

Women's Empowerment for Household Food Security: The Place of Education

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ABSTRACT This study investigated the association between educational status of women and provision of food for household members for food security. In addition, ownership of household Labour Saving Devices and varieties of food provided were investigated. Data were collected from 220 randomly selected women in Osun State of Nigeria using structured interviewed schedule. Descriptive statistics such as frequency distribution and percentages were used to describe the data while Chi-Square was used to analyze the data. The results showed that the educational level attained by the respondents has an association with the Labour Saving Devices acquired $\chi^2_c=101.5$ at 0.05 significant level. And there exists a moderate association between the two variables ($\phi = 0.298$). In addition, the results showed a fairly high degree of association between Educational level and Age $\phi = 0.162$, Occupation $\phi = 0.362$, Marital status $\phi = 0.381$, and varieties of food provided $\phi = 0.179$. This suggests that women with higher education are likely to provide varieties of food thereby increasing the household food security.

INTRODUCTION

Women's role in the economy has often been underestimated, and their work in agriculture has long been invisible. While policy makers have targeted population, health and nutrition programmes to women in their reproductive roles, they have neglected them as productive agents. This Situation however is changing with the growing evidence that income in the hands of women contributes more to household food security and child nutrition. Such knowledge about women's key role in food security is essential to enhance their potential (Agnes et al., 1995).

Women have important roles as producers of food, managers of natural resources, income earners, and care taker of household food and nutrition security. Giving women the same access to physical and natural resources as men could increase agricultural productivity (Agnes et al., 1995). In addition, increase in women's education and improvement in woman's status over the past quarter century have contributed to more than half of the reduction in the rate of child malnutrition (Lisa et al., 2003).

Despite the efforts directed at building women capabilities, gender gaps in access to resources through available legal means continue to persist. These disparities have serious consequences for wellbeing, not only for women themselves, but also for their families and for society.

Empowering women is a key to achieving

food security. Improving women's education is probably the single most important policy instrument to increase agricultural productivity and reduce poverty (Saito et al., 1994).

Evidence shows that increase in women's education accounted for 43% of the total reduction in child malnutrition, by far the largest contribution. Improvement in food availability came in a distant second to women's education, contributing 26% to the rate of reduction (Smith et al., 2000).

In Sub Saharan Africa, women have less access to education and to labour, fertilizer and other inputs than men do. When women obtain the same levels of education, experience and farm inputs that currently benefit the average male farmer, they increase their yield by 22%. In Kenya, where the amount of education women receive is extremely low, a year of primary education provided to all women farmers would boost their farm yield by 24% (Quisumbing, 1996).

Increasing women's education is a key ingredient for women's empowerment. Many studies worldwide have documented the importance of women's education for its impact on child schooling and nutrition, however, such studies did not emphasize the importance or association between women's education and their empowerment for household food security. Basic education is the foundation for developing the flexible skills needed to participate in knowledge-intensive economic activity. Those who lack access to basic education are likely to be

excluded from new opportunities, and where long-standing gender gaps in education persist, women will be at increasing risk of falling behind men in their ability to participate in development.

In Sub Saharan Africa, where women and men farm separate plots, women farmers have traditionally been responsible for food production. Estimates from the Food and Agriculture Organization of the United Nation (FAO) show that women account for more than half of the labour required to produce the food consumed in the developing world (FAO, 1995).

Aggregate data suggest that African women perform about 90% of the work of processing food crops and providing household water and fuelwood, 80% of the work of food storage and transport from farm to village, 90% of the work of hoeing and weeding, and 60% of the work of harvesting and marketing World Bank(1989). Despite their traditional specialization in food production, women are becoming increasingly involved in cash crop cultivation (Saito et al., 1994).

Household food security which is often defined as access by all people at all times to sufficient food required for a healthy and active life in the household can be ensured through the following: (i) nutritionally adequate and safe food supply at household level (ii) reasonable degree of stability in the supply of food during the year and in all years and (iii) access by each household to sufficient food to meet the needs of all.

For all households to be food secure, each must have physical and economic access to adequate food. Each household must always have the ability, the knowledge and the resources to produce for all the nutritional requirements of the household members, which means a balanced diet providing all necessary energy, protein and micronutrients.

From the foregoing, it would be necessary to establish with empirical evidence, the importance of education towards attainment of household food security.

This study therefore has the following objectives:

- (i) assess the level of education of the women in the study area, and
- (ii) identify the role women play in food provision towards household food security within the study area,
- (iii) identify Labour Saving Devices (LSD) that are available for women to ease the stress

involved in food processing and preparation for household food security, and

- (iv) determine the association between women's education and related household food enhancement variables.

METHODOLOGY

The Study Area: The study was carried out in Ilesa area of Osun State Nigeria. The region has 6 Local Government Areas and is located within the Savannah belt. The basic occupation in the area is farming while women are known to engage in food crop trading. The average household size of the region is 4.42 NPC(1992), and the people of the area are basically of Yoruba, Ibo and Hausa tribes, though predominantly Yoruba.

Sampling Procedure: The data for this study were collected from 220 women. The sampling was obtained through random sampling procedure. Data were collected using structured interviewed Schedule that was designed to elicit quantitative information to address the set objectives and the hypotheses.

The data were analysed using descriptive statistics such as Percentage distribution, numerical counts and cross tabulations. The hypotheses for the study were tested with the use of Chi-Square and Cramer phi coefficient.

Measurement of Variables: Possession of Labour Saving Devices (LSD) was used to measure the strength of women in ensuring household food security since the LSD could be a source of encouragement to varieties in food choices. The number of LSD possessed was adopted as the measurement.

RESULTS AND DISCUSSION

Age: The age range of the respondents was 25-45 years. The data in table 1 showed that more than half of the respondents fell between the age class interval of 31 and 40 (64.6%). About 21.8% were 25-30 years, while only 13.6% were above 40years old. This is an indication that all the respondents were in their prime age and could adopt new technologies if exposed to them. In addition they could also be trained and would be able to engage in educational programmes.

Marital Status: The data in table 1 also showed that 71.4% of the respondents were married while 16.3% were temporarily separated

Table 1: Distribution of respondents according to age, marital status, occupation and level of education, role in food provision

<i>Variables</i>	<i>Frequency</i>	<i>%</i>
<i>Age</i>		
25-30	48	21.8
31-34	69	31.4
35-40	73	33.2
41 And Above	30	13.6
Total	220	100.0
<i>Marital Status</i>		
Married	157	71.4
Divorced	5	2.3
Widowed	22	10.0
Single Mother (Separated)	36	16.3
Total	220	100.0
<i>Occupation</i>		
Civil Servant	73	33.2
Artisan	64	29.0
Business	44	20.1
Farming	31	14.1
No Job	8	3.6
Total	220	100.0
<i>Level of Education</i>		
Primary Education (1-6years)	86	39.1
Secondary Education (7-12years)	71	32.3
Tertiary Education (>12 Years)	63	28.6
Total	220	100.0
<i>Role in Food Provision</i>		
Food Processing Activities	74	33.6
Food Product Marketing	60	27.3
Farming Activities	64	29.1
Labour For Farm Work	22	10.0
Total	220	100.0

from their husbands. These may have assess to their husbands whenever the need arises. Only 2.3% were legally divorced. This implied that they do not have assess to their husbands and may be taken for the head of their various households, loaded with the responsibility of ensuring household food security. Only 10.0% were widowed. Since majority, 71.4% were still married; they are responsible to provide food for their household even if the husbands make money needed available. They are known to determine the type of food, quality and quantity to prepare.

Occupation: The respondents were asked to state what they do presently which is taking a higher percentage of their time. The data showed that 33.2% were civil servants, 29.0% Artisan, 20.1% Business. 14.1% farming and only 3.6%

were without any job. This is an indication that 96.4% of the respondents were employed and have assess to regular source of income as presented in Table 1. The information is an evidence that the women also engage in various forms of income generating activities which is basically to ensure household food security and good economic stability.

Level of Education: Data on the highest formal educational level attained by the respondents was collected and analysed. The result showed that 28.6% of the respondents had tertiary education while 39.1% had primary education and 32.3% was with secondary education. This is an indication that the subjects could read and write which indicates a fairly high level of literacy. None was without any education as shown in table 1.

Previous studies such as that of Quisumbing (1996), Agnes et al. (1995) and Smith et al. (2000) established that, increasing women's education is a key ingredient for women's empowerment which invariably would affect household food security. Those who lack assess to basic education are not likely to accept new programmes such that will enhance food security within the households. The higher the educational status of women, the better their contribution to household food security. While many studies worldwide such as Quisumbing 1996, have documented the importance of women's education for its impact on child schooling and malnutrition, this study also established the fact that the higher the women's education the wider the varieties of foods provided for household consumption as presented in table 3.

Role of Women in Food Provision within the Households

The roles which women play in ensuring that food is available at home at all times for household members are enormous. Some of the roles which women in the study area played are: food processing activities (33.6%), food products marketing (27.3%) farming activities (29.1%) and Labour for farm work (10.0%). They engaged in such activities in order to ensure the availability of food for household members. Previous studies such as FAO (1995) established that, in sub-Saharan Africa, where women and men farm separate plots, women farmers have traditionally been responsible for food production

and estimates showed that women account for more than half of the Labour required to produce the food consumed in the developing world.

Ownership and Use of Labour Saving Devices (LSD)

Data on the ownership and use of LSD by the respondents was collected and analysed. LSD are the technologies that are available to women for use to ease the stress of cooking process and to reduce the length of time used in food preparation. Such technologies are listed in table 2. This study also established that the educational level attained by the respondents has an association with the LSD acquired as shown by table 2. This is in agreement with the findings of Lisa et al. (2003).

Varieties of Food Provided

Food frequency table was developed and the frequency at which some food items were consumed was analysed data collected showed that women with tertiary education consumed a fairly wide varieties of food while those with either primary and secondary education provided almost the same types of food repeatedly for household consumption. Smith et al. (2000) showed that increase in women's education accounted for 43% of the total reduction in child malnutrition by far the largest contribution through provision of varieties of food item for household consumption.

Summary of Chi - Square Analysis Showing the Association Between Educational Level and LSD Acquired

The data presented in table 2 showed that

Chi- Square (χ^2) calculated (χ^2) was greater than χ^2 tabulated (χ^2) at 0.05 significant level. The decision rule therefore revealed that there is a significant relationship between the level of education attained by the respondents and the LSD acquired. ($\chi^2 = 101.5$)

This finding showed that the educational level attained by the respondent has an association with the LSD acquired, the Cramer's phi coefficient (\emptyset) which measures the degree of association was 0.298. Hence there exists a moderate association between the variables.

Summary of Chi - Square Analysis Showing the Association Between Educational Level and Selected Variables

The result of chi square analysis used to study the existence of relationship between the level of education and selected variables as presented in table 3. The results showed that significant associations exist between educational level and Age ($\chi^2 = 15.033$ $\emptyset = 0.162$),

Occupation, ($\chi^2_c = 132.22$ $\emptyset = 0.362$), Marital status ($\chi^2_c = 76.82$, $\emptyset = 0.381$) and Varieties of food provided by the respondents ($\chi^2_c = 15.13$, $\emptyset = 0.179$).

It is therefore established, however, that the strength of association as revealed by the value of \emptyset is weak for age and varieties of food provided, whereas the association is strong between Occupation and Marital Status as shown by table3.

CONCLUSION AND RECOMMENDATION

Emerging evidence from the study showed that women play key roles in food provision and production for household food security. Their

Table 2: Summary of chi square analysis showing association between educational level and LSD acquired

Educational level	Frequency of Labour Saving Devices (LSD)									χ^2_c	\emptyset
	Grater	Chopping board	Vegetable chopper	Blender	Rice cooker	Boiling ring	Electric kettle	Electric cooker	Gas cooker		
Primary	50	33	4	-	-	4	8	-	-	101.5	0.298
Secondary	67	41	16	3	-	10	28	1	2		
Tertiary	63	61	54	22	3	31	46	11	10		

Significant at $P < 0.05$

χ^2_c = Chi- Square Calculated = 101.5

\emptyset = Cramer's Phi Coefficient = 0.298

χ^2 = Chi- Square Tabulated = 26.30

$df = (r-1)(c-1) = 16$

Table 3: Summary of chi square analysis showing association between educational level and selected variables.

Variables	χ^2_c	ϕ
Age	15.033	0.162
Occupation1	132.22	0.362
Marital Status	76.83	0.381
Varieties of food provided	15.13	0.179

Significant at $P < 0.05$

χ^2_c = Chi- Square Calculated

ϕ = Cremar's Phi Coefficient

roles include food-processing activities, food products marketing, farming activities, and Labour for farm work. Education has very significant association with ownership of LSD and some variables discussed.

Women with formal education are more likely to adopt new technologies and increase productivity in their chosen career and invariably improve the food security of their households. In view of this, the following recommendations were made:

(i) Women literacy should be taken seriously since they are the major determinant of which food comes into the house.

(ii) Women are the majority of the world's agricultural producers, FAO (1995). Policies should be made to favour women and compete considerably with men in the field of Agriculture.

(iii) Women should be empowered to gain access to new resources such as LSD

(iv) Programs that promote girls' education and health care should be encouraged

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