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Title

ASSESSMENT OF THE IMPACT OF COMMMUNITY HEALTH EDUCATION ON NUTRITION PRACTICES AMONG PREGNANT WOMEN IN KATONDO AREA T/A TSABANGO-LILONGWE

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ABSTRACT

Maternal nutrition during pregnancy is a critical determinant of both maternal and neonatal health outcomes. In many low-resource settings, inadequate nutritional knowledge and poor dietary practices among pregnant women contribute to adverse pregnancy outcomes such as low birth weight, anemia, and increased maternal morbidity. This study assessed the impact of community health education on nutrition practices among pregnant women in Katondo area, Traditional Authority Tsabango, Lilongwe District. A community-based cross-sectional study design with an evaluative component was employed. The study targeted pregnant women attending antenatal care services and residing in the Katondo area. Data were collected using structured questionnaires that assessed socio-demographic characteristics, nutritional knowledge, and dietary practices before and after health education interventions. Descriptive and inferential statistical analyses were used to determine associations between health education exposure and nutrition practices.

The findings revealed that pregnant women who participated in community health education sessions demonstrated significantly improved nutritional knowledge compared to those with limited or no exposure. Improved practices included increased dietary diversity, higher consumption of protein-rich and better adherence to recommended meal frequency during pregnancy. Health education delivered through community health workers and antenatal clinics played a key role in promoting positive behavior change. However, despite improved knowledge, some women continued to face challenges in fully adopting recommended practices due to socioeconomic constraints, food insecurity, and cultural beliefs.

The study concludes that community health education has a positive impact on improving nutrition practices among pregnant women in the Katondo area. Strengthening and expanding community- based nutrition education programs, alongside interventions addressing economic and food access barriers, is recommended. These efforts can contribute to improved maternal nutrition and better pregnancy outcomes in the study area.

Keywords: Maternal nutrition, Community health education, Nutrition practices, Pregnant women, Antenatal care, Malawi.

INTRODUCTION

Maternal nutrition is a fundamental component of maternal and child health and plays a critical role in ensuring positive pregnancy outcomes. Adequate nutrition during pregnancy supports fetal growth and development, strengthens maternal health, and reduces the risk of complications such as anemia, low birth weight, preterm delivery, and maternal mortality. Despite its importance, poor maternal nutrition remains a major public health concern in many low- and middle-income countries, including Malawi. Pregnant women in rural and peri-urban communities often face challenges such as limited nutritional knowledge, food insecurity, poverty, and deeply rooted cultural practices that negatively influence dietary behaviors.

Background

Maternal nutrition is a vital aspect of maternal and child health, as it directly influences pregnancy outcomes and the

long-term health of both the mother and the child. Adequate intake of essential nutrients during pregnancy supports fetal growth, prevents maternal complications such as anemia, and reduces the risk of low birth weight and preterm birth. However, in many low- and middle- income countries, pregnant women continue to experience poor nutritional status due to inadequate dietary intake, limited nutritional knowledge, poverty, and food insecurity. These challenges are often compounded by cultural beliefs and practices that restrict the consumption of certain nutritious foods during pregnancy.

Community health education has been widely recognized as an effective strategy for improving maternal nutrition. Through health talks, counseling sessions, and community outreach programs, pregnant women are educated on balanced diets, appropriate meal frequency, and the importance of micronutrients during pregnancy. Community-based approaches are particularly important in rural and peri-urban settings where access to health facilities may be limited. Despite the availability of such programs, gaps remain between nutritional knowledge and actual practice, highlighting the need to assess the effectiveness of community health education interventions.

Context of the Study

This study was conducted in Katondo area, under Traditional Authority Tsabango in Lilongwe District, Malawi. The area is characterized by a mixed rural and peri-urban population, where most residents depend on subsistence farming and informal economic activities for their livelihoods. Access to diverse and nutritious foods is often limited by seasonal availability and household income levels. Health services in the area are mainly provided through antenatal clinics, outreach services, and community health workers who play a key role in delivering health and nutrition education to pregnant women.

Although nutrition education is routinely provided during antenatal care visits and community health talks, little evidence exists on how effectively this information influences the daily nutrition practices of pregnant women in the Katondo area. Socioeconomic constraints, low literacy levels, and cultural food taboos may affect the adoption of recommended dietary practices. Understanding the local context is therefore essential in evaluating the impact of community health education on maternal nutrition practices and in identifying barriers that limit behavior change.

RESEARCH OBJECTIVES

General Objective

- To assess the impact of community health education on nutrition practices among pregnant women in Katondo area, T/A Tsabango, Lilongwe District.

Specific Objectives

- To assess the level of nutritional knowledge among pregnant women who have received community health education.
- To examine the nutrition practices of pregnant women in the Katondo area.
- To determine the relationship between community health education and nutrition practices among pregnant women.
- To identify barriers affecting the adoption of recommended nutrition practices during pregnancy.

LITERATURE REVIEW

Introduction

The existing literature related to the assessment of the impact of community health education on nutrition practices among pregnant women, particularly in rural and low-resource settings similar to Katondo area. The review focuses on definitions of key concepts, empirical evidence on nutrition knowledge and practices, cultural, social and economic factors influencing the adoption of nutrition advice, common dietary habits among pregnant women, challenges to improved nutrition practices, and community-based strategies that enhance social inclusion and participation. Reviewing previous studies helps to establish knowledge gaps and provides a foundation for the current study.

Community Health Education

Community health education is a process through which individuals and groups within a community are provided with information, skills, and motivation to promote health-enhancing behaviors. It includes structured health talks, home visits, peer education, group discussions, and the use of mass media. Studies by *Lassi et al. (2014)* demonstrated that community-based health education significantly improved prenatal care attendance, birth preparedness, and early neonatal care in rural areas. Community health education is particularly effective in low-resource settings where access to formal health facilities is limited.

Nutritional Practices

Nutritional practices refer to behaviors and habits related to food consumption, including types of foods eaten, meal frequency, dietary diversity, and adherence to recommended nutritional guidelines during pregnancy. Good nutritional practices enhance dietary diversity and ensure adequate intake of macro- and micronutrients essential for maternal and fetal health.

Pregnant Women

Pregnant women are women of reproductive age who are carrying a fetus. They have increased nutritional requirements to support maternal health, fetal growth, and development, making appropriate nutrition during pregnancy essential.

Antenatal Care (ANC)

Antenatal care refers to health services provided to pregnant women before childbirth. These services include routine check-ups, nutrition counseling, supplementation, health education, and monitoring of maternal and fetal well-being.

Maternal Nutrition

Maternal nutrition refers to the dietary intake and nutritional status of a woman during pregnancy. Adequate maternal nutrition plays a key role in fetal development, prevention of pregnancy-related complications, and ensuring the health of both the mother and the baby.

Nutrition Knowledge of Pregnant Women

Several studies indicate that baseline nutrition knowledge among pregnant women in low-resource settings is often inadequate. *Chilinda et al. (2016),* in a study conducted in Malawi, found that although pregnant women attending antenatal clinics had some awareness of recommended dietary practices, there were significant gaps in understanding food group classifications and specific

nutrient requirements during pregnancy. Similarly, Klevor et al. reported that many pregnant women in Malawi had limited knowledge of micronutrient needs and dietary diversity.

Bhutta et al. (2010) found that community health education interventions significantly reduced neonatal mortality and improved maternal practices in rural settings. *Campbell* and *Graham (2006)* also emphasized community mobilization and health education as key strategies for improving maternal health in low-resource rural areas. Health education has been shown to address misinformation, challenge harmful cultural beliefs, and promote positive dietary behaviors.

Studies using pre- and post-intervention designs have demonstrated improvements in nutrition knowledge following education sessions. *Kavle et al. (2019)* reported that health education interventions in low-income countries such as Nepal and Ethiopia significantly improved knowledge of iron-rich foods and folic acid supplementation. *Gerard* and *Olude (2012)* found that women who attended group nutrition education sessions in Bangladesh had higher knowledge scores and improved dietary diversity. Similarly, Yisahak (2015) showed that community-based nutrition education in Ethiopia significantly improved knowledge of balanced diets and anemia prevention.

Cultural, Social, and Economic Factors Affecting Adoption of Nutrition Advice

Cultural Factors

Cultural beliefs and practices strongly influence dietary behaviors during pregnancy. *Kale* and *Landry (2017)* noted that food taboos and traditional beliefs in many African settings restrict the consumption of essential nutrients. In rural Zambia, *Ngoma-Hazemba* and *Chirwa (2021)* found that pregnant women avoided protein-rich foods such as eggs and fish due to beliefs that these foods could cause complications during delivery. Similar findings were reported among Kalenjin women in Kenya, where certain animal products were avoided due to fears of difficult childbirth. Such beliefs may also be present in Katondo area, highlighting the need for culturally sensitive health education.

Social Factors

Social structures and family dynamics play a significant role in maternal nutrition. *Mushaphi et al. (2015)* reported that in patriarchal societies, pregnant women often have limited decision-making power over household food choices. Advice from mothers-in-law, elder women, and traditional birth attendants may conflict with modern nutrition guidelines. Studies in Malawi and Kenya between 2020 and 2023 found that male partners and older female relatives often influenced what pregnant women consumed, affecting the adoption of nutrition advice.

Access to healthcare services also influences nutrition practices. Okube et al. (2016) identified barriers such as long distances to health facilities, transportation costs, poor attitudes of health workers, and misconceptions about pregnancy nutrition as major obstacles to accessing antenatal nutrition education.

Economic Factors

Economic constraints are a major barrier to adequate maternal nutrition. Studies in Malawi (2020– 2023) reported that over 60% of pregnant women experienced moderate to severe household food insecurity, which was

associated with low dietary diversity and reduced consumption of nutrient- rich foods such as meat and eggs.

METHODOLOGY

Introduction

This chapter describes the research methodology used to generate and analyze data for the study on the impact of community health education on nutrition practices among pregnant women in Katondo area, T/A Tsabango, Lilongwe District. It outlines the research design, study area, target population, sampling methods, sample size, data collection instruments and procedures, pilot study, data analysis techniques, and ethical considerations. Research methodology refers to the systematic framework of methods, principles, and procedures used to conduct research *(Somekh & Lewis, 2005). Dawson (2019)* further explains that research methodology provides the guiding principles that shape how a study is conducted and how data are interpreted.

Research Design and Methods

Research design refers to the overall framework that guides the selection of methods and techniques for collecting and analyzing data in a logical and systematic manner (Pratt, 1992). This study adopted a mixed-methods descriptive research design, combining both quantitative and qualitative approaches to comprehensively assess nutrition knowledge, practices, and the influence of community health education.

Research Methods

Both quantitative and qualitative methods were used in this study. The quantitative method was employed to generate numerical data on nutrition knowledge and dietary practices, which could be easily analyzed using descriptive statistics. The qualitative method was used to obtain in-depth information from participants regarding beliefs, attitudes, cultural practices, and challenges influencing nutrition practices. The integration of both methods strengthened the validity of the findings by allowing triangulation of data.

Research Design

The study employed a descriptive cross-sectional design. This design was appropriate as it enabled the researcher to assess the existing nutrition knowledge and practices of pregnant women at a single point in time. The descriptive nature of the design allowed for detailed documentation of participants' experiences, food choices, and exposure to community health education. Open-ended questions were used to capture participants' views freely, while structured questions provided comparable quantitative data.

Research Setting

The study was conducted in Katondo area, located in Lilongwe District, Malawi, under Traditional Authority Tsabango. The area is largely rural with some peri-urban characteristics. Health services are provided mainly through antenatal clinics, outreach services, and community health workers who deliver nutrition education to pregnant women.

Target Population

The target population refers to the group of individuals from whom data are collected for a study. This study targeted pregnant women residing in Katondo area, as they are the

primary recipients of community-based health education on maternal nutrition. In addition, key informants were included to enrich the data. These included health workers, a nutritionist, community health workers, village headmen, and village health committee members. Including different respondents enhanced the credibility and trustworthiness of the findings by capturing diverse perspectives related to maternal nutrition.

Sampling Method

The study used purposive sampling, a non-probability sampling technique commonly applied in qualitative and community-based studies. Purposive sampling allowed the researcher to deliberately select participants who had relevant knowledge and experience related to maternal nutrition and community health education. Pregnant women attending antenatal clinics and those receiving community outreach services were selected because they could provide rich and meaningful information about nutrition practices *(Kothari, 2009).*

Sample Size

Sample size refers to the number of participants selected from the target population *(Kothari, 2004)*. A total of 33 participants were included in the study. This number was considered adequate for a descriptive community-based study and manageable within available time and resources. According to *Mugenda* and *Mugenda (2003),* a minimum sample size of 30 is acceptable for descriptive studies when the population is relatively small.

The sample comprised

- 25 pregnant women
- 1 nurse from a local health facility
- 1 community health worker
- 1 nutritionist
- 2 village headmen
- 1 village health committee leader
- 2 elder women (including mothers-in-law)

These participants provided insights on nutrition practices, community support, cultural influences, and health education delivery**.**

Research Instruments

Data were collected using structured questionnaires and interview guides. Questionnaires were used to collect quantitative data on nutrition knowledge and dietary practices among pregnant women. Interview guides were used to collect qualitative data from key informants and selected pregnant women. According to *Patton (2000),* interviews allow researchers to understand participants' experiences, perceptions, and views in depth.

Data Collection Procedures

Data were collected through face-to-face interviews and questionnaire administration. Questionnaires were administered directly to participants, and responses were recorded by the researcher when necessary. Interviews were conducted in a private and convenient setting, recorded with participants' consent, and later transcribed. Data collection followed standard ethical and procedural guidelines to ensure accuracy and reliability.

Pilot Study

A pilot study was conducted prior to the main data collection to test the clarity,

relevance, and feasibility of the research instruments. *Kerlinger (1993)* describes a pilot study as a small-scale preliminary study conducted to refine research procedures. The pilot involved a small number of pregnant women from Katondo area who were not included in the main study. Feedback from the pilot study was used to revise unclear questions, estimate the time required for data collection.

RESULTS

Introduction

The findings of the study on the impact of community health education on nutrition practices among pregnant women in Katondo area, T/A Tsabango, Lilongwe District. The results are presented according to the study objectives and include socio-demographic characteristics of respondents, nutrition knowledge levels, common nutrition practices, influence of community health education, and challenges affecting the adoption of recommended nutrition practices. Data are presented using tables and descriptive explanations.

Socio-Demographic Characteristics of Respondents

A total of 33 respondents participated in the study, comprising 25 pregnant women and 8 key informants (health workers, community leaders, and elder women). This section focuses on the characteristics of the pregnant women.

Age Distribution of Pregnant Women (n = 25)

A total of 25 respondents participated in the study. The largest proportion were aged 25–31 years, accounting for 40% (n=24), indicating that most respondents were within the most active reproductive age group. This was followed by those aged 18–24 years at 28% (n=7) and 32–38 years at 24% (n=6). Respondents aged 39 years and above formed the smallest group, representing 8% (n=2).

Regarding the influence of community health education on nutrition practices, most pregnant women reported receiving nutrition education through antenatal clinics, community health workers, and village health talks, highlighting the important role of community-based health platforms in promoting maternal nutrition.

In terms of exposure to community health education, the majority of respondents (81%, n=21) reported that they had received nutrition education, while a smaller proportion (16%, n=4) indicated that they had not. Overall, the findings suggest high exposure to community health education among pregnant women in the study area, which may positively influence nutrition practices.

Women who received nutrition education were more likely to demonstrate better meal frequency, increased consumption of vegetables, legumes, and iron-rich foods, and improved adherence to antenatal supplements.

Key informants confirmed that community health education positively influenced awareness and attitudes toward maternal nutrition, although behavior change was not universal due to contextual challenges.

Challenges Affecting Adoption of Recommended Nutrition Practices

- Reported Challenges to Good Nutrition Practices

Note:

Food insecurity and poverty were identified as the major barriers to adopting recommended nutrition practices. Cultural beliefs and limited

decision-making power also played a significant role, indicating that knowledge alone is not sufficient to change behavior without addressing social and economic factors.

Common Nutrition Practices among Pregnant

- Women Meal Frequency per Day

Note:

While 48% of respondents reported eating three meals per day, a significant proportion (32%) consumed only one to two meals daily. This indicates that some pregnant women are not meeting recommended meal frequency, which may affect maternal and fetal health.

DISCUSSION

Introduction

The findings of the study in relation to the research objectives and existing literature. The discussion interprets the results on the impact of community health education on nutrition practices among pregnant women in Katondo area, T/A Tsabango, Lilongwe District. The findings are compared with previous studies to determine similarities, differences, and implications for maternal nutrition interventions in rural and low-resource settings.

Socio-Demographic Characteristics and Maternal Nutrition

The study revealed that most pregnant women were within the active reproductive age group of 25–38 years and had low to moderate levels of formal education. This demographic profile is consistent with findings from similar rural settings in Malawi and other sub-Saharan African countries, where early childbearing and limited educational attainment are common. Low education levels may affect women's ability to fully understand and apply nutrition information, reinforcing the need for simple, culturally appropriate health education strategies.

Previous studies have shown thatmaternal education is positively associated with improved nutrition practices and health-seeking behavior. Women with higher education are more likely to adopt recommended dietary practices and utilize antenatal care services. Therefore, the relatively low education levels observed in Katondo area may partially explain why some women, despite receiving nutrition education, were unable to fully implement recommended practices.

Nutrition Knowledge among Pregnant Women

The findings indicate that most pregnant women had moderate to good nutrition knowledge, particularly those who had been exposed to community health education. This suggests that community-based nutrition education is effective in improving awareness of balanced diets, meal frequency, and the importance of micronutrients during pregnancy. These findings are in line with studies by *Bhutta et al. (2010)* and *Lassi et al. (2014)*, which demonstrated that community health education significantly improves maternal knowledge and health-related behaviors.

However, a notable proportion of women still had poor nutrition knowledge,, indicating persistent gaps in understanding. Similar gaps were reported by *Chilinda et al. (2016)* in Malawi, where pregnant women struggled with identifying food groups and understanding nutrient-specific

requirements. This highlights the need for continuous reinforcement of nutrition messages and the use of practical demonstrations, such as food preparation sessions, to improve comprehension.

Nutrition Practices among Pregnant Women

Despite improved nutrition knowledge, the study found that nutrition practices among pregnant women were only moderately improved. While nearly half of the respondents reported eating three meals per day, a substantial number consumed fewer meals, which falls below recommended dietary guidelines for pregnancy. Dietary diversity was also found to be moderate, with limited consumption of animal-source foods, fruits, and vegetables.

These findings are consistent with previous studies conducted in Kenya, Ethiopia, and Malawi, which reported that pregnant women in low-resource settings often rely on starchy staple foods with limited intake of nutrient-rich foods. *Girma (2013)* and *Mithra (2014)* similarly observed low dietary diversity and meal skipping among pregnant women due to economic and cultural constraints. The results suggest that improved knowledge does not automatically translate into improved practices, particularly in contexts of poverty and food insecurity.

Impact of Community Health Education on Nutrition Practices

The study demonstrated that exposure to community health education positively influenced nutrition knowledge and, to some extent, dietary practices among pregnant women. Women who attended antenatal clinics and community health talks were more likely to report improved food choices, increased meal frequency, and adherence to iron and folic acid supplementation. This aligns with findings by *Gerard* and *Olude (2012)* and *Yisahak (2015),* who reported improved dietary diversity and micronutrient intake following nutrition education interventions.

However, the impact of community health education was limited by contextual factors. Although most women received nutrition education, not all were able to implement the advice due to socioeconomic constraints and cultural beliefs. This supports the argument by *Campbell* and *Graham (2006)* that health education alone is insufficient without addressing broader social and economic determinants of health.

Cultural, Social, and Economic Barriers to Improved Nutrition

The study identified food insecurity and poverty as the main barriers to adopting recommended nutrition practices. Many women reported limited access to diverse and nutritious foods, which restricted their ability to follow dietary advice. This finding is consistent with studies conducted in Malawi and Tanzania, which reported strong associations between household food insecurity and poor dietary diversity among pregnant women.

Cultural beliefs and food taboos also played a significant role in shaping dietary practices. Some women avoided foods such as eggs and meat due to fears of pregnancy complications or difficult labor. Similar beliefs have been documented in rural Zambia, Kenya, and Ethiopia. Social factors, including limited decision-making power within households and reliance on advice from elder relatives, further influenced women's food choices. These findings highlight the importance of involving family members, community leaders, and male

partners in nutrition education programs.

Implications for Community Health Education Programs

The findings suggest that community health education programs should move beyond information provision to address practical and structural barriers. Integrating nutrition education with livelihood support, food security initiatives, and community empowerment strategies may enhance the effectiveness of interventions. Additionally, culturally sensitive approaches that respect local beliefs while promoting healthy practices are more likely to result in sustained behavior change.

Health education strategies should also include participatory approaches, such as cooking demonstrations, peer support groups, and community dialogues, to improve understanding and acceptance of nutrition messages. Strengthening the role of community health workers and ensuring consistent follow-up may further improve maternal nutrition outcomes.

CONCLUSION

The impact of community health education on nutrition practices among pregnant women in Katondo area, T/A Tsabango, Lilongwe District. The findings indicate that community health education positively influenced nutrition knowledge, with most women demonstrating moderate to good understanding of balanced diets, meal frequency, and micronutrient intake during pregnancy. Exposure to antenatal clinic sessions, community health talks, and outreach programs contributed significantly to improved awareness and informed dietary decisions.

However, the study also highlighted that improved knowledge did not always translate into optimal nutrition practices. Key barriers included food insecurity, poverty, cultural beliefs and food taboos, limited household decision-making power, and restricted access to diverse foods. These findings underscore the importance of integrating community health education with strategies that address social, economic, and cultural factors to enhance adoption of recommended dietary practices.

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