

Research Article

Exploring the Implications of Gendering Food Security in Kapenguria Constituency, West Pokot County

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Abstract

Food insecurity is a significant crisis that disproportionately affects a vast population especially in the Arid and Semi-Arid areas in Kenya. Kenya has been ranked to be having the lowest food security index. Kapenguria in West Pokot County, Kenya has been characterized by a lack of sufficient food and a state of insecurity over food availability, making it one of the counties in Kenya facing these challenges. Gendered food security is an ongoing concern in various roundtable discussions and panels. The intersection of gender and food security interlinkages brings out the need to address this challenge due to growing food insecurity concerns. A concurrent explanatory design explored the nuances of gendering food security and why it is a growing challenge to women. Questionnaires were formulated and distributed to explore the whole picture of how women understand the dynamics of food security. In-depth interviews and focus group discussions were conducted with Kapenguria Constituency residents, local authorities, and other stakeholders. Using thematic analysis, the study looked for emerging themes and patterns that shed light on the complex relationships between gender dynamics and food security in this environment. The main findings of the research were as follows; First, the study revealed that there was a complex interplay between gender dynamics and food security dynamics. Regarding food security levels, 54.9% of participants perceive their situation as "Moderately Food Secure," while 37.3% identify as "Marginally Food Insecure." Cultural and societal norms play a substantial role in shaping women's access to nutritious food. Perceptions regarding policymakers' understanding of gender issues in food security are encouraging, with 63.4% believing that policymakers grasp the importance of gender considerations to a substantial extent.

Keywords

Food Security, Gendered Food Security, Gender Inequality

1. Introduction

The study examined how gender affects food security in Kenya's West Pokot County, specifically in the Kapenguria Constituency. The study provided more evidence about the connection between food security and gender. The problem of gendering food security dates back to the 1970s, when several patent rules guaranteed gender parity in food security, since women were entitled to food. Two clauses of the worldwide

Convention on the Elimination of Discrimination Against Women (CEDAW) promote gender equality in food security [1]. The research explored the implications of gender inequality on food security (availability, access, utilization, and stability). Furthermore, the research established the levels of food insecurity in Kapenguria and investigated the leveraging of gender for sustainable food security.

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1.1. Background of the Study

Women are crucial in global and local food production, contributing 60–80% of agricultural output in developing countries and about half worldwide [2]. Despite this, gender inequalities—such as limited access to land, credit, markets, technology, and decision-making—continue to hinder their potential in ensuring household food security [3]. These challenges are evident not only in developing countries and regions where food insecurity persists among low-income households, particularly single women [4]. Gender disparities in agriculture are observed globally, from Europe and Central Asia to Asia and Latin America, where male-dominated structures restrict women's agricultural participation and productivity [5].

In Africa, cultural and institutional constraints further limit women's access to resources and agricultural technologies [6]. Case studies from Ghana, Malawi, Uganda, and Tanzania highlight significant productivity gaps between male- and female-managed farms, ranging from 13% to 66% [7]. In Kenya, particularly in West Pokot County (WPC), food insecurity is intensified by climate change, low rainfall dependency, and limited access to agricultural inputs. Post-harvest losses, inadequate market access, and unequal distribution of extension services exacerbate these challenges, affecting women disproportionately [8].

Global and national food security policies have attempted to address these issues, but gaps remain in integrating gender considerations into implementation frameworks. The Special Programme for Food Security (SPFS) and similar initiatives have been criticized for insufficiently addressing gender inequalities. As a result, women's involvement in the four pillars of food security—availability, access, utilization, and stability—remains limited, weakening overall outcomes in addressing hunger and malnutrition. Kenya's policy framework includes the National Gender and Development Policy, the Agricultural Sector Development Strategy, and the National Food and Nutrition Security Policy, all emphasizing gender equality and women's empowerment in agriculture. While these policies recognize women's roles in food production and seek to bridge access gaps, their effectiveness depends on robust gender mainstreaming, resource allocation, and active implementation. Properly integrated, these policies can leverage women's contributions toward achieving sustainable household and community food security [9–11].

Thus, this study looked at the relationship between gender and food security in West Pokot County's Kapenguria Constituency. While identifying barriers to women's empowerment in agriculture, it also examined the effects of gender inequality on the four pillars of food security: availability, access, usage, and stability. The study emphasizes the pressing necessity to use gender equality as a means of attaining sustainable food security by placing the Kenyan context within larger global viewpoints.

1.2. Problem Statement

Women play a crucial role in global food production, yet they face significant barriers that limit their full participation and empowerment in agriculture. Despite their contributions, they often have less access to land ownership, finance, education, and technology than men. Gender inequalities, patriarchal norms, and discriminatory practices further restrict their autonomy, worsening food insecurity and malnutrition. These challenges are particularly evident in agricultural sectors where women are confined to low-paying, part-time roles and excluded from decision-making processes [12].

In West Pokot County, Kenya, climate change has intensified food insecurity, disproportionately affecting women, who are primarily responsible for household food provision. Cultural gender roles reinforce this disparity, with women expected to handle domestic duties while men dominate leadership and agricultural decision-making. This "gender blindness" in policymaking ignores women's distinct needs and contributions, perpetuating inequalities in food production, distribution, and resilience-building efforts [13].

The lack of gender-disaggregated data further complicates efforts to address these issues. While existing research highlights gender disparities in food security, there is no direct quantitative measure linking hunger to women's disempowerment. A deeper analysis using qualitative and quantitative methods is needed to understand this relationship and inform effective interventions [14].

The study targets women in Kapenguria Constituency, aiming to improve access to resources like fertilizers, credit, extension services, and markets. It also seeks to engage policymakers, NGOs, and lawmakers to promote gender-inclusive strategies that enhance women's agricultural productivity and food security. Addressing these gaps is critical to reducing hunger and empowering women in West Pokot and similar regions.

1.3. Purpose of the Study

The study aimed to promote gender equality in food availability, access, and utilization in West Pokot, Kenya.

1.4. Research Question

How do gender dynamics influence food security, and how can gender-sensitive strategies enhance sustainable food security levels in Kapenguria Constituency, West Pokot County, Kenya?

2. Literature Review

2.1. Theoretical Review

2.1.1. Liberal Feminist Theory

Liberal Feminist Theory, rooted in the works of Mary Wollstonecraft (1792), advocates for gender equality by

challenging legal and social barriers that restrict women's freedoms. It emphasizes equal rights, education, and opportunities, arguing that societal roles—not biology—determine gender disparities [15]. The theory is relevant to food security, highlighting how limited access to education, resources, and decision-making perpetuates women's agricultural marginalization. However, critics argue that liberal feminism often overlooks systemic power imbalances, focusing on individual choice without addressing deeper structural inequalities [16]. Despite this, the theory remains useful in advocating for policy reforms to ensure women's equal participation in food production and economic activities.

2.1.2. Capability Approach Theory

The Capability Approach, developed by Amartya Sen and expanded by Martha Nussbaum, shifts focus from mere resource availability to individuals' real freedoms to achieve well-being. It argues that true empowerment requires access to resources (like land or credit) and the ability to use them effectively. This approach is particularly valuable in addressing gender inequality, as it recognizes that women may face unique barriers in converting resources into meaningful opportunities [17]. By combining this with liberal feminism, the framework provides a holistic view—addressing systemic inequalities (e.g., discriminatory laws) and individual empowerment (e.g., skills training)—to enhance women's roles in food security and sustainable development.

2.2. Empirical Review

Previous studies in West Pokot highlight the region's persistent food insecurity, with research focusing on smallholder farming's economic impact but often overlooking gender disparities. In a study done by Gatobu and Ombato, they found that men dominate cash crop and livestock farming, while women face exclusion. However, their study lacked a gendered analysis of food insecurity [18]. This research gap is addressed in the current study by examining how cultural, social, and economic factors shape women's roles in cash crop farming and livestock production, alongside men's shifting responsibilities.

Land ownership and environmental changes further complicate gender dynamics in West Pokot. Krmeback et al studied Chepareria's shift toward private land enclosures, revealing that gender roles in labor, finances, and decision-making are fluid and influenced by socio-cultural factors. However, their analysis treated gender roles as static, missing deeper structural influences. This study expands on their findings by assessing how cultural norms, political structures, and social systems dynamically affect women's access to resources and food security [19].

Nutrition and food security studies in arid regions like Turkana and West Pokot link child malnutrition to gendered dietary disparities but rely heavily on qualitative methods, lacking quantitative validation [20]. The current study em-

ploys a mixed-methods approach to address this limitation, combining qualitative insights with quantitative data for a more robust analysis. By integrating economic, cultural, and environmental perspectives, this research provides a comprehensive understanding of gendered food insecurity in West Pokot.

3. Materials and Methods

3.1. Design, Population, and Sampling (Put a Table of the Sample Size)

The study employed a concurrent explanatory research design to investigate the various aspects of gendered food security and its significance as a pressing issue, particularly for women. A concurrent explanatory mixed-methods research design involved a combined investigation using both quantitative and qualitative data in the same study to provide a better, deeper understanding of the research problem [21]. The study population constituted the Kapenguria Constituency in West Pokot County, which has a population of 40751 individuals.

The study used stratified random sampling. Stratified random sampling is a phenomenon whereby the researcher divides the population into smaller groups known as strata. In other words, the researcher undertakes a stratification process by dividing the homogeneous sub-groups before sampling.

The study adopted Cochran's formula to calculate the research sample size.

$$n_0 = \frac{Z^2 \cdot p \cdot (1-P)}{e^2}$$

Where:

e is the desired level of precision (i.e., the margin of error),
p is the (estimated) proportion of the population that has the attribute in question,

The Z-value is 1.44 as per the table.

Given that the population of Kapenguria constituency is 40,751 and assuming the confidence level for the study was 85% with a margin of error of 5%, using an estimated proportion (p) of 0.3.

$$n_0 = \frac{Z^2 \cdot p \cdot (1-P)}{e^2}$$

$$n = \frac{1.44^2 \times 0.30(1-0.30)}{0.05^2}$$

$$n = \frac{2.0736 \times 0.30 \times 0.70}{0.0025}$$

$$n = \frac{0.435888}{0.0025}$$

$$n \approx 174.3552$$

3.2. Data Collection

The researcher used questionnaires, interview guides, and content analysis as the data collection instruments.

3.3. Data Collection Procedure

The researcher got a research permit from the Daystar University Ethics Review Board (DU-ERB) and a national research permit from the National Commission for Science, Technology, and Innovation to continue in the field to collect data (NACOS-TI). After obtaining these requirements to conduct the research, the researcher went to the field and collected data.

3.4. Data Analysis Plan

Editing, cleaning, coding, and entering quantitative data into the Statistical Package for Social Sciences (SPSS) Version 23 were done. The SPSS analysis produced descriptive statistics as percentages, cross-tabulations, and frequencies. Following the analysis, the data were shown in tables and charts. Excel software was used to type (transcribe) qualitative data verbatim. Following a theme analysis, they were given both narrative and verbatim presentations. The researcher used statistical methods such as descriptive statistics to analyze the quantitative data and specifically examined how gender correlates with different aspects of food security.

The researcher used triangulation, analyzing and juxtaposing the results obtained from the qualitative and quantitative data to verify and improve the comprehensive comprehension of the correlation between gender and food security. The data was triangulated with the empirical literature reviewed.

4. Results

4.1. Response Rate and Demographics

The response rate for the study was calculated as follows:

$$\text{Response Rate} = \frac{\text{Number of respondents}}{\text{Total Sample}} \times 100$$

$$\text{Number of respondents} = 142$$

$$\text{Total Number} = 174$$

$$\text{Response Rate} = \frac{142}{174} \times 100$$

$$\text{Response Rate} = 81.6\%$$

The response rate of 81.6% was considered appropriate for the research survey-based study. This response rate made the study reliable and represented the study's targeted population. According to the research findings, the response rate minimized bias and strengthened the validity of the study.

4.2. Demographics of Respondents

The demographic analysis of the 142 respondents in Kapenguria Constituency revealed that women comprised a majority (64.8%) of participants, reflecting their central role in agriculture. However, decision-making on food security remained largely male-dominated, with 72.5% of households headed by men. The age distribution showed a mature population, with 59.9% above 35 years, 27.5% aged over 50 years, and 37.3% youthful, indicating both experience and potential for sustainable agricultural engagement. However, 2.8% of households under 20 may be vulnerable child-headed households. Education levels were generally low, with 45.1% having primary education, 23.9% secondary, and 21.1% no formal education, correlating with income disparities where 76.1% earned less than KES 20,000 monthly, and 41.5% earned $\leq$ KES 10,000. Occupations were dominated by peasant farming (45.1%) and unemployment (37.3%), reflecting limited livelihood diversification and economic vulnerability. These findings underscore a predominantly low-income, agriculturally dependent population, where gender disparities, limited education, and low income exacerbate food insecurity, highlighting the need for gender-sensitive, education-focused, and livelihood-diversifying interventions to enhance sustainable food security in the region.

5. Discussion of Findings

Summary of Findings

Prevalence of Food Insecurity in Kapenguria Constituency

In Kapenguria Constituency, 50% of respondents identified food insecurity as a major threat, citing persistent hunger, malnutrition, reduced meal frequency, poor harvests due to erratic rainfall, low education for modern farming, low income, and general food shortages. Conversely, 47.2% did not view food insecurity as an issue, often without justification, while 2.8% gave no opinion. These mixed perceptions, possibly influenced by ignorance of prevailing socio-economic trends, indicate that food insecurity affects a significant portion of the population, underscoring the need for targeted interventions to enhance food access and resilience.

Table 1. The Prevalence of Food Insecurity in Kapenguria Constituency.

Description	Frequency	Percent	Valid Percent	Cumulative Percent
No Opinion	4	2.8	2.8	2.8
No	67	47.2	47.2	47.2
Yes	71	50.0	50.0	50.0
Total	142	100.0	100.0	100.0

Knowledge Levels on Gender Issues in Food Insecurity in Kapenguria Constituency

The study revealed that 55.6% of respondents recognized gender inequalities as a significant factor affecting food security in Kapenguria Constituency, while 41.5% disagreed and 2.8% had no opinion. Further analysis showed that 88% agreed that gender inequalities and stereotypes contribute to food insecurity, with only 7% disagreeing and 4.9% remaining neutral. These disparities are rooted in limited land ownership, restricted access to credit, and male dominance in decision-making, despite women being the primary players in farming. Lower education levels among women further hinder their ability to adopt modern agricultural practices, worsening

food insecurity. Qualitative findings from FGDs emphasized that cultural norms heavily shape gender roles, with women handling domestic duties and food preparation while men focus on plowing and harvesting, occasionally collaborating. Respondents noted that the lack of cooperation between genders reduces food production and quality, while gender-based violence, low consultation at family levels, and drug abuse deepen inequalities. Women's lack of land rights, unpaid caregiving burdens, and limited participation in income-generating activities restrict their ability to contribute fully to household food security. This highlights the need for gender-responsive interventions to ensure equitable access to resources and improved food production.

Table 2. Knowledge of Gender Inequalities in Food Insecurity.

Description	Frequency	Percent	Valid Percent	Cumulative Percent
I do not know	4	2.8	2.8	2.8
No	59	41.5	41.5	44.4
Yes	79	55.6	55.6	55.6
Total	142	100.0	100.0	100.0

Significance of addressing gender inequalities for sustainable food security, livelihoods/and nutrition in the Kapenguria Constituency.

The study found that 82.4% of respondents believe addressing gender inequalities is key to achieving sustainable livelihoods and nutrition. FGDs emphasize that removing household power struggles and improving women's access to land would boost food production. While 63.4% agreed that

women are more affected by food insecurity than men, cultural norms, unequal resource distribution, and limited decision-making power continue to hinder women's contributions despite their central role in farming and household food provision. These findings underscore the urgent need for gender-responsive policies and programs to address women's unique food production and security challenges in Kapenguria Constituency.

Table 3. Addressing Gender Inequalities is of significance for Sustainable Food Security.

Description	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Agree	72	50.7	50.7	50.7
Agree	37	26.1	26.1	76.8

Description	Frequency	Percent	Valid Percent	Cumulative Percent
Neutral	15	10.6	10.6	97.2
Disagree	14	9.9	9.9	86.6
Strongly Disagree	4	2.8	2.8	2.8
Total	142	100.0	100.0	100.0

Implications of Gendered Food Security

On the implications of Gendered Food Security: The analysis reveals that 42.3 percent of the respondents worry about food availability due to their gender, and over half of them face challenges in affording a balanced diet. These findings reflect significant gendered disparities in food security, indicating a need for targeted interventions to address these issues.

Interlinkages between gender and food security

The data also highlights a strong belief in the interlinkage between gender and food security, with 57.7% affirming that gender dynamics directly affect food security outcomes. This finding points to the necessity for enhanced educational efforts to raise awareness about the role of gender in food security.

Food Security Levels in West Pokot County

Regarding food security levels, 54.9% of participants perceive their situation as "Moderately Food Secure," while 37.3% identify as "Marginally Food Insecure." This suggests that while many residents can access food, a significant portion face regular challenges, indicating a persistent need for targeted interventions. Furthermore, only 3.5% report being "Highly Food Insecure," suggesting that extreme food insecurity, while less common, still poses a considerable concern.

Cultural Dynamics and Food Security in West Pokot County

Cultural and societal norms play a substantial role in shaping women's access to nutritious food. A combined 62.7% of respondents acknowledge that these norms significantly influence food security outcomes for women, suggesting that cultural expectations restrict their access to resources and decision-making power. However, only 5.6% believe these norms hinder access, indicating potential for improvement through strategic interventions.

Possibilities of Leveraging gender and food security

In evaluating the possibilities of leveraging gender for sustainable food security in Kapenguria Constituency in West Pokot County, Kenya, it was observed that understanding the interplay between gender and food security is essential for developing effective strategies to address food insecurity in Kapenguria Constituency.

Policies and Food Security in West Pokot County

Lastly, perceptions regarding policymakers' understanding of gender issues in food security are encouraging, with 63.4% believing that policymakers grasp the importance of gender

considerations substantially. However, a clear need remains for more comprehensive policy frameworks and effective implementation strategies.

6. Conclusion

The study in Kapenguria Constituency found a clear link between gender inequality and food security, with cultural norms, gender stereotypes, and limited access to resources like land, technology, and fertilizers significantly disadvantaging women. While overall food security was rated as "moderate," many households experienced marginal insecurity, reflecting ongoing vulnerabilities. The community strongly supported integrating gender considerations into food security policies, recognizing that empowering women and involving men in domestic roles can improve food distribution, access, and nutrition. Despite some skepticism, most respondents viewed gender-sensitive approaches as effective and called for expansion. The findings highlight the need for targeted interventions addressing gender disparities and broader food security challenges. Transforming restrictive cultural norms, promoting education and grassroots involvement, and ensuring policymakers fully integrate gender perspectives were identified as key priorities. The strong community commitment to gender equity provides a solid foundation for developing inclusive and sustainable food security strategies that empower women, engage men, and improve overall household nutrition and resilience.

7. Recommendations

To address the gendered aspects of food insecurity in Kapenguria Constituency, the study recommends integrating gender perspectives into all food security policies and programs, ensuring equal access to resources such as land, technology, fertilizers, agricultural inputs, and financial support. Targeted empowerment programs for women, including education, vocational training, and skill development, are essential to enhance their contribution to household food security. Community education campaigns should challenge harmful gender stereotypes, promote shared domestic responsibilities, and encourage male involvement in food security initiatives. Additionally, culturally sensitive interventions that improve access to nutritious food, strengthen local food

production, and enhance supply chains are critical.

The recommendations also call for strong community participation in designing and implementing food security programs, ensuring they are tailored to local needs and contexts. Building partnerships between government, NGOs, and local organizations can mobilize resources and expertise for gender-sensitive initiatives. Continuous monitoring, gender-disaggregated data collection, and policy adjustments based on feedback will improve effectiveness. Addressing broader socio-economic barriers like poverty and lack of education is vital, alongside advocacy efforts to influence laws and policies that promote gender equality. Kapenguria can create inclusive, sustainable, and equitable food security systems by adopting these measures.

Abbreviations

CEDAW	Convention on the Elimination of Discrimination Against Women
DU-ERB	Daystar University Ethics Review Board
FGDs	Focus Group Discussions
NACOSTI	National Commission for Science, Technology, and Innovation
NGO	Non-Governmental Organization
SPSS	Social Package for Social Scientists
WPC	West Pokot County

Conflicts of Interest

The authors declare no conflicts of interest.

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