org/10.18531/sme.vol.10.no.1.pp.3-13>.
- Osabohien R, Osabuohien E, & Urhie E (2018) Food security, institutional framework and technology: Examining the nexus in Nigeria using ARDL approach. *Current Nutrition & Food Science* 14 (2):154-163. <https://doi.org/10.2174/1573401313666170525133853>.
- Sultana F, Wahab MA, Nahiduzzaman M, Mohiuddin M, Iqbal MZ, Shakil A, & Asaduzzaman M (2023) Seaweed farming for food and nutritional security, climate change mitigation and adaptation, and women empowerment: A review. *Aquaculture and Fisheries* 8 (5):463-480. <https://doi.org/10.1016/j.aaf.2022.09.001>.
- Urhibo BO & Orhero AE (2023) Rural women's empowerment and rural development in Nigeria's South-South Geopolitical Zone. *Social Sciences, Humanities and Education Journal (SHE Journal)* 4 (2):267-282. <http://doi.org/10.25273/she.v4i2.17078>.
- Yila J O & Sylla A (2020) Women empowerment in addressing food security and nutrition. In: *Zero Hunger*. Cham: Springer International Publishing. 980-990.
- Zelda AE & Tari D (2023) Assessment of food security status of rural women in Bayelsa State, Nigeria. *Scientific African* 21: e01878. <https://doi.org/10.1016/j.sciaf.2023.e01878>.
- Zerbian T & de Luis Romero E (2023) The role of cities in good governance for food security: Lessons from Madrid's urban food strategy. *Territory, Politics, Governance* 11 (4):794-812. <https://doi.org/10.1080/21622671.2021.1873174>.

Author Biography

Ejiroghene Augustine Oghuvbu is a lecturer II in the Department of History and International Studies at Delta State University, Abraka, Nigeria. He obtained a Bachelor of Arts degree in History and International Studies from the Delta State University in 2014, a Bachelor of Arts Honours Degree in International Relations from the University of Kwazulu Natal, Durban, South Africa in 2016 and also a Master of Social Science in Policy and Strategic Studies from Covenant University, Ota, Ogun State in 2019 where he also obtained a PhD Degree in Policy and Strategic Studies. He has several publications in National and International Journals.