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# Women Literacy and Household Food Security in Igambang'ombe Division, Tharaka Nithi County, Kenya

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## Abstract

*Many counties in Kenya are generally faced with food insecurity. Women play an active role in food production. However, the women's potential is limited by inadequate levels of literacy which affects the way they access and utilize resources for sustainable agricultural production and household food security. This study examined the impact of women literacy on household food security in Igambang'ombe Division, Tharaka Nithi County, Kenya. The study established that the division is faced with food insecurity in spite of the fact that women play an active role in food production. Women's potential in Igambang'ombe Division is limited by inadequate level of literacy. The study recommended that all agricultural stakeholders should be sensitized on literacy competencies and its relationship with sustained food security.*

**Keywords:** Household Food Security, Literacy Competencies

## Introduction

Food security is essential to overcoming poverty and ensuring healthy lives in any given society. The strategic framework for Food and Agricultural Organization (FAO) 2000 – 2015 specified that the number of chronically under-nourished people in developing counties will be 30% of the population in 2015 unless efforts are made to improve food supplies (FAO, 2000). Access to food should be taken as a priority especially in communities where there are marked deficits. Access and use of agricultural information is one of the critical factors that have a bearing on food production and food security. In rural communities, a great deal of responsibilities is entrusted to the less literate subsistence farmers to produce and provide food sustainability (FAO, 2002). Many of the rural communities have over depended on indigenous knowledge that has been passed orally from generations to generations. Indigenous knowledge is the local knowledge that is tacit, expressive and unique in a given culture or society. It is not limited to agriculture but encompasses healthcare, food preparation, education, governance and even security.

One of FAO's strategic objectives is to eradicate food insecurity and rural poverty through guaranteeing access to agricultural information. However, before policies that will achieve this objective can be defined, decisions must be supported by relevant and updated information. The information and communication technology revolutions have greatly increased the possibilities of disseminating and sharing knowledge. But disadvantaged segments of society are excluded from information and communication flow, raising the questions of how to exploit technological developments in a way that prevents them from creating further inequalities.

Rural populations, particularly subsistence female farmers have to cope with difficulties that are caused by ongoing economic and social changes. Women are more vulnerable when social and economic challenge faces communities. The bringing of women, information and food security into a common sphere may seem extreme but food security has been a basic societal function performed by women. The global concern with food security was noticeable in the early 1970s when there were various international gathering to address food security according to the World Food Report (2005). The overall world food security situation has not changed much since 1970s.The World Food Report acknowledges that the focus of the 1970s on national food stocks and food supply was shifted into the mid 1980s by a more concern over household access to food. This approach emphasized consistent availability, access and stability or sustenance of food collections within the household. Household Food Security (HFS) enables all individuals to access an adequate supply of food on a stable basis, and in a sustainable way (Smith, 1992). This study focused on the ability to attain household food security because the household is the nucleus of food security.

The importance of literacy as a human right was underscored by the United Nations (UN), where, a resolution was passed setting up a Decade of Literacy form 2003 to 2012. Much as the women play an important part in achieving household food security both in the rural and urban areas, it is becoming clear that they cannot meet the growing food demand. As the population grows and the capacity of the land diminishes, it exerts a need to shift towards intensive farming or the application of new methods and technologies in farming. The adaption and use of new innovation assumes a higher level of literacy yet the majority of women have low formal education which means that there is need for deliberate efforts to boost literacy status of the rural farmers. This creates anxieties as to what challenges this engenders for female household heads in developing countries (UNESCO, 2004). Education is widely recognized as one of the key dimensions of development according to the World Conference held in Jomtien in 1990 and the successive conference held in Dakar in 2000.The World Food Summit of 1996 also acknowledged the critical role education plays in achieving food security. According to the United Nations (2005) Millennium Development Goals, focusing on education, especially primary and basic education, positively impacts on food security. Education for rural people is critical because this category of population is directly involved in food production, processing and commercialization. These factors are key in addressing food insecurity in developing countries (UNESCO, 2002, 2004).

This study was informed and guided by the Social and Institutional Change theory originally developed by Thornstein Veblem in the 1940s and Social Construction theory advocated by Burnes (2009). This approach by Burnes focuses on the processes by which people construct, maintain and change social and organizational reality. Mukudi (2003) and others have built on these theories which assert that acquiring education enables people to properly capture and elaborate information for social and institutional change. Consequently, education influences food security through both direct and indirect contribution. The type of education that can be useful in food security is the one that goes beyond the simple literacy and agricultural services. Countries should therefore invest in a level of non-formal adult and continuing education that can alleviate rural household food insecurity.

## Statement of the Problem

Despite efforts toward food security, its attainment in Igambang'ombe Division in Tharaka Nithi County in Kenya has continued to be elusive especially at the household level. Women farmers are responsible for the larger food production, yet a majority of these women have only basic levels of formal education. Literacy levels affect access to and utilization of information by women. If access and utilization levels are low, this may lead to food insecurity and other related problems such as poverty. This would delay attained of Millennium Development Goals such as eradication of poverty and mortality rates in the division. This study investigated the effect of women literacy on household food security and accessibility of agricultural information in the process of attaining household food security in Igambang'ombe Division, Kenya.

## Objective of the Study

The study was guided by the following objectives:

i. To find out the causes of household food insecurity in Igambang'ombe Division;
ii. Determine the agricultural information needs of women in Igambang'ombe Division;and
iii. Ascertain the effect of literacy in the process of accessing and utilizing agricultural information by women in Igambang'ombe division.

## Methodology

The study used descriptive research design. This design was appropriate because it was easy, direct and the researcher was able to gather information in terms of individual opinions. Furthermore, the design enabled the researcher to gather data from a wide range of respondents on effect of women literacy on access and utilization of agricultural information in Igambang'ombe division. The area was chosen because the rainfall pattern and topography which includes numerous ridges, hills, volcanic soils and numerous rivers is ideal for agricultural activities. The target and accessible population was 7,139 female farmers in the five locations of Kajuki, Kamwimbi, Itugururu, Mutino and Kamaindi. Out of this, a sample size of 400 was selected using the stratified random sampling technique. Sample selection was based on the presence of a female respondent in the 10$^{th}$ household. This provided equal opportunity for the selection of each element in the population. Table 1 summarizes age range and population of the respondents.

**Table I**

Summary of Study Population

| Age | Frequency | Percentage |
|---|---|---|
| 18 – 28 | 32 | 08 |
| 29 – 39 | 112 | 28 |
| 40 – 50 | 56 | 14 |
| 51 – 60 | 64 | 16 |
| 61 – 70 | 64 | 16 |
| 71 – 80 | 32 | 08 |
| 80+ | 40 | 10 |
| **Total** | **400** | **100** |

The main tools of data collection and focus group discussions for the study were questionnaires. They both elicited information on literacy and food security in terms of causes, access to information and effect literacy has on improving the situation. The validity and reliability of the instruments was achieved through a pilot study. Pre-testing of the instruments was done to ensure face validity. Experts in the field of Education and Community Studies at Chuka University were consulted for this purpose. According to Mugenda and Mugenda (1999), Borg and Gall (1989), and Kathuri (1993), validity of research instruments is important because one is assured of accuracy, correctness and true data. Secondly some questions in the questionnaire may be misunderstood or misprinted; therefore validity may be used to iron out ambiguity. Kasombo (2006) recommends a test of reliability of instruments in order to ensure dependability. The co efficient of the reliability were computed at 0.8499 for female farmers, agricultural officers and chiefs. Since Mugenda and Mugenda (1999) recommends a reliability of at least 0.8, the instruments were reliable. Data collected was coded and then entered into the computer via Statistical Package for Social Sciences (SPSS 16.0). Descriptive statistic in form of percentages and frequencies were used to analyze the data obtained. Thematic analysis was derived from the open ended questions while percentages, frequencies and cross tabulations was used to report the analyzed data.

## Results of the Study

The preliminary analysis involved the analysis of the demographics of the sample. The study identified the causes of household food insecurity and the effect. Literacy has had enormous effect in the process of accessing and utilizing agricultural information by women. The following general information about the participants was obtained. Table 2 shows a summary of the marital status of respondents.

**Table 2**

Marital Status of Respondents

| Marital status | Frequency | Percentage |
|---|---|---|
| Married | 240 | 60 |
| Windowed | 120 | 30 |
| Single | 16 | 04 |
| Separated | 16 | 04 |
| Divorced | 08 | 02 |
| **Total** | **400** | **100** |

The study showed that from the 400 respondents, 60% were married, 30% widowed, 4% single, 4% separated and 2% were divorced. The respondents that were widowed, single, divorced or separated added up to 40%. The average household size was 6 while household size raged between 2 and 12 persons. As far as the level of for education of women in the study area was concerned, it was found out that about 40% of the respondents had completed up to 5 years of primary school, 14.5% hand minimum secondary education and 34% had no formaleducation This was the category in the 40-80+ age bracket. Only 4.5% had tertiary and college/university education. This was an indication of low literacy in the study area. Table 3 summarizes this information.

**Table 3**

Level of Formal Education of Women

| Level of formal Education | Frequency | Percentages |
|---|---|---|
| None | 138 | 34.5 |
| Primary | 160 | 40.0 |
| Secondary | 58 | 14.5 |
| Tertiary | 18 | 4.5 |
| College/;university | 26 | 6.5 |
| **Total** | **400** | **100** |

As for the factors affecting household food security the study established the following factors have having effects on household food security. Access to education and training had the highest effect with 27%, inputs such as fertilizer and seed (15%), weather patterns (14%), land (13%), access to information (10%), access to credit (8%) and other factors such as culture and tradition (2%). Table 4 summarizes this.

**Table 4**

Factors impacting on household food security

| Factor | Frequencies | Percentage |
|---|---|---|
| Educational & agricultural training | 108 | 27 |
| Inputs (Fertilizer, Seeds) | 64 | 16 |

| | | |
|---|---|---|
| Weather patterns | 56 | 14 |
| Land | 52 | 13 |
| Agricultural information | 40 | 10 |
| Credit | 32 | 08 |
| Labour | 20 | 05 |
| Farming methods | 20 | 05 |
| Other (culture, tradition) | 08 | 02 |
| **Total** | **400** | **100** |

Concerning farm production in the Study area, findings from the study revealed that agricultural production in igambang'ombe division was confined to food and animal husbandry for family food and income. About 60% of the respondents indicated that food production in the past two years was poor, 26% indicated it was satisfactory while ones 14% said it was successful. Table 5 has this summary.

**Table 5**

Farm Production in the last two Years

| **Farm production** | **Frequency** | **Percentages** |
|---|---|---|
| Poor | 240 | 60 |
| Satisfactory | 104 | 26 |
| Successful | 56 | 14 |
| **Total** | **400** | **100** |

The study sought to get information needs of women. The study found out that in terms of information needs of the respondents 20% and 15% indicated they required information on farming systems, pests' management and cropping respectively. The needs were education (10%), credit management (8.75%) and livestock management (7.5%). Respondents further indicated that they needed information on marketing and pricing, management and health. As for access and utilization of agricultural information, the study revealed that extension workers (28%) were the most important source of agricultural information in Igambang'ombe division. Others included, friends and relatives (14%) NGO (13%), community leaders (12%), radio (12%), social networks (06) television (4%) and print media (4%). It was further established that there were barriers to effective access to agricultural information with intellectual barriers bring at the top at 55%, social-economic factors (11%) and social –cultural factors (12%).

## Conclusion

The study established that the most popular farming system in the study area was mixed subsistence farming agricultural production. Majority of the respondent exhibited a need for information on farming systems, pest and diseases control, management education and marketing opportunities. Other needs included management of health and nutrition, information on finance and credit. Also emphasized was the need for information on opportunities to augment income in training in new skill. The respondents showed a lack of knowledge of the best sources to meet their information needs. The study revealed that the literacy level of the respondents was significantly low with almost half of the respondents using informal channel to access information. The degree of utilization of information was therefore directly related to education level.

## Recommendations

Based on the finding of the current study the following recommendations were made.

i. The government should encourage and raise literacy levels especially for women.

ii. Adult literacy education should be emphasized to cater for illiterate adults and youth who may have dropped out of formal education school system before attaining basic literacy competencies
iii. Discouragement of social, cultural and traditions that encourage gender barriers to information accessibility.
iv. Scientific research information should be made available through channels that the respondents preferred such as religious agencies.

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