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Challenges of Implementing Food Based Dietary Guidelines: A Case of Selected Boarding Schools in Kapiri-Mposhi District, Zambia

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Abstract

Overview: Food-based dietary guidelines (FBDGs) are evidence-based nutrition recommendations that aim to promote health and prevent chronic diseases through dietary choices. Implementing these guidelines in boarding schools is vital as it can help improve the nutritional quality of meals served to students. This study aimed to assess the importance of implementing FBDGs in boarding schools and provide practical strategies for schools to do so effectively.

Body of Knowledge: Boarding schools play a crucial role in shaping the dietary habits of students, as they often provide the majority of meals for the students. By following FBDGs, schools can ensure that meals are balanced and provide essential nutrients needed for growth and development. This can help in preventing nutrient deficiencies and promoting overall health among students.

Methods: The study employed a case study design with key stakeholders, including Administrators, Staff, and Students. The sample consisted 150 respondents. Data was collected from the respondents by means of questionnaires, interviews and case studies. Quantitative data from questionnaires was analyzed using statistical software to identify patterns, correlations, and deviations. Qualitative data from interviews were put into writing and subjected to thematic analysis to identify recurring themes and narratives.

Results: Implementing FBDGs in boarding schools can help in promoting healthier eating habits among students. By teaching students about the importance of incorporating a variety of fruits, vegetables, whole grains, and lean proteins in their diet, schools can help students make better food choices both at school and at home. This can have a long-lasting impact on their health and well-being.

Recommendation: Ministry of Education should update policies to ensure that nutrition education is a mandatory component of the school curriculum. This may involve the development of new educational materials that align with FBDGs and the training of teachers to deliver this content effectively.

Keywords: Boarding School; Dietary; Education; Health; Nutrition; Stakeholders.

1 Introduction

The contemporary discourse on nutritional interventions in educational institutions has increasingly streamlined the significance of implementing food-based dietary guidelines (FBDGs). These guidelines serve as a confluence of nutritional science and public health policy, offering a scaffold for healthy eating patterns within diverse populations

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(Herforth et al., 2019). Globally, the World Health Organization (WHO) has enacted the necessity of tailoring dietary guidelines to the cultural, economic, and nutritional exigencies of each nation (WHO, 2018). Regionally, the African Regional Nutrition Strategy has acknowledged the importance of customizing these guidelines to address specific dietary deficiencies and prevalent health concerns (African Union, 2021). At a local level, such as in Kapiri-mposhi district, the adoption of these guidelines is pivotal for fostering healthy dietary behaviours among the youth, particularly in boarding schools where food choices are often limited and structured by the institution. Namunyola & Chanda (2023) in their study noted that many children in less developed countries suffer from poor health and nutrition. The United Nations estimates that one third of preschool age children in less developed countries – a total of 180 million children under age 5–experience growth stunting relative to international norms, while hundreds of millions more suffer from tropical diseases, including malaria and intestinal parasites.

The implementation of food-based dietary guidelines within the milieu of boarding schools poses a unique constellation of challenges. Boarding schools in Kapiri-mposhi district are places wherein the provisioning, preparation, and consumption of food is very complicated with the educational, social, and economic fabric of the community. The execution of FBDGs in such settings is not merely a matter of dietary change but a multifaceted process involving the interplay of policy development, stakeholder engagement, resource allocation, and consistent monitoring and evaluation of dietary interventions (Amin et al., 2020). Chanda (2023) added that government funding for schools plays a crucial role in shaping the quality of education provided to students.

The process of implementing these guidelines commences with the translation of the national dietary recommendations into actionable and context-specific strategies for schools. This translation necessitates a sound understanding of the local food system, including the availability and affordability of diverse food items, as well as cultural preferences and practices that shape the dietary habits of students (Osei-Kwasi et al., 2020). Moreover, the infrastructure of school kitchens, the expertise of food service personnel, and the procurement policies of the institutions are central to the practicality of these guidelines (Turner et al., 2019).

Yet, the journey from policy to plate was fraught with difficulty. Schools often struggle with limited financial resources, which can constrain their ability to provide a variety of foods that align with the nutritional ideals of FBDGs. The budgetary allocations may not suffice to cover the cost of fresher and more nutritious, yet often more expensive, food items (Affognon et al., 2020). Additionally, the procurement process can be challenging, with seasonal fluctuations in food availability and price volatility further complicating consistent adherence to dietary guidelines (Pérez-Escamilla et al., 2018).

Human resources also play a pivotal role. The training and motivation of kitchen staff to prepare meals that are not only nutritious but also appealing to students are essential. It is a delicate balance to satisfy the taste preferences of young individuals while steering them towards healthier choices (Langford et al., 2015). Muleya et al (2024) alluded that the practice of Servant Human Resource Management (SHRM) significantly impacts employee performance by emphasizing leadership that prioritizes the well-being, development, and empowerment of employees. Furthermore, the overall dietary behaviour of students is influenced by factors extending beyond the school dining hall, including their knowledge and attitudes towards nutrition, peer influences, and the eating patterns established in their homes (Neelon et al., 2017).

In light of these complexities, the implementation of food-based dietary guidelines in boarding schools within Kapiri-mposhi district is an ambitious endeavour that requires a comprehensive, multi-sectorial approach. This research paper aims to explore these multifaceted challenges, grounded in the latest empirical evidence, and to offer insights into strategies that can facilitate the successful integration of FBDGs into the boarding school environment. In doing so, it contributed to the broader goals of public health nutrition by nurturing a foundation for lifelong healthy eating habits among school-aged children.

1.1 Statement of the Problem

The implementation of food-based dietary guidelines in secondary schools' curricula faces numerous challenges. These challenges may include limited resources, lack of teacher training, resistance from students and parents, competing priorities, and inadequate support from the school administration. Chanda et al (2024) narrated that financial constraints limit the procurement of teaching materials such as textbooks, educational aids, and technology, which are crucial for engaging and informative lessons. These factors hinder the successful integration of food-based dietary guidelines into the curriculum, ultimately impacting the health and well-being of secondary school students.

1.2 Purpose of the Study

The primary purpose of this study was to critically examine the challenges faced by selected boarding schools in Kapiri-mposhi district in implementing Food-Based Dietary Guidelines (FBDGs) and to identify practical solutions to these challenges.

1.3 Research Objectives

To evaluate the alignment of current educational policies with the goals of Food-Based Dietary Guidelines (FBDGs) within boarding schools in Kapiri-mposhi district.

- To assess the current level of nutrition knowledge and training among school staff responsible for food procurement, preparation, and service in boarding schools in Kapiri-mposhi District
- To investigate the extent of participation and engagement of the broader school community, including parents and local food producers, in implementing FBDGs in boarding schools in Kapiri-mposhi district.

1.4 Conceptual Framework

The primary purpose of this study was to critically examine the challenges faced by selected boarding schools in Kapiri-mposhi district in implementing Food-Based Dietary Guidelines (FBDGs) and to identify practical solutions to these challenges.

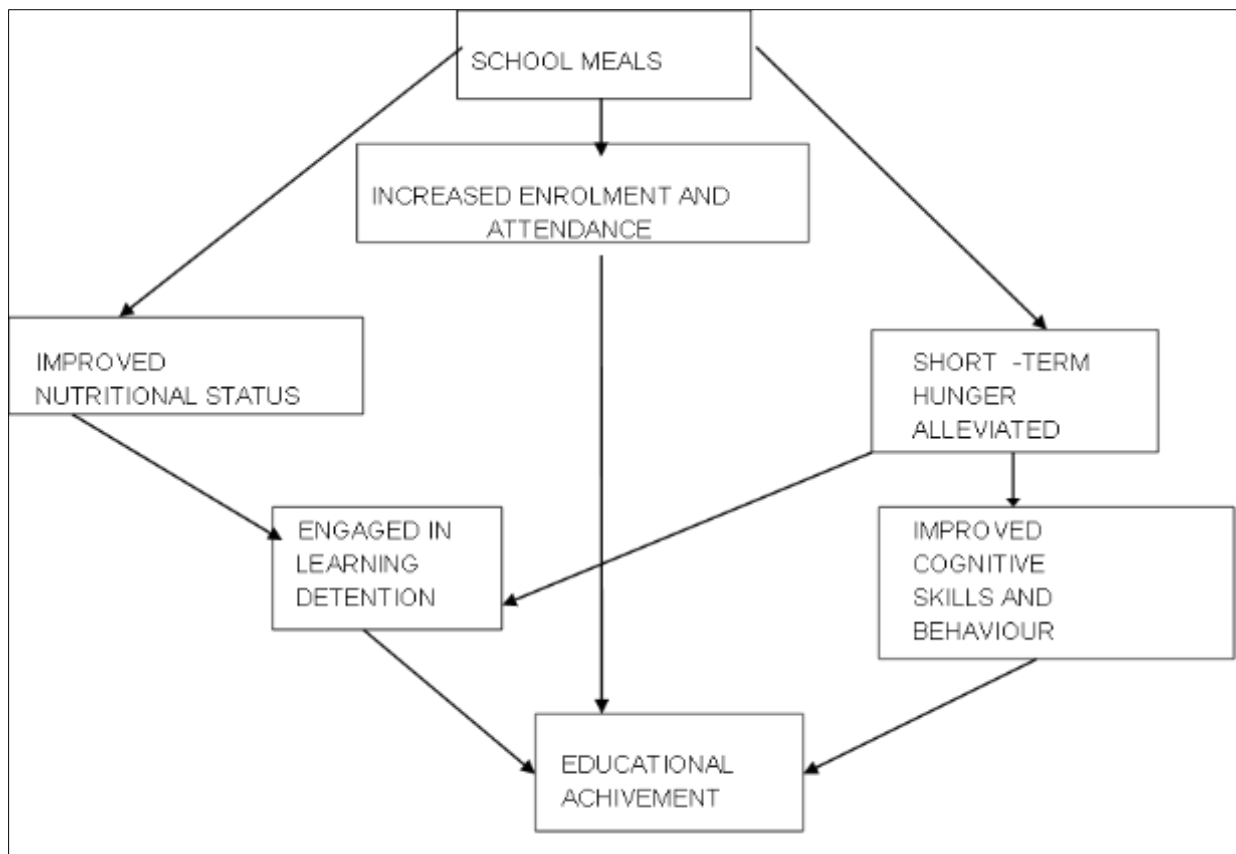


Figure 1 Conceptual Framework

2 Literature Review

The introduction to the study on the implementation of food-based dietary guidelines (FBDGs) in boarding schools within the Kapiri-mposhi district embarked on a critical exploration of how nutritional policies translate into practice in an educational setting. This study looked at the multifaceted challenges of aligning school meal programs with FBDGs, an endeavour that involves not only educational and health sectors but also intersects with socioeconomic and cultural dimensions of the school community. Chanda & Madoda (2024) added that the relationship between cultural identity and educational equity in Zambia is intricate and profound, echoing the broader global discourse on education and

identity. With a focus on the unique context of Kapiri-mposhi boarding schools, the study sought to illuminate the intricacies of policy implementation, the preparedness of school staff in nutrition, and the role of the wider school community, ultimately aiming to bridge the gap between theoretical guidelines and their practical application in fostering healthier, well-informed eating habits among students.

Several studies have investigated the implementation of FBDGs in boarding schools and the challenges and barriers that schools may face. A study by Mustapha et al. (2019) found that while most boarding schools in Nigeria were aware of the existence of FBDGs, there was a lack of practical implementation due to factors such as limited access to healthy food options, inadequate food preparation facilities, and a lack of trained personnel to provide nutrition education. Similarly, a study by Mochama et al. (2017) in Kenya reported that boarding schools often struggle to provide balanced and nutritious meals for students, and that there is a lack of funding and support for implementing FBDGs.

Despite the challenges of implementation, several studies have shown the potential impact of FBDGs in boarding schools. A study by Naidoo et al. (2018) in South Africa found that the implementation of FBDGs in schools led to improvements in nutrient intake and dietary behaviours among students. Similarly, a study by Mann et al. (2016) in the United States found that schools that implemented FBDGs saw improvements in student health outcomes, such as reduced rates of obesity and improved academic performance.

2.1 Best Practices for Promoting Healthy Eating Habits in Boarding Schools

To effectively promote healthy eating habits in boarding schools, several best practices have been identified. These include:

- Providing access to a variety of healthy food options, including fruits, vegetables, whole grains, lean proteins, and low-fat dairy products.
- Offering nutrition education and cooking classes to teach students about the importance of healthy eating and how to prepare nutritious meals.
- Involving students in menu planning and food preparation to increase their engagement and motivation to make healthy choices.
- Implementing policies and guidelines to support the provision of healthy foods in schools, such as creating a school wellness policy and promoting the use of local and sustainable food sources.

Overall, the implementation of FBDGs in boarding schools can have a positive impact on student health and well-being. However, schools face challenges in providing balanced and nutritious meals and promoting healthy eating habits among students. By implementing best practices such as providing access to healthy food options, offering nutrition education, and involving students in menu planning, schools can help students develop lifelong healthy eating habits and improve their overall health outcomes (Namunyola & Chanda, 2023). Further research is needed to explore the long-term impact of FBDGs in boarding schools and identify strategies to overcome barriers to implementation.

2.2 Underpinning Theories

2.2.1 Health Belief Model (HBM)

The Health Belief Model (HBM) is a psychological model that has been pivotal in the development of health education and health behaviour interventions. Originally developed in the 1950s by social psychologists Hochbaum, Rosenstock, and Kegels at the U.S. Public Health Service, the HBM was one of the first theories that adapted behavioural research to the context of health promotion and disease prevention (Rosenstock, 1974). It has been extensively used to understand a wide range of long-term behaviours, including dietary practices.

The core assumption of the HBM is that health-related action is determined by the simultaneous occurrence of three classes of factors: the existence of sufficient motivation (or health concern), the belief that one is susceptible (perceived susceptibility), and the belief that following a particular health recommendation would be beneficial in reducing the perceived threat and is worth the costs or barriers (perceived benefits vs. perceived barriers) (Carpenter, 2010).

Furthermore, HBM introduces the concept of self-efficacy, which refers to confidence in one's ability to take action (Rosenstock, Strecher, & Becker, 1988). The incorporation of self-efficacy into the model during the 1980s was influenced by Bandura's work on Social Cognitive Theory and acknowledged the importance of the individual's belief in their capability to execute the behaviours required to manage prospective situations.

When applied to the implementation of food-based dietary guidelines in boarding schools, the HBM can be a useful framework to assess why school administrators and staff might (or might not) engage in the recommended health behaviours. It helps in identifying the beliefs that can influence decision-making processes, such as the perceived severity of the consequences of poor dietary habits among students, or the perceived barriers to implementing dietary guidelines, which could include costs, perceived lack of time, or lack of resources (Glanz, Rimer, & Viswanath, 2008).

Criticism of the HBM often centres on its focus on individual decision-making and cognition at the expense of wider social and environmental factors (Edberg, 2007). Critics argue that the model does not account adequately for how social, economic, and environmental factors can influence an individual's behaviour, which is particularly relevant in school settings where policies and resources play a crucial role. Moreover, the model is sometimes critiqued for its limited emphasis on habitual behaviours and emotions, which can also be strong predictors of one's behaviour (Conner & Norman, 2005).

Despite these criticisms, the HBM remains a widely used and influential theory in the design of health behaviour interventions. Its focus on perceived threats and beliefs makes it particularly apt for interventions aimed at preventing negative health outcomes through behaviour change. In the context of dietary guidelines implementation in schools, the HBM can inform the development of interventions that take into account individual beliefs and perceptions, as well as guide the design of educational campaigns to alter these perceptions where necessary (Carpenter, 2010).

By understanding the specific beliefs that may act as barriers or motivators for school staff, interventions can be tailored to address these factors. This might involve providing more information on the risks associated with non-compliance to dietary guidelines or improving self-efficacy through training programs to equip staff with the skills needed to successfully implement these guidelines (Chanda, 2024).

2.2.2 *Theory of Planned Behaviour (TPB)*

The Theory of Planned Behaviour (TPB) is a well-established psychological theory that extends the Theory of Reasoned Action (TRA), which posits that behavioural intention is the most important determinant of behaviour. Developed by Icek Ajzen in 1985, the TPB aims to predict deliberate behaviour, since behaviour can be planned (Ajzen, 1991). The theory introduces the concept of perceived behavioural control to account for factors outside the individual's control that may affect their intentions and behaviour.

At the core of TPB are three determinants of intention:

- Attitude toward the behaviour: This refers to the degree to which a person has a favourable or unfavourable evaluation of the behaviour in question.
- Subjective norm: This is the perceived social pressure to perform or not to perform the behaviour.
- Perceived behavioural control: This refers to the perceived ease or difficulty of performing the behaviour and it is assumed to reflect experience as well as anticipated impediments and obstacles.

In the context of implementing food-based dietary guidelines in boarding schools, TPB provides a valuable framework for understanding how the attitudes of school administrators and staff towards nutrition, the influence of social pressures (perhaps from parents, peers, or the school board), and their perceived control over the implementation process (affected by resources, policies, and skills) can determine their intentions and actions. For instance, even if staff have positive attitudes towards healthy eating, they may feel constrained by perceived barriers such as cost, time, or lack of facilities, which in turn affects their intentions to act (Ajzen, 2002).

Research applying the TPB to dietary behaviours has demonstrated that attitudes, subjective norms, and perceived behavioural control are significant predictors of intentions to eat healthily (Conner & Armitage, 2002). In schools, the TPB can be used to predict and understand the specific challenges and motivations of school personnel when implementing dietary guidelines. Interventions can then be designed to address negative attitudes, alter perceived norms, and increase perceived behavioural control by providing necessary resources and support.

Critics of TPB have noted that the model assumes a rational, linear decision-making process and may not fully account for more impulsive, non-conscious actions that can also influence behaviour (Sniehotta, Pousseau, & Araújo-Soares, 2014). Others have suggested that the model could benefit from the inclusion of emotional factors, which can also impact intention and behaviour (Hagger, Chatzisarantis, & Biddle, 2002).

Despite these critiques, TPB remains influential in the design of behaviour change interventions, including nutritional interventions in schools. By understanding the intentions behind behaviours and the factors that influence these intentions, school administrators and policy-makers can develop more targeted and effective strategies for implementing dietary guidelines and improving student health.

2.2.3 Social Cognitive Theory (SCT)

Social Cognitive Theory (SCT), developed by Albert Bandura, posits that learning occurs in a social context with a dynamic and reciprocal interaction of the person, environment, and behaviour. Introduced in the 1970s as an extension of Bandura's earlier work on social learning theory, SCT maintains that people learn not only through their own experiences but also by observing the actions of others and the results those actions have (Bandura, 1977).

Central to SCT are several key constructs:

- **Observational Learning (Modelling):** Individuals can observe and replicate the behaviour of others. In the case of dietary practices in schools, students and staff may observe and imitate the dietary choices and eating behaviours of their peers and influential role models.
- **Self-Efficacy:** This is the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations. It is crucial for behaviour change, as individuals who believe they can perform a behaviour are more likely to have the intention to do so and to perform it.
- **Outcome Expectancies:** This refers to the anticipated consequences of a behaviour. Individuals will engage in behaviour if they value the outcomes they expect will result from it.
- **Behavioural Capability:** This means having the knowledge and skill to perform a behaviour. When it comes to implementing dietary guidelines, would involve understanding the guidelines and having the culinary skills to prepare meals that comply with them.
- **Reinforcements:** These are the responses to a person's behaviour that affect the likelihood of continuing or discontinuing the behaviour. Reinforcements can be self-initiated or in the environment, and they can be positive or negative.
- **Reciprocal Determinism:** This is the dynamic interplay between personal factors, behavioural patterns, and environmental events. It means that the environment influences individuals and their behaviours, and simultaneously, individuals can also influence their environment and their behaviour.

Applying SCT to the challenge of implementing food-based dietary guidelines in boarding schools requires a consideration of the multifaceted nature of human behaviour. For instance, the introduction of new dietary guidelines might necessitate changes in the school's culture, environment, and in the personal beliefs of the staff and students. An understanding of the potential role models who can positively influence others, such as respected teachers or popular students, could facilitate the adoption of healthier eating practices (Bandura, 1986).

Criticism of SCT often revolves around its broad nature, which while comprehensive, can sometimes lack the specificity needed to develop targeted interventions (Stajkovic & Luthans, 1998). However, the comprehensive approach of SCT is also its strength, as it allows for the consideration of a wide range of factors that can influence behaviour, which is especially useful in complex settings like schools.

In terms of dietary guidelines in boarding schools, SCT can be a framework for understanding and addressing the various personal, behavioural, and environmental factors that influence dietary behaviour. It suggests that to implement dietary guidelines effectively, schools must not only educate but also provide opportunities for positive modelling, create environments that encourage healthy eating, and ensure that the entire school community believes in and can support healthy food choices (Story, Nannery, & Schwartz, 2009).

3 Methodology

3.1 Study design

The study planned data analysis techniques, which are designed to integrate quantitative and qualitative data, facilitating a comprehensive understanding of the multifaceted challenges in implementing dietary guidelines within the educational sector. (Banda et al, 2017). For this particular study, a case study design was chosen. This design was appropriate when a deep, holistic investigation was required, and it was especially pertinent when examining contemporary phenomena within real-life contexts (Yin, 2018). The case study approach facilitates an in-depth exploration of the processes, stakeholder perspectives, and contextual factors that influence the implementation of

FBDGs in boarding schools. It also allowed for the flexibility to use multiple sources of evidence, which was crucial in capturing the complexity of the implementation process (Stake, 2005).

3.2 Research sites

The selected sites included a group of boarding schools located in Kapiri-mposhi district that was Chipepo, Mpunde and St.Pauls boarding secondary schools chosen for their representative nature in terms of the district's demographics, economic conditions, and educational environment. These schools serve as microcosms of the broader national education system, offering a fertile ground for examining the implementation of FBDGs in a context that could offer insights with broader applicability.

3.3 Population, sample and sampling procedure

The total population was estimated to be approximately 1500 individuals, reflecting a diverse mix of stakeholders each with their perspective and influence on the implementation of FBDGs. From the identified target population, a sample size of 150 individuals were determined this was 10% of the target population. The study picked this because it wanted to have enough information and to provide a sufficient representation of the population while maintaining manageability for in-depth analysis. A stratified random sampling technique was employed to ensure that all subgroups within the population were adequately represented in the sample. This method divided the target population into distinct subgroups (strata) such as administrators, staff, and students, and then randomly selected samples from each subgroup in proportion to their size in the population. This strategy enhanced the representativeness of the sample and ensured that findings were generalizable to the wider population (Thompson, 2012).

3.4 Data analysis

Quantitative data from questionnaires was analyzed using statistical software to identify patterns, correlations, and deviations. Descriptive statistics summarized the data, while inferential statistics tested the hypotheses. Qualitative data from interviews were put into writing and subjected to thematic analysis to identify recurring themes and narratives. This mixed-methods approach to data analysis allowed for triangulation, enhancing the validity of the study's findings (Bryman, 2012).

3.5 Ethical issues

The study obtained permission form DEBS office for Kapiri-mposhi district before engaging the respondents. The study adhered to ethical standards, including obtaining informed consent from participants, ensuring confidentiality and anonymity of responses, and the right to withdraw from the study at any time. Additionally, there was a conscious effort to mitigate any power imbalances between the researchers and participants, and findings were reported honestly and without fabrication (Israel & Hay, 2006).

4 Results and Discussions

4.2 Presence of Nutrition Policy

The analysis investigates the presence of a nutrition policy in boarding schools within Kapirimposhi district.

The findings indicated mixed perceptions regarding the integration of nutrition education within boarding schools. While a majority acknowledged the importance of nutrition education, the varied responses suggest room for enhancing the curriculum's focus on FBDGs. Specifically, the alignment of educational policies with FBDGs shows variability, indicating gaps that need to be addressed to ensure consistent and comprehensive nutrition education across boarding schools in the Kapiri-mposhi district.

Pérez-Rodrigo and Aranceta (2003) discuss school-based nutrition education and its importance in fostering healthy eating practices. They emphasize educational strategies that include efforts to increase health awareness and involve families, particularly for younger children. Coulson, Eiser, and Eiser (1998) highlight the changes brought by the Education Reform Act 1988 and the National Curriculum, which have implications for nutrition education in schools, suggesting that teachers are well-placed to deliver comprehensive and coherent food and nutrition education. Peralta, Dudley, and Cotton (2016) review nutrition education resources for elementary school teachers, finding that most resources embed curriculum approaches and many incorporate parental involvement strategies, yet there is a need for resources that embed cross-curricular and experiential learning approaches.

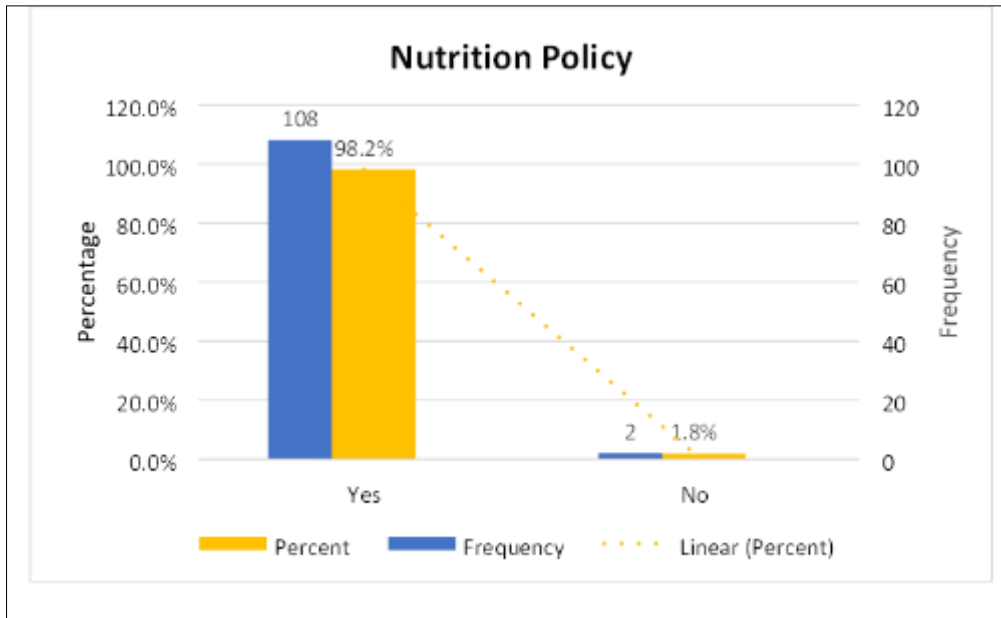


Figure 2 Alignment of Educational Policies with FBDGS Within Boarding Schools in Kapiri-mposhi District

The mixed perceptions on the alignment of educational policies with FBDGS suggest a need for clearer guidelines and a more robust integration of nutrition education into the curriculum. This could involve updating educational policies to ensure that nutrition education is a mandatory part of the curriculum, providing teachers with the necessary resources and training to effectively deliver nutrition education, and involving parents and the community to reinforce healthy eating messages. Enhanced curriculum focus on FBDGS can lead to better-informed students making healthier dietary choices, thereby improving their overall well-being.

4.3 Availability of Budget for Nutrition Programs

The analysis examines whether boarding schools within Kapiri-mposhi district have a dedicated budget allocated specifically for nutrition programs.

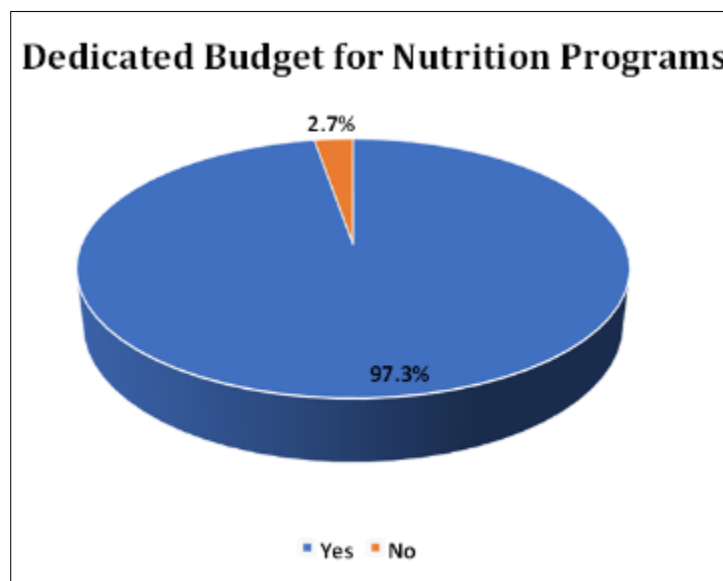


Figure 3 Dedicated Budget for Nutrition Programs

The data reveals that the majority of schools (97.3%) have a dedicated budget for nutrition programs, indicating a prioritization of resources towards promoting healthy eating habits and nutritional well-being among students. These allocated funds may be utilized for various purposes, including procuring nutritious food items, implementing nutrition

education initiatives, training staff on dietary guidelines, and maintaining infrastructure to support food preparation and service.

4.3.1 Assess the current level of nutrition knowledge and training among school staff

The findings from recent research underscore the significant positive impact of school staff's nutrition knowledge and training on the adherence to Food-Based Dietary Guidelines (FBDGs), emphasizing the pivotal role of education in the effective implementation of these guidelines. Enhanced nutrition knowledge and training among school personnel are linked to improved nutritional quality of meals served in schools, influencing students' dietary behaviours positively.

Supporting these findings, a study by Xu et al. (2021) in "Maternal & Child Nutrition" developed a conceptual framework showing how the education sector can be leveraged for nutrition, highlighting the need for well-integrated, culturally appropriate nutrition and health education within the school curriculum, supported by a skilled workforce including school staff. Additionally, Berlin et al. (2013) in "The Journal of School Health" discussed the role of social cognitive theory in farm-to-school-related activities, suggesting that diverse activities incorporated into FTS programs, which are likely part of school staff's training, show great potential to facilitate movement toward desired dietary changes.

The implications of these studies are profound, indicating that investing in the continuous professional development of school staff, especially those involved in food procurement, preparation, and service, could significantly enhance the nutritional outcomes of school meal programs. This necessitates the allocation of resources towards comprehensive training programs that not only provide the requisite nutritional knowledge but also equip the staff with the skills needed to effectively incorporate this knowledge into their daily practices, thus promoting a healthier dietary environment for students.

4.4 Community Engagement and Collaboration in Promoting Food-Based Dietary Guidelines (FBDGs) Adherence

The data reflects a diverse range of responses regarding various aspects of community engagement and collaboration in promoting adherence to Food-Based Dietary Guidelines (FBDGs) within the school context.

Table 1 Community Engagement in FBDGs and Nutrition Programs

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Parents informed and educated about FBDGs and school efforts	10	15	20	35	30
Local food producers involved in menu planning discussions	5	10	15	40	40
Partnerships with local food producers to promote nutritious food	10	15	25	30	30
Events/workshops engaging the community in FBDGs understanding/support	5	10	20	40	35
Feedback from parents/community utilized for nutrition program	5	10	15	45	35

The findings highlight a positive correlation between community participation, including parents and local food producers, and adherence to Food-Based Dietary Guidelines (FBDGs), suggesting that community engagement is crucial for the successful implementation of FBDGs. Chanda et al (2024) 's study supported this finding by stating that community engagement refers to the process by which organizations and institutions involve individuals, groups, and communities in meaningful and collaborative activities aimed at achieving a common goal or addressing shared concerns. This participation is not limited to involvement in decision-making processes but extends to active engagement in activities that support the school's nutrition objectives.

Supporting these findings, research conducted by Cupertino et al. (2022) on "School Feeding Programs: What Happens Globally?" in the "International Journal of Environmental Research and Public Health" discusses the role of nutritional,

cultural, food safety, and agro-family participation in school feeding programs across different countries. This study underscores the importance of integrating cultural, food safety, and agro-family participation into school feeding programs to optimize children and adolescent development, suggesting a broader scope of community engagement in school nutrition programs. Chitondo et al (2024) noted that food security is a pressing issue worldwide, affecting millions of people. In the context of national food security, ensuring access to safe and nutritious food for all citizens is paramount.

The implications of these findings are significant. They suggest that fostering stronger partnerships with local food producers and increasing parental involvement in nutrition education could enhance the effectiveness of FBDGs. Schools might consider creating more opportunities for community involvement, such as workshops, school meal planning committees, and educational events, to strengthen the support network for nutritious eating practices.

4 Conclusion

This study delves into a comprehensive discussion of the research findings, aiming to provide a deeper understanding of the insights derived from the data analysis concerning the alignment of educational policies with Food-Based Dietary Guidelines (FBDGs), the level of nutrition knowledge and training among school staff, and the extent of participation and engagement of the broader school community in Kapiri-mposhi district boarding schools. The discussion critically evaluates the findings in the context of existing literature and theoretical frameworks, emphasizing implications for policy development, practice, and future research endeavours in the field of nutrition education and dietary guidelines implementation within boarding schools. Mixed perceptions regarding the alignment of educational policies with FBDGs suggest a need for clearer guidelines and a more robust integration of nutrition education into the curriculum. Enhanced nutrition knowledge and training among school personnel are linked to improved nutritional outcomes, highlighting the importance of investing in the continuous professional development of school staff. Positive correlations between community participation and adherence to FBDGs underscore the significance of fostering stronger partnerships with local food producers and increasing parental involvement in nutrition education to enhance the effectiveness of FBDG implementation.

4.1 Recommendations

Ministry of education should update policies to ensure that nutrition education is a mandatory component of the school curriculum. This may involve the development of new educational materials that align with FBDGs and the training of teachers to deliver this content effectively.

Head teachers through District Education Board secretary should invest in the continuous professional development of their staff, particularly those involved in food procurement and preparation. This could include regular training sessions, workshops, and access to the latest nutrition research and guidelines.

Head teachers, boarding masters, procurement officers and parent teacher cooperatives should actively seek to involve parents, local food producers, and other community stakeholders in the planning and implementation of nutrition programs. This might include establishing food committees, organizing nutrition-focused events, and creating partnerships with local farms and businesses.

Compliance with ethical standards

Disclosure of conflict of interest




No conflict of interest to be disclosed.

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