Media Influence On Nutrition Behaviour In The First 1000 Days Of Life: A Comparative Study Of Breeze FM And Zanis Under The Sun Proramme In Chipata District

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1. Abstract

This study examines the influence of media on nutrition behaviour during the first 1,000 days of life, focusing on a comparative analysis of Breeze FM and the Zambia News and Information Service (ZANIS) "Under the Sun" programme in Chipata District. The first 1,000 days from conception to a child's second birthday are widely recognized as a critical window for optimal growth, development, and long-term health outcomes. Media platforms play a vital role in disseminating nutrition information; however, their effectiveness in shaping knowledge, attitudes, and practices among caregivers remains underexplored in rural and peri-urban Zambian contexts. Using a mixed-methods approach, the study collected data from caregivers, health practitioners, and programme producers through surveys, interviews, and content analysis. The research assessed the accessibility, frequency, messaging strategies, and audience engagement of both Breeze FM and the ZANIS "Under the Sun" programme. Findings indicate that both media platforms contribute positively to raising awareness of recommended nutrition practices, though they differ in reach, format, and audience interaction. Breeze FM, as a community radio station, demonstrated higher audience engagement and relatability, while ZANIS provided more standardized and policy-aligned messaging. Despite increased awareness, gaps remain between knowledge and practice due to socio-economic constraints, cultural beliefs, and limited access to resources. The study concludes that while media interventions are effective tools for nutrition education, their impact is enhanced when combined with community-based support systems and context-specific messaging. It recommends strengthening collaboration between media houses, health institutions, and local communities to improve the design and delivery of nutrition communication strategies during the first 1,000 days of life.

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2. Introduction

This study looks at the importance of this critical period for child development and explains why media influence is central to improving nutrition outcomes. It examines the influence of media on nutrition behaviour during the first 1,000 days of life, focusing on a comparative analysis of Breeze FM and the Zambia News and Information Service (ZANIS) "Under the Sun" programme in Chipata District. As is known scientifically, the first 1,000 days from conception to a child's second birthday are known to be critical for optimal growth, development, and long-term health outcomes. Media, being educative and informative, therefore play a vital role in disseminating nutrition information. It's therefore very important to know, especially in rural and peri-urban Zambian contexts, whether they sensitize the public and how effective they are. That is why Chipata District, which is a peri-urban, has been taken as a case study. In doing so, it establishes the rationale for comparing ZANIS, a government media institution, and Breeze FM, a private radio station, to determine which is more effective in promoting nutrition behaviour among caregivers.

3. Background Information

Zambia is one of the twenty-two (22) African countries with the highest burden of undernutrition in children under the age of two as many more children and women suffer from one or more forms of malnutrition, including low birth weight, wasting, stunting, and underweight among others (UNICEF 2013).

According to the Demographic Health Survey, currently about 32 percent of the children under two years of age are chronically undernourished. This represents about 1.2 million children within the same age group who are stunted while close to 160,000 are wasted (DHS 2018).

Food and nutrition security worldwide is recognised as a human right and a critical ingredient for economic, social and human development (The State of Food Insecurity in the World 2012).

Poor nutrition leading to stunting has long-term effects on an individual, the family, society and the nation including diminished cognitive and physical development, poor performance in school, reduced adult economic productivity and increased risk of generative diseases such as diabetes and hypertension (SUN factsheet 2019-2023).

A lot of research shows that malnutrition of both mothers and children is a key factor in child morbidity and mortality among low income families in Zambia. It greatly contributes to micronutrient deficiencies in children, severe childhood illnesses, stunted growth, wasting and mortality. Food and nutrition security worldwide is recognised as a human right and a critical ingredient for economic, social and human development (UNICEF 2013). This is why the global Scaling Up Nutrition (SUN) movement was formed in 2009. Zambia was an early adopter of SUN, joining in 2010 to implement a national programme focusing on stunting reduction (UNICEF 2018). The Zambian Government working together with other partners through the National Food and Nutrition Commission (NFNC) joined the Scaling Up Nutrition (SUN) movement, as an initiative to focusing on the first 1,000 Most Critical Days programme (MCD) of a child's life from the time of conception, a period that is critical to human development.

Chipata is one of districts that has a nutrition problem. Despite the availability of the indigenous foods in Chipata District, children have continued to die from malnutrition. For instance, the Zambia Daily Mail of June 5, 2014 reported that over 20 children died in Chipata due to poor nutrition in the first quarter of that particular year. This showed how rampant malnutrition levels are in the district and media houses in the district rose to the challenge and gave it mass coverage.

To effectively conduct its communication, the programme has a communication strategy that centres on the need to re-invigorate and redirect the communication activities of the program in order to reinforce both the efficiency and effectiveness of the overall SUN strategy and the need to re-new the support and participation of the various stakeholders in the First 1,000 MCDP campaign in Zambia.

The communication strategies which comprise community-based channels such as the use of community media mainly radio stations, radio listening groups, drama, songs, road shows, field days, and mass media, which are the most effective as they reach a large audience within a short period , include, radios like Breeze FM, Radio Maria, Feel Free radio and Smooth FM, newspapers

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such as Zambia Daily Mail and Times of Zambia and Television stations and channels like Chipata TV, National Agricultural Information Services (NAIS) and the Zambia News and Information Services (ZANIS).

4. Media Houses in Chipata

According to the 2022 Census of Population and Housing, Chipata District has a population of 327,059, with 12 media houses, which include Zambia News and Information Services (ZANIS), Radio Breeze, National Agricultural Information Services (NAIS), Feel Free Radio, Smooth Radio, Radio Maria, Times of Zambia, Zambia Daily Mail, Daily Nation, Chipata Television and Diamond TV. This research study used ZANIS, which is a government-owned media institution, and Radio Breeze, which is privately owned.

4.1 ZANIS

The Zambia News and Information Services (ZANIS) is a public relations wing of Government under the Ministry of Information and Broadcasting Services. The Department came into being in 2005 following the merger between the Zambia News Agency (ZANA) and Zambia Information Services (ZIS), both Government wings.

ZANIS mandate is to interpret Government policies and provide accurate and comprehensive information to the public in order to solicit their support and participation in national development. This mandate is executed through the Department's three units, Editorial, Technical Services, and Research and Information.

The Department's headquarters is in Lusaka while regional offices are in the following towns: Kabwe (Central Province), Ndola (Copperbelt Province), Mansa (Luapula Province), Kasama (Northern Province), Chipata (Eastern Province), Livingstone (Southern Province), Mongu (Western Province) and Solwezi (North-Western Province).

The Department as a media mix provides credible news through text, video and still pictures to the Zambian public. This is done through its clients who include the national broadcaster, Zambia National Broadcasting Corporation (ZNBC), Times of Zambia, Zambia Daily Mail and a string of privately owned newspapers, commercial and community radio stations as well as private television stations. ZANIS also provides news and in-depth articles to the Zambian public abroad and the international community via the internet.

4.2 Radio Breeze FM

Breeze FM is a privately owned radio station in Chipata, Zambia. The station's coverage is shaped by its public service mission, which involves providing access to useful, relevant, and up-to-date development-related information that will foster growth at personal, family, and community levels.

The station has a radius of 120 km, covering 9 districts out of the 15 districts in the province. The signal also spills over into Malawi, reaching as far as the outskirts of the capital, Lilongwe. The radio station can be listened to online live. It is a public interest station – combining education, information, news and entertainment. The station's focus is on the interplay of issues concerning the community; its history and the social, cultural and economic activities and endeavours of the people.

In 2006, the station extended its broadcasting to 18 hours per day, shared equally by English and the local Nyanja language. As of January 2009, it broadcasts from 06.00 to 24.00 hours.

Spot announcements are provided, radio magazines and documentaries that last from 5 minutes to 1 hour and cover news, reviews, features, testimonies, interviews, and discussions. Programmes focus on issues meant to be meaningful to community members and range from health issues to agriculture, education, cultural and social issues, nutrition, and the environment.

5. Statement of the Problem

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The development of any country is not just about infrastructural development but also the well-being of the people especially the well-being of children because they are the future of the nation as the famous Bemba proverb says “imiti ikula empanga”. Literally translating it means “the little shrubs will grow into a forest”. Unfortunately, as mentioned already, Zambia is one of the twenty-two African countries with the highest burden of malnutrition in children under the age of two as many more children and women suffer from one or more forms of malnutrition including low birth weight, wasting, stunting, and underweight among others. To this effect, the government has come up with efforts such as the Scaling Up Nutrition (SUN) Programme.

Unfortunately, despite these efforts, malnutrition is still one of the causes of child mortality in Chipata District of Eastern Province. This problem has negatively affected households in the district as it hampers the health and growth of children, leading to death and those that survive have challenges in their cognitive development.

A possible cause of this problem is lack of a balanced diet and practices such as perpetual eating of one type of food. The difficulty arising from this problem is poor health, anemia, stunted growth and frequent visits to health centres and death. Malnutrition greatly contributes to micronutrient deficiencies in children, severe childhood illnesses, stunted growth, wasting and mortality (NFNC communications strategy 2015).

In order to fight and eradicate malnutrition, the media has been a leaning shoulder in educating and sensitizing the public in terms of balanced diet issues. Once the media is effectively used to sensitise the public, families will be informed and educated on the importance of consuming nutritious food. Hornik R. (2002) argues that, it is recognised that the media has a massive role to play in raising awareness and communicating messages around good nutrition and healthy diets to the masses with a sole purpose of saving children from dying from preventable diseases like malnutrition hence the media is key in promoting health eating habits.

With the presence of 12 media houses in Chipata, it is hoped that the media would be of great help to the society in educating the public about good feeding habits in defeating the scourge of malnutrition. It is for this reason that ZANIS as government and Breeze as private media, being among the oldest in Chipata, have been chosen to be compared and find out which one is more effective in educating the public in promoting good nutrition in children below the age of two. It is important to know between these two media houses, ZANIS and Breeze FM, which one is more effective than the other as a way of encouraging to do better and helping the others which are lagging behind to pull up.

6. Research Objectives

6.1 General Research Objective

To assess between the public media and the private media, which of the two is more influential in promoting good nutrition in the first 1000 days of children under the age of two in the Scaling up Nutrition (SUN) Programme in Chipata district.

6.2 Specific Objectives

i. To find out whether ZANIS and Radio Breeze FM sensitise the public about the SUN programme in order to promote good nutrition in the first 1000 days of children under the age of two in Chipata.

ii. To compare between these two media houses, through the programmes they offer, which one has more impact among the people.

iii. To make recommendations the best strategies the two media houses could use in promoting good nutrition in the first 1000 days of the children under the age of two in Chipata.

7. Theoretical Framework

This study is guided by two key communication theories: The Diffusion of Innovation Theory and the Agenda Setting Theory. These theories help explain how media influences people’s understanding and behaviour, especially in relation to nutrition during

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the first 1,000 days of a child's life. Together, they provide a strong foundation for analysing how government and private media shape nutrition practices among caregivers in Chipata District.

7.1 Diffusion of Innovation Theory (Everett Rogers, 1962)

The Diffusion of Innovation (DOI) Theory, developed by Everett Rogers in 1962, explains how new ideas, behaviours, or products spread within a community over time. According to Rogers, people adopt innovations at different rates, depending on how new or useful they perceive them to be. The process begins with a few early adopters who try out the new idea and then influence others in their social circles to do the same. Over time, the innovation becomes more widely accepted and practiced (Rogers, 2003). In this study, the innovation is the promotion of good nutrition practices for children under the age of two. Media houses like Breeze FM and ZANIS act as the communication channels that carry these messages to the public. Through programmes, interviews, radio listening groups, and community discussions, they help spread awareness and encourage behaviour change. The theory supports the idea that the more accessible, relatable, and consistent the message is, the more likely it is to be adopted by caregivers. It also explains why some people change their behaviour quickly while others take longer, depending on their exposure and trust in the media.

The DOI theory is particularly relevant in the context of Chipata District, where caregivers may have varying levels of access to media and differing degrees of openness to new ideas. For example, caregivers who regularly listen to Breeze FM may be more exposed to nutrition messages and therefore more likely to adopt recommended practices such as exclusive breastfeeding or diversified feeding. On the other hand, those who rely on ZANIS may receive information in a more formal and less interactive format, which could affect their level of engagement and adoption. The theory also highlights the importance of tailoring messages to different segments of the population, recognising that early adopters can play a crucial role in influencing others. By understanding the diffusion process, media practitioners can design programmes that not only inform but also inspire action across different community groups.

7.2 Agenda Setting Theory (McCombs & Shaw, 1972)

The Agenda Setting Theory, introduced by Maxwell McCombs and Donald Shaw in 1972, focuses on how the media influences what people think is important. The theory suggests that while the media may not tell people what to think, it plays a powerful role in telling them what to think about. When a topic is covered frequently and prominently in the media, the public begins to see it as a priority (Littlejohn et al., 2002). This theory is important to the study because it explains how media coverage of nutrition issues can shape public attention and concern. If Breeze FM or ZANIS regularly broadcast programmes about child feeding, hygiene, and maternal health, they are setting the agenda for public discussion. Caregivers are more likely to consider these topics important and take action. The theory also highlights the responsibility of media houses to use their platforms wisely, especially when dealing with life-saving information like nutrition during the first 1000 days.

In Chipata District, where malnutrition remains a serious concern, the media's role in setting the public agenda is critical. By consistently highlighting nutrition-related issues, media houses can influence caregivers to prioritise healthy feeding practices and seek information on child development. The theory also underscores the importance of message framing and repetition. For instance, if Breeze FM uses storytelling and local language to present nutrition topics, it may resonate more deeply with listeners and lead to greater behavioural impact. ZANIS, with its government mandate, may focus on policy-driven messages that are informative but less engaging. The contrast between these approaches provides a valuable lens for evaluating media effectiveness. Agenda Setting Theory also suggests that media coverage can influence not only individual behaviour but also community norms and public discourse. When nutrition becomes a regular topic in radio programmes and discussions, it gains visibility and legitimacy, encouraging collective action and support.

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8. Literature Review

8.1 Promotion of Good Nutrition by the Media

Mass media play a central role in promoting health because their wide reach allows messages to cross geographical and social boundaries. Exposure to specific messages in the media shapes public knowledge, attitudes, beliefs, and behaviours. Over the past decades, campaigns have been used to encourage positive health behaviours and discourage harmful ones (Dhawan, 2023).

Research suggests that the success of mass media campaigns depends on factors such as the clarity of messages, the level of exposure, and the creativity of communication. These elements help influence the determinants of behaviour targeted in the campaign (Beluska-Turkan, 2019). Delivering health messages requires selecting the right media channels so that recipients can understand and act on the information. McLuhan's idea that "the medium is the message" reminds us that the choice of communication tools affects how content is received (UNICEF, 2012).

A number of scholars have investigated the role of media in promoting nutrition and influencing behaviour change. Dhawan (2023), in *Media and Behaviour Change*, examined how campaigns have been used to encourage positive health behaviours and discourage harmful ones. His study employed a descriptive approach, analysing media campaigns across different health sectors. The findings confirmed that mass media can create awareness and influence behaviour, but the limitation was that no comparison was made between public and private media in the specific area of nutrition.

Gillespie (2007), in *Communication for Change*, adopted a communication analysis methodology to explore how mass media reaches large audiences. His work highlighted that single messages rarely change strongly held attitudes, recommending instead a multi-channel approach. The sample included various media outlets, and the findings stressed the need for repeated exposure. However, the limitation was that frequent exposure may not be possible if different media forms are used inconsistently.

Lediard (1991), in *Nutrition and Education*, drew on social marketing literature to explain strategies for nutrition communication. His study was largely theoretical, focusing on message planning rather than empirical testing. The analysis showed that persuasive messages can be designed effectively, but the limitation was that these strategies were not directly applied as a media approach, leaving a gap in practical implementation.

Harrabin, Coote, and Allen (2003), in *Health in the News*, used content analysis of media coverage in the United States. Their sample included magazines, newspapers, radio, television, and internet sources. They found that demand for nutrition information had grown exponentially, reflecting public concern about food and health. However, the increased availability of information did not always improve knowledge. The limitation was that the study did not compare which media platform was more effective in reaching health-conscious audiences.

Jepson, Harris, Platt, and Tannahill (2010), in *Health Promotions and Media*, examined the use of mass media such as television, radio, billboards, and newspapers in delivering health messages. Their methodology involved reviewing health promotion campaigns, and the findings showed that mass media can modify knowledge and attitudes of large populations simultaneously. The limitation was that the messages were not specific to nutrition, increasing the risk of audiences missing vital nutrition information.

Flora (1989), in *The Role of Media Across Four Levels of Health Promotion Intervention*, employed a comparative analysis of public media technologies. His findings showed that public media is the fastest way to spread health information, and health institutions believe it plays a vital role due to accessibility. However, the research focused only on public media and did not address private or commercial outlets.

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Wakefield (2010), in *Nutritional Facts*, used longitudinal studies to assess the impact of repeated messages. His findings confirmed that even well-designed messages must be repeated many times to build awareness. The limitation was that competing programmes make it difficult for media houses to repeat nutrition content consistently.

Mhuru (2018), in *CSO-SUN Advocacy on Nutrition*, employed case study methodology focusing on Zambia. His findings showed that media is critical in influencing community well-being and that advocacy campaigns have educated the public on nutrition's long-term effects. The limitation was that without dedicated programmes or spaces for nutrition, media participation in advocacy remains constrained.

Mun'ou (2012), in *Scaling Up Nutrition (SUN) Kenya*, conducted a field study examining how media influences policy decisions. His findings showed that the public was sensitised on good nutrition, malnutrition cases, and exclusive breastfeeding. However, the study did not specify which media platform—public or private—was more effective in influencing policy.

Chilufya (2015), in *CSO-SUN Zambia Report*, analysed media coverage frequency. His findings showed that Zambian media covers nutrition issues about four times a week across print, radio, online, and television, sustaining the narrative and keeping leaders accountable. The limitation was that coverage was not as consistent compared to other topics such as politics.

Okaka (2018), in *The Role of the Media in Food Nutrition Public Awareness Campaigns for Community Empowerment in Africa*, employed qualitative analysis of media campaigns. His findings showed that the media has a social responsibility to sustain public awareness of nutrition. However, the limitation was that such information may be ignored by audiences, reducing its impact.

Taken together, these studies confirm that media has a strong role in promoting nutrition awareness and influencing behaviour. They also reveal recurring gaps: most research does not compare public and private media directly, some focus only on general health rather than nutrition, and others highlight sustainability challenges in coverage.

8.2 Comparison Between Government and Private Media in the Promotion of Good Nutrition

Government-owned media technologies are often the fastest way to spread information among large groups. People gain knowledge and information through these channels as well as through other forms of media. Health institutions and professionals believe that government media can play a vital role in promoting good health due to their accessibility (Flora et al., 1989).

At the same time, private media outlets also provide nutrition information that influences behaviour. Many consumers, especially women, seek nutrition advice from different sources, but media remains the most frequent source (Rowe & Toner, 2003). Articles and programmes from newspapers, radio, television, booklets, and the internet have been shown to positively influence food intake (Freisling et al., 2009). Studies over the past twenty years confirm that both print and electronic media can shape health and nutrition behaviour (Goldberg, 2009).

This study therefore compares ZANIS, a government media institution, and Breeze FM, a private radio station, to assess which has greater impact in promoting good nutrition during the first 1,000 days of life.

8.3 Empirical Studies from the Global Perspective

8.3.1 Promotion of Good Nutrition by the Media in the United States of America

In the United States, the media, health professionals, and educators act as the main gatekeepers of food and health information. They determine what consumers hear, read, and believe, and carry the responsibility of presenting facts clearly and in context (Fineberg & Rowe, 1998). The demand for nutrition information has grown rapidly in recent years. People are increasingly concerned about food not only at a basic level but also in relation to health, lifestyle, and long-term wellbeing. This demand is reflected in extensive coverage across magazines, newspapers, radio, television programmes, and the internet (Harrabin et al., 2003).

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Mass-media health education campaigns in the United States are designed to reach large populations. They typically aim to achieve specific outcomes, target wide audiences, operate within defined timeframes, and use organised communication channels such as newspapers, radio, television, posters, and online platforms (Princeton Survey Research Associates, 2019). Research shows that effective campaigns use clear, concise, and credible messages. The most successful ones include memorable slogans or themes, and they are presented by trusted sources in a positive style that avoids fear or negativity (US Department of Health and Human Services, 2000).

However, single messages rarely change strongly held attitudes. Studies emphasise the need for repeated exposure and multi-channel approaches to reinforce behaviour change (Wakefield, 2010). Interpersonal communication, such as counselling in clinics, may be more effective at influencing individuals, but mass media remains essential for reaching wider audiences (Gillespie, 2007). To address this, partnerships are recommended. Nutritionists, social scientists, media specialists, and community leaders often collaborate to design campaigns that combine interpersonal and mass communication (Severin & Tankard, 1988; Dwivedi, 2023).

Overall, U.S. studies show that while mass media campaigns can raise awareness and influence attitudes, their effectiveness depends on message quality, frequency, and integration with other communication strategies. Government media outlets often focus on policy-driven messages, while private media may use more interactive formats. Both play important roles, but their comparative effectiveness in promoting nutrition behaviour among children under two remains an area requiring further research.

8.3.2 Promotion of Good Nutrition by the Media in Bangladesh

Bangladesh has made progress in reducing maternal and infant mortality, yet undernutrition remains a major challenge. Close to one-third of children under five are undernourished (Chowdhury et al., 2013). Infant and Young Child Feeding (IYCF) practices are critical for child growth and development, but only half of infants under six months are exclusively breastfed. Complementary feeding practices are poor, with only one-quarter of children aged 6–23 months consuming adequately diverse foods (NIPORT et al., 2016).

Interventions such as interpersonal counselling and group meetings have improved breastfeeding practices (Haider et al., 2002). Nutrition education combined with food supplements has shown positive impacts on child growth (Roy et al., 2005; Saha et al., 2008). Mass media campaigns using radio, television, billboards, and newspapers have also been employed to promote behavioural change (Hornik, 2010). Evidence shows that well-developed messages tailored to target audiences have higher success rates. Campaign intensity and duration also influence effectiveness. For example, repeated radio broadcasts about exclusive breastfeeding have been more effective than one-time announcements. Combined strategies, such as pairing mass media with community meetings, contribute to successful campaigns (Wakefield, 2010).

Despite these efforts, evidence of mass media improving a broad set of IYCF practices beyond breastfeeding remains limited (Nguyen et al., 2016). Most campaigns have focused narrowly on breastfeeding promotion, leaving gaps in complementary feeding, hygiene, and dietary diversity. This indicates the need for further research comparing government and private media in promoting a wider range of nutrition practices for children under two.

8.3.3 Promotion of Good Nutrition by the Media in India

India faces one of the highest burdens of child malnutrition globally, with millions of children under five affected by stunting, wasting, and micronutrient deficiencies. The government has implemented large-scale programmes such as the Integrated Child Development Services (ICDS) and the Poshan Abhiyaan (National Nutrition Mission), which rely heavily on both government and private media to spread nutrition messages.

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Mass media campaigns in India have promoted exclusive breastfeeding, timely introduction of complementary foods, and dietary diversity. Radio and television have been widely used to reach rural populations, while private media outlets and digital platforms have targeted urban audiences. Studies show that repeated exposure to nutrition messages through radio dramas, television spots, and community screenings has improved awareness among caregivers (UNICEF India, 2019).

However, challenges remain. Literacy levels, language diversity, and socio-cultural practices sometimes limit the effectiveness of campaigns. Research indicates that combining mass media with interpersonal communication, such as Anganwadi workers counselling mothers, produces better results than media alone (Gupta et al., 2020). Private media has been more flexible in using local languages and interactive formats, while government media has focused on policy-driven messages.

Suffice to say, evidence from India demonstrates that both government and private media play important roles in promoting nutrition during the first 1,000 days. Yet, similar to the United States and Bangladesh, comparative studies assessing which type of media has greater impact remain limited.

8.3.4 Promotion of Good Nutrition by the Media in Brazil

Brazil has also faced challenges with child malnutrition, though progress has been made through strong public health campaigns. The Brazilian government has implemented national programmes such as the Bolsa Família conditional cash transfer scheme, which includes nutrition education components, and the National School Feeding Programme. These initiatives rely on government media to promote healthy eating practices, while private media has played a role in shaping public opinion through advertising and entertainment.

Mass media campaigns in Brazil have focused on reducing child malnutrition, promoting breastfeeding, and encouraging consumption of locally produced foods. Television and radio have been particularly influential, given their wide reach across urban and rural areas. Studies show that campaigns combining mass media with community-based interventions have achieved better outcomes than media alone (Monteiro et al., 2010).

Private media in Brazil has often been criticised for promoting processed foods, which can undermine nutrition campaigns. However, partnerships between government agencies, NGOs, and private broadcasters have helped balance this influence by promoting positive nutrition messages. Evidence suggests that coordinated campaigns, repeated over time, have improved awareness and contributed to reductions in child malnutrition rates (Victora et al., 2011).

Brazil's experience demonstrates the importance of integrating government and private media efforts. While government media provides authoritative, policy-driven messages, private media offers broader reach and creative formats. Together, they can reinforce behaviour change during the first 1,000 days of life.

From these global studies in the United States, Bangladesh, India, and Brazil, it is clear that mass media campaigns can raise awareness and influence behaviour, but their success depends on message quality, repetition, and integration with other strategies. Both government and private media play important roles, yet their comparative effectiveness in promoting nutrition behaviour for children under two has not been fully assessed.

8.4 Empirical Studies from the African Perspective

8.4.1 Promotion of Good Nutrition by the Media in Kenya

An estimated 35 percent of children less than five years of age in Kenya are stunted, 16 percent are underweight, and 7 percent are wasted (KNBS and ICF Macro, 2010). Lack of appropriate breastfeeding and complementary feeding practices are the main causes of undernutrition. Inappropriate breastfeeding and complementary feeding practices can also initiate the problem of overweight and

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obesity that may only become most apparent in children beyond the age of two years. Kenya is among many countries that suffer from the double burden of both types of malnutrition.

Kenya joined the global movement for Scaling Up Nutrition (SUN) in November 2012, thereby committing to addressing malnutrition at scale in a multi-sector approach. To date, Kenya has established six SUN networks, namely Government, United Nations, Donor, Business, Civil Society, and Academia. These are harnessing various efforts to meet SUN Movement objectives. The Global Nutrition Report (2015) recognised Kenya as the only country on course to meet the 2025 World Health Assembly targets. It notes that nearly every country with available data is on course to meet at least one of the five global targets.

According to Titus Mun'ou (2012), a study conducted in Kenya shows that the role of the media in influencing policy decisions on health and nutrition is very important. Through the media, the public is sensitised on good nutrition, malnutrition cases, benefits of eating locally produced nutritious foods, exclusive breastfeeding, and baby-friendly facilities. Members of Kenya's SUN Civil Society Alliance support the Ministry of Health to ensure media coverage of nutrition events, with some participating in media talk shows and discussions on topical issues.

Wilson Taume Okaka (2018) observes that effective media engagement can create, raise, and sustain public awareness of nutrition policy, research outputs, and family nutrition practices, or break cultural barriers to poor food habits. The media are vital for bridging knowledge and practice gaps among researchers, policy makers, practitioners, communities, the private sector, and donors. Collaboration across regions is key for building local capacity and ensuring sustainable nutrition access.

Proper nutrition is essential for child growth. Children who are well nourished are more likely to be healthy, productive, and able to learn. Malnutrition, by contrast, is devastating. It blunts intellect, reduces productivity, and perpetuates poverty for families and societies (UNICEF, 2012). Media-based nutrition education projects have been implemented in many countries. Some have produced changes in behavioural practices, such as campaigns for oral rehydration salts in Egypt, Honduras, Gambia, and Swaziland, though changes in nutritional status are less common (Hornik, 1985).

Severin and Tankard (1988) argue that the best use of media, particularly for stand-alone campaigns, is to build public awareness about new issues or problems. One of the most powerful aspects of the media is its ability to set the public agenda. The media shapes what people view as important and defines concerns and problems. However, the public may not always agree with the conclusions reached by the media, and other forms of two-way communication may be needed to persuade people to adopt new practices.

A media visibility study conducted by Reelforge, covering May 2014 to May 2015, found that nutrition coverage was highest on radio due to the large number of outlets. Television had the highest share of advertising value equivalents for nutrition products and services, despite fewer nutrition stories compared to other media types (Kabore and Serra, 2015). The study recommended that nutrition actors push for more coverage by regional and rural radio stations to address malnutrition in areas such as West Pokot and Turkana. It also suggested increasing efforts to profile nutrition stories in major media channels, such as television and newspapers, targeting key decision-makers.

The media in Kenya therefore carry a social responsibility to sustain public awareness of nutrition values and benefits through effective information dissemination. Evidence shows that both government and private media have contributed to raising awareness, but coverage remains uneven, with rural areas less reached than urban centres.

8.4.2 Promotion of Good Nutrition by the Media in Nigeria

Nigeria has the second highest burden of stunted children in the world, with a national prevalence rate of 32 percent among children under five. An estimated two million children suffer from severe acute malnutrition, but only two out of every ten affected are currently reached with treatment. Seven percent of women of childbearing age also suffer from acute malnutrition (UNICEF, 2023).

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Exclusive breastfeeding rates have not improved significantly over the past decade, with only 17 percent of babies exclusively breastfed during their first six months. Just 18 percent of children aged 6–23 months are fed the minimum acceptable diet (UNICEF, 2023). The northern states are the most affected by stunting and wasting. High rates of malnutrition pose significant public health and development challenges. Stunting is linked to poor cognitive development, reduced educational performance, and low productivity in adulthood, contributing to economic losses estimated at up to 11 percent of Gross Domestic Product.

Poor nutrition during the first 1,000 days causes irreversible damage to a child's brain and growth potential. These developmental effects ripple through society, affecting school performance and limiting the number of children who can rise out of poverty and contribute to the economy (FHI Solutions LLC, 2022).

The International Society for Media in Public Health (ISMPH) has called on media practitioners to advocate for good nutrition and its benefits in ending malnutrition. According to Makanjuola (2022), the media is reaching communities with reports that empower them to prevent causes of undernutrition such as diarrhoea, malaria, poor infant feeding, and poor hygiene. The media has a powerful role in disseminating information to disadvantaged and vulnerable groups with lower education levels and higher rates of malnutrition.

Children below the age of two are most vulnerable to all forms of malnutrition, including stunting, wasting, micronutrient deficiencies, and overweight, due to their greater need for essential nutrients per kilogram of body weight than at any other time in life. A UNICEF report titled *Fed to Fail* (2021) states that many children under two lack the food and nutrients they need to thrive, leading to irreversible developmental harm.

While the media has played a strong role in disseminating nutrition information, challenges remain. The presence of unqualified nutritionists has sometimes led to misinformation, leaving the public confused about correct practices (Salami and Ihensekhien, 2019).

Studies in Nigeria confirm that both government and private media have contributed to raising awareness of nutrition, but their impact has varied. Some studies focus on the role of the media in promoting good nutrition, while others assess its direct impact. This variation shows the need for further research comparing government and private media in promoting nutrition for children under two. Bridging this gap is important because the media has a vital role to play in encouraging healthy living among communities.

8.4.3 Promotion of Good Nutrition by the Media in South Africa

South Africa faces a complex nutrition landscape, with both undernutrition and rising rates of childhood obesity. National surveys indicate that stunting affects nearly one in four children under five, while overweight and obesity are increasing among urban populations (Shisana et al., 2013). The government has implemented programmes such as the Integrated Nutrition Programme and campaigns promoting exclusive breastfeeding and healthy diets.

Government media outlets have played a role in disseminating nutrition messages through public service announcements and educational programming. Private media, including commercial radio and television, have also been active in shaping public opinion, though sometimes criticised for advertising processed foods. Studies show that coordinated campaigns combining government and private media have improved awareness of breastfeeding and complementary feeding practices (UNICEF South Africa, 2018).

Challenges remain in reaching rural communities and addressing socio-economic inequalities. Research indicates that while government media provides authoritative information, private media often reaches wider audiences with creative formats. The

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combination of both has proven effective in raising awareness, but further studies are needed to assess their comparative impact on behaviour change among caregivers of children under two.

8.4.4 Promotion of Good Nutrition by the Media in Ethiopia

Ethiopia has one of the highest rates of child malnutrition in Africa, with nearly 38 percent of children under five stunted and 10 percent wasted (EDHS, 2016). The government has prioritised nutrition through the National Nutrition Programme and partnerships with international organisations. Mass media campaigns have been used to promote exclusive breastfeeding, dietary diversity, and hygiene practices.

Radio remains the most influential medium in Ethiopia, particularly in rural areas where literacy levels are low. Government radio stations broadcast nutrition programmes, while private and community radio stations provide locally tailored messages. Studies show that repeated radio campaigns have improved knowledge of breastfeeding and complementary feeding, though behaviour change has been slower (Alive & Thrive, 2014).

Television and print media have less reach in rural areas but are important in urban centres. Evidence suggests that combining mass media with interpersonal communication, such as health extension workers visiting households, produces better outcomes than media alone. Both government and private media play important roles, but their comparative effectiveness in promoting nutrition for children under two has not been fully assessed.

From these African studies in Kenya, Nigeria, South Africa, and Ethiopia, it is clear that media plays a vital role in promoting nutrition awareness and influencing practices. Government media often provides authoritative, policy-driven messages, while private media reaches broader audiences with diverse formats. Both have strengths and limitations, and their combined use appears most effective. However, comparative studies assessing which type of media has greater impact on nutrition behaviour for children under two remain limited.

8.5 Empirical Studies from the Zambian Perspective in the Promotion of Good Nutrition by the Media

While significant progress has been made in ensuring proper nutrition for children, challenges remain throughout the world. For Eastern and Southern Africa, stunting, also referred to as chronic malnutrition (low height for age), is of particular concern with more than 25 million, or 40 percent of children under five years of age suffering from it.

In Zambia, ensuring adequate nutrition among the low-income groups, mothers and children, and the vulnerable population is a serious challenge today. According to the Zambia Statistics Agency (ZamStats, 2022), it is estimated that 35 percent of children under the age of five years are chronically under-nourished, representing about 1.2 million children within the same age group who are stunted, while about 160,000 are wasted. Undernutrition, which is preventable, causes lifelong disadvantages impacting negatively on intellectual and physical development and health outcomes (UNICEF, 2013).

According to the NFNC communication strategy (2014), Zambia is politically committed to tackling undernutrition under the First 1000 Most Critical Days Programme (MCDP) as a key strategy to reduce stunting by the National Food and Nutrition Commission (NFNC Communication Strategy and Implementation Plan, 2014). Effective media participation is key to supporting interventions for the First 1000 MCDP. The media provides nationwide campaigns around the importance of maternal and child nutrition to prevent stunting in the context of the first 1000 Most Critical Days, and critical information is disseminated at various levels to reach different audiences using different messages, channels, and activities.

The goal in using the media is to give the highest confidence in the underlying value of nutrition projects through effective communication and contributing to the already existing body of knowledge. Malnutrition has continued to be one of the leading causes of child mortality and is estimated to account for more than one third of about three million deaths in under-five children

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globally (UNICEF, 2013). The concern is that proficient and interdisciplinary teamwork lacks proper communication, as the adequate use of communication skills and interpersonal relationships constitutes the foundation that sustains palliative care.

Other studies have shown that malnutrition of differing degrees is rampant in Zambia and is chronic rather than acute. Chipata City, for example, like many other districts, has a nutrition problem, but with the consumption of indigenous foods, the trend is being reversed. However, despite the availability of indigenous food in Chipata City and other communities in Zambia, children have continued to die from malnutrition. For example, the Zambia Daily Mail of June 5, 2014 reported that over 20 children died in Chipata due to poor nutrition in the first quarter of that year.

According to the World Health Organization (2013), nutrition during pregnancy and in the two years of a child's life provides the essential building blocks for brain development, healthy growth, and a strong immune system. A growing body of scientific evidence shows that the foundation of a person's lifelong health, including their predisposition to obesity and certain chronic diseases, is largely set during this 1,000-day window.

Zambia is one of 22 African countries with the highest burden of undernutrition in children under the age of five, as many more children and women also suffer from one or more forms of malnutrition, including low birth weight, wasting, stunting, and underweight. Malnutrition has continued to be one of the leading causes of child mortality and is estimated to account for more than one third of about three million deaths in under-five children globally (UNICEF, 2013).

Media is a major source of information or misinformation on nutrition. Members of the public are often bombarded by messages about foods. The media consists of campaigns aimed at communicating messages with the hope of influencing potential consumers. Forms of media include television, radio, print, and social media, all of which have been linked to significantly impacting individual food choices and the availability of nutrition information. Over the past century, the media has rapidly developed through changes in technology and the introduction of worldwide and portable platforms (Salami and Ihensekhien, 2017).

Advocacy and communication form the bedrock of driving and empowering nutrition outcomes. It is through advocacy and communication that policy changes are influenced and communities are sensitised. Advocacy targeted at high-level decision-makers can lead to government commitments that have the potential to improve nutrition programming and accountability. Through strategic lobbying, increased resources are allocated to nutrition interventions. For nutrition interventions to be properly planned and implemented, there must be a good understanding of nutrition among political players, policymakers, policy implementers, and the general public. Advocacy and communication play the unique role of creating demand and building consciousness about the importance of nutrition at all levels and among all key stakeholders in nutrition development. Sensitisation and demand-creation are key components of the story of change that has seen community mobilisation around nutrition progress, thereby creating a relationship between the population and its leaders and fostering accountability and involvement (Eneya Phiri, 2021).

Civil Society Organisation (CSO)-SUN has been very successful in engaging the media to sustain the nutrition dialogue in the country. The Alliance has trained the media on nutrition reporting and recognised deserving institutions and individuals at its annual award-giving ceremony. This has continued to inspire accurate nutrition coverage in Zambia.

According to William Chilufya (2015:1), on average, the Zambian media covers nutrition issues around four times a week across print, radio, online, and TV media. This sustains the narrative on nutrition, ensuring that it is always a prime topic when discussing development issues. It also creates demand from the public and keeps government leaders accountable.

Mathews Mhuru (2018:2) states that the media is critical in influencing the well-being of communities. Through advocacy campaigns and visibility, the media is vital in educating the public and raising awareness on the importance of nutrition, as well as its long-term effects. The media can use its collective power to lead and mobilise social actions for nutrition. Media engagement

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has been key to the successful advocacy work the Civil Society Organisation Scaling Up Nutrition Zambia (CSO-SUN) has been doing.

From the Zambian perspective, as shown in the research above, a number of studies have been carried out on the role of the media in promoting good nutrition in children, but certain studies concentrated on how frequently the media covers issues to do with nutrition without assessing the effectiveness of the various media houses in promoting good nutrition in children below the age of two. Therefore, this calls for research in assessing the effectiveness of the public as compared to the private commercial media in promoting good nutrition in children below the age of two. Bridging this gap is important because the media has a vital role to play in promoting good nutrition in children, thereby encouraging healthy living among communities.

9. Gaps in Literature Review and Studies

From the reviewed literature, several gaps emerge. First, while many studies confirm that mass media can influence health behaviours, few have specifically compared the effectiveness of public versus private media in promoting nutrition. Second, much of the research focuses on general health communication rather than nutrition for children below the age of two, leaving a critical gap in early childhood nutrition studies. Third, several studies highlight the importance of repeated exposure and multi-channel approaches, but they do not address the practical challenges of sustaining nutrition coverage in media houses that prioritise other topics such as politics. Fourth, while advocacy campaigns have been shown to raise awareness, there is limited evidence on how these campaigns translate into measurable behaviour change among caregivers of young children.

These gaps justify the present study, which seeks to assess the comparative effectiveness of public and private commercial media in promoting good nutrition in children below the age of two. By addressing this gap, the study contributes to understanding how different media platforms can be used more effectively to promote nutrition during the critical first 1,000 days of life.

10. Research Methodology

10.1 Research Design

A descriptive, non-interventional design was adopted. This design was appropriate because the study sought to describe and analyse existing practices without manipulating variables. It combined quantitative surveys with qualitative interviews, focus group discussions, and content analysis to provide both breadth and depth of understanding (Jansen, 2023; McCombes, 2019).

10.2 Research Methods

The study employed mixed methods. Quantitative methods included structured questionnaires administered to mothers with children below the age of two. Qualitative methods included semi-structured interviews with producers, reporters, and station managers from ZANIS and Breeze FM, as well as focus group discussions with mothers. Content analysis of selected programmes and bulletins from both media houses was also conducted (Research Methods Org, 2024).

10.3 Study Population

The study population consisted of two distinct groups. For the quantitative component, mothers and caregivers of children under two years in Chipata District were targeted, as they are the primary audience for nutrition messages. For the qualitative component, media practitioners from ZANIS and Breeze FM (including producers, reporters, and station managers) were selected because of their direct involvement in programme design and dissemination. This separation ensured that both the recipients and the creators of nutrition messages were represented. According to Zambia Statistic Agency (2022), the total population of Chipata District was 327, 059.

10.4 Sample Size

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The sample size was calculated using Taro Yamane's formula. The Taro Yamane formula is commonly used to calculate the sample size for a given population. The formula is given by:

n=N/ (1+N (e)

Where:

n is the sample size;

N is the population size;

e is the desired level of precision (expressed as a decimal).

The selected population size is 327,059 the confidence level is 95 percent and the margin of error (e) is 0.05. The confidence level is related to the Z-score, which represents the number of standard deviation data points from the mean in a normal distribution. For a 95 percent confidence level, the Z-score is approximately 0.05 (this value can be found in standard normal distribution tables).

n= 327,059/1 + (327,059) $(0.05)^2$

n=327,059/1+327,059 (0.05x0.05)

n=327,059/1+= 327,059 X 0.0025

n= 327,059/817.6475 + 1

n=327876.6475

n=338

Round off to 340. Therefore

N=340

This means that 340 people were interviewed.

From this sample size 10 key respondents from Breeze FM and ZANIS were interviewed using purposeful sampling techniques.

10.5 Sampling Technique

A multi-stage cluster sampling technique was used to select mothers from different wards in Chipata District, ensuring representativeness. Within each cluster, mothers attending under-five sessions at health facilities were randomly selected (Finlay, 2008). For the qualitative component, purposive sampling was used to select media practitioners based on their roles, experience, and relevance to nutrition programming (Tromp, 2006).

10.6 Data Collection Instruments

Data was collected using a structured interview schedule and questionnaire specifically designed for this study.

10.6.1 Primary Data Collection

The study employed both qualitative and quantitative methods. In the qualitative strand, semi-structured interviews were conducted with mothers of children below two years, as well as producers, reporters, and station managers from Breeze FM and ZANIS. These interviews allowed deeper probing and clarification of responses. Focus group discussions were also held with selected mothers,

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providing opportunities for interaction and collective reflection on nutrition messages. This method encouraged freedom of expression and helped capture diverse perceptions and experiences.

In the quantitative strand, self-administered questionnaires were distributed to literate mothers and media staff. The questionnaires were semi-structured, combining open and closed questions to generate both measurable data and explanatory insights. Research assistants supported respondents where necessary, while interviews were used for those who were semi-literate or illiterate. This dual approach ensured inclusivity and balanced data collection.

10.6.2 Secondary Data Collection

Secondary data were drawn from existing sources such as books, magazines, newspapers, and internet materials (Syed, 2006). These sources reinforced the primary data by providing background knowledge, theoretical grounding, and comparative evidence from other contexts. The literature review was particularly crucial in situating the study within established scholarship and strengthening the validity of the findings.

10.7 Data Analysis

The researcher used the manual method for qualitative data and Statistical Package of Social Sciences (SPSS) software was applied for descriptive statistics and generation of frequencies of distribution as well as cross tabulations. The data obtained was analysed and interpreted using frequency tables and bar charts to present the data that was collected to help understand, the impact of the Public media as compared to the Private media in promoting good nutrition in the first 1000 days of the children under the age of two with a case study of ZANIS and Breeze FM. The SPSS was recommended for numerical data in social sciences for simplicity and thematic analysis was also be used to analyse qualitative data.

11. Data Presentation, Analysis and Interpretation

11.1 Demographics of Respondents

The demographic characteristics of the 340 respondents who participated in the study included 298 mothers and caregivers of children under two years, 9 media personnel from ZANIS and Breeze FM, and 33 health professionals affiliated with the National Food and Nutrition Commission (NFNC) and the Scaling Up Nutrition (SUN) Programme. As mentioned already, out of the total 340 participants, 289 were female, representing 85 percent, while only 51 were male, accounting for 15 percent. This gender imbalance is largely attributed to the study's focus on mothers and caregivers of children under two years, who are predominantly women. Additionally, many of the health and media professionals involved in nutrition communication roles were female, reflecting broader gender dynamics in caregiving and public health communication. This demographic trend is important in understanding how nutrition messages are received, interpreted, and acted upon within the target population.

11.2 Media Sensitisation by Breeze FM and ZANIS of the Public about the SUN Programme

The research commenced with an inquiry into whether ZANIS and Breeze FM actively sensitise the public about the Scaling Up Nutrition (SUN) Programme, particularly focusing on the critical first 1,000 days of a child's life. This study presents findings from mothers and caregivers, media staff, and health professionals. This was to assess the extent of media exposure, the clarity and frequency of nutrition messaging, and the level of institutional collaboration in promoting SUN objectives. In Nigeria, Makanjuola

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(2022) observed that media reports empowered communities to prevent undernutrition through improved hygiene and feeding practices. This aligns with respondents in the present study who reported adopting behaviours such as handwashing and exclusive breastfeeding after listening to Breeze FM.

11.2.1 Media Access and Exposure (Mothers)

11.2.1.1 Types of Media Accessed

The first objective was to examine how ZANIS and Breeze FM sensitised the public about the Scaling Up Nutrition (SUN) Programme. Findings revealed that awareness was generated through both interpersonal communication at health facilities and mass communication via radio. Out of 340 respondents, 136 (40 percent) reported that they first heard about the programme at clinics and hospitals. Breeze FM was cited by 102 respondents (30 percent), while ZANIS was mentioned by 68 respondents (20 percent). These figures show that health workers remain the primary source of information, but media platforms extend the reach of nutrition messages into households and communities.

Respondents' testimonies illustrate this dual pathway. One mother explained, "The nurse told me about the 1,000 days when I went for under-five clinic." Another added, "I heard about it on Breeze FM when they were talking about feeding babies. Breeze FM is for us. They talk about our problems and our food." These voices demonstrate that health workers provide trusted interpersonal communication, while radio embeds nutrition messages into everyday listening.

In Bangladesh, Chowdhury et al. (2013) and NIPORT et al. (2016) highlighted the persistence of poor infant feeding practices despite awareness campaigns. Haider et al. (2002) and Roy et al. (2005) showed that combining interpersonal counselling with media interventions improved breastfeeding outcomes. This aligns with the current study's finding that clinic teachings and radio broadcasts must be consistent to avoid confusion. Where messages diverged, respondents reported uncertainty, echoing Nguyen et al. (2016), who found that mass media alone had limited impact on complementary feeding practices.

Evidence from India also supports the importance of combining media with interpersonal communication. UNICEF India (2019) reported that repeated exposure to nutrition messages through radio dramas and television spots improved awareness, while Gupta et al. (2020) emphasised that counselling by Anganwadi workers produced better results than media alone. The present study confirms this by showing that health workers remained the most cited source of initial awareness, but radio reinforced and diffused practices into households.

Brazil's experience further illustrates the importance of integration. Monteiro et al. (2010) and Victora et al. (2011) found that campaigns combining mass media with community-based interventions achieved better outcomes than media alone. The present study's findings that Breeze FM was most effective when aligned with clinic messaging reflect this principle. However, the limited impact of ZANIS shows that government media, while authoritative, may struggle to achieve resonance without adapting to audience realities.

Indeed, as Gillespie (2007) notes, interpersonal communication may be more effective at influencing individuals, but mass media remains indispensable for reaching wider audiences. The dual pathway observed in this study, where clinics provided credibility and radio extended reach, confirms this integration of interpersonal and mass communication.

11.2.1.2 Frequency of Radio Listening

Respondents were asked how frequently they listened to the radio. The responses revealed a strong daily engagement, especially among those who relied on radio for both entertainment and information. One mother shared, "*I listen every morning when preparing porridge for my baby.*"

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The findings on the frequency of radio listening revealed that radio remains a vital medium of communication among mothers and caregivers. The majority of respondents, representing 76 percent (226 individuals), reported listening to the radio on a daily basis. This strong daily engagement highlights the radio's consistent role in their everyday routines, with one mother noting that she listens every morning while preparing porridge for her baby. Another 14 percent (42 respondents) indicated that they tune in three to five times weekly, while 6 percent (18 respondents) listen once a week. A smaller proportion, 4 percent (12 respondents), reported listening rarely.

This is in accord with Kabore and Serra (2015) who found that radio had the highest frequency of nutrition coverage in Kenya, recommending greater use of regional and rural stations. This pattern emphasized the dominance of daily radio use compared to other frequencies. The high percentage of daily listeners showed the radio's reliability as both an entertainment and information source for mothers and caregivers thereby increasing the likelihood that nutrition related messages were heard and retained.

The Agenda-Setting Theory (McCombs and Shaw, 1972) helps explain these findings. Breeze FM's consistent programming placed nutrition on the community agenda, ensuring that child feeding and maternal health were perceived as important. The Agenda-Setting Theory, as discussed by Severin and Tankard (1988), argues that media does not dictate what people think but rather what they think about. In this study, Breeze FM's consistent programming ensured that nutrition was placed on the community agenda. By repeatedly broadcasting messages about child feeding, hygiene, and maternal health, Breeze FM made these issues salient to its audience. Respondents recalled specific programmes and segments, such as dramas and call-in shows, which reinforced the importance of nutrition. ZANIS, while authoritative, did not achieve the same level of salience because its broadcasts were less frequent and less engaging. This shows that frequency and relevance are critical factors in agenda-setting. However, ZANIS's official broadcasts reinforced government priorities, but their limited frequency reduced overall impact. Mhuru (2018) emphasised the role of media in mobilising social action on nutrition, while Makanjuola (2022) noted that radio in Kenya educated vulnerable populations on undernutrition prevention. Kabore and Serra (2015) found that radio had the highest frequency of nutrition coverage in Kenya, further supporting the importance of radio in health communication.

11.2.1.3 Most Listened-To Stations

Respondents were asked to name the radio stations they listened to most. The responses highlighted a clear preference for Breeze FM. One mother said, "*Breeze FM is for us. They talk about our problems and our food*. "The pie chart below has the statistics of the responses given.

Breeze FM was the most preferred station, cited by 58 percent of respondents. This preference was attributed to its use of local languages and relatable content. ZANIS, while government-affiliated, had a smaller audience share, possibly due to limited programming or reach.

Comparative views show that Breeze FM's vernacular and interactive style was more effective than ZANIS's formal tone. Respondents appreciated Breeze FM's use of Chinyanja and its interactive call-in segments. In contrast, ZANIS was recognised for its official status but was less frequently accessed due to its formal delivery. Banda (2018) and Manda and Mweetwa (2020) similarly found that vernacular radio enhances message retention and comprehension in rural Zambia.

11.2.1.4 Awareness of SUN and Information Sources

Awareness of the SUN Programme was assessed by asking mothers where they first heard about it. Health facilities and radio emerged as the leading sources. One respondent said, "*The nurse told me about the 1,000 days when I went for under-five clinic*." Another added, "*I heard about it on Breeze FM when they were talking about feeding babies*."

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Health facilities were the most cited source of SUN Programme information (40 percent), followed by Breeze FM (30 percent). This suggests that while media plays a significant role, interpersonal communication through health workers remains vital. ZANIS accounted for 20 percent, indicating moderate reach.

11.2.1.5 Media Staff Perspectives

Besides the responses on media access and exposure from mothers, media staff when questioned provided insights into their role in disseminating nutrition information. They believed that both ZANIS and Breeze FM had a responsibility to educate the public on health matters, especially concerning maternal and child nutrition. One producer from Breeze FM stated, "*We try to make our programmes interactive so that people can call in and ask questions*." Another ZANIS reporter noted, "*Our challenge is that we depend on directives from above, so sometimes we wait for content*."

Media staff from both institutions demonstrated awareness of the SUN Programme and acknowledged their involvement in nutrition messaging. However, Breeze FM appeared to have more editorial flexibility and community interaction, while ZANIS relied on top-down directives. This is in line with Banda (2018) and Manda and Mweetwa (2020) who found that vernacular radio enhances message retention and comprehension in rural Zambia. This structural difference may explain the variation in frequency and depth of coverage. Staff from both stations agreed that increased funding and training would enhance their ability to deliver impactful nutrition content.

11.2.1.6 Health Workers' Input

The responses were going to be insufficient without the perspectives of health personnel, who serve as both content sources and community educators. Their insights helped validate the claims made by mothers and media staff. One nutritionist remarked, "*We work closely with Breeze FM because they are open to feedback and adjust their content.*" Another health educator noted, "*ZANIS is good for official announcements, but they don't always reach the rural areas.*"

Health professionals generally rated Breeze FM more favourably, with 26 out of 33 rating its collaboration as either excellent or good. ZANIS received a more mixed evaluation, with 20 respondents rating it as good or excellent, but 13 rating it as fair or poor. These findings suggest that while both media houses are engaged in nutrition messaging, Breeze FM is perceived as more responsive and community-oriented. However, some health workers acknowledged that ZANIS's government affiliation gives it credibility, especially for official campaigns.

11.3 Comparative Impact of ZANIS and Breeze FM on Public Understanding and Behaviour

The second objective of this study was to determine which media house (ZANIS or Breeze FM) had a greater impact on public understanding and behaviour regarding the Scaling Up Nutrition (SUN) Programme. To achieve this, respondents were asked a series of questions exploring their comprehension of nutrition messages, the clarity of language used, topics they remembered, behavioural changes they adopted, and the challenges they faced in implementing the advice. A rich range of perspectives emerged, reflecting both the diversity of media consumption and the complex ways in which information was internalised and acted upon. Regression analysis revealed that exposure to Breeze FM and ZANIS accounted for 61.2 percent of the variance in reported behaviour change. Breeze FM had a higher beta coefficient ($\beta = 0.684$) compared to ZANIS ($\beta = 0.214$), indicating that its programming was more effective in influencing nutrition-related behaviours.

11.3.1 Understanding of Nutrition Messages

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Respondents demonstrated varying levels of understanding of the nutrition messages they received. One mother confidently stated, "*They said we should give babies porridge with groundnuts and vegetables, and I do that now."* Another recalled, *"I remember they talked about exclusive breastfeeding for six months."* These responses suggested that key messages from the SUN Programme were not only heard but also understood and applied.

The use of local language was repeatedly cited as a factor that enhanced comprehension. One participant noted, "*They explained it in our language (Chinyanja), so it was easy to understand.*" This sentiment was echoed across multiple interviews, indicating that language accessibility played a vital role in message retention. Comparative views show that Breeze FM's vernacular and interactive style was more effective than ZANIS's formal tone. Respondents appreciated Breeze FM's use of Chinyanja and its interactive call-in segments. In contrast, ZANIS was recognised for its official status but was less frequently accessed due to its formal delivery. Banda (2018) and Manda and Mweetwa (2020) similarly found that vernacular radio enhances message retention and comprehension in rural Zambia.

11.3.2 Language and Accessibility

When asked which station they preferred based on clarity, respondents overwhelmingly favoured Breeze FM. In a focus group discussion, participants joked that *"even our grandmothers can understand Breeze FM,"* highlighting its accessibility. One respondent stressed, *"ZANIS sometimes uses English and it's hard for some of us."* While ZANIS was respected for its official tone, it lacked the emotional and cultural resonance that Breeze FM seemed to master. This distinction in language use and tone significantly influenced how messages were received and understood. The use of local language was repeatedly cited as a factor that enhanced comprehension. This goes hand in hand with Wakefield (2010) who argues that when the media uses the language that the local people understand best, there is greater reach, interest, comprehension of the message, frequency, and duration and there is greater likelihood that change will occur.

11.3.3 Memorable Content and Behaviour Change

Respondents were enthusiastic about the topics they remembered. Those who regularly tuned in to Breeze FM demonstrated a high understanding of child feeding practices, hygiene, and the importance of the first 1,000 days. One mother shared, *"They talked about washing hands before feeding the baby, and now I always do that."* Others cited specific programmes and segments that left a lasting impression. For instance, *"the drama about the pregnant woman who didn't eat well and got sick"* was described as particularly memorable. One respondent admitted, *"It scared me, so I changed."*

The storytelling approach used by Breeze FM was likened to personal conversations. "*It's like my sister is talking to me,"* one woman said with a smile. This sense of familiarity and emotional connection was seen as a key factor in influencing behaviour. In contrast, while ZANIS covered similar topics, respondents noted that the messages were not as vividly remembered, often due to the formal delivery style.

The findings showed that Breeze FM had a stronger influence than ZANIS. Respondents recalled Breeze FM's content more frequently, described its programming as emotionally engaging, and attributed specific behavioural changes to its messages. These changes included improved child feeding practices, enhanced hygiene, and increased attendance at antenatal clinics.

Comparative views show that Breeze FM's storytelling approach created emotional connections that influenced behaviour. Respondents described its programmes as relatable, with one saying, "It's like my sister is talking to me." In contrast, ZANIS's formal delivery style limited its impact, even though it carried official authority. Chanda (2019) observed that community radio stations in Eastern Province influenced maternal health behaviours, while Phiri (2021) noted that local dialects enhanced trust and message clarity. Indeed, mothers want relatable and practical content, media staff want resources and collaboration, and health

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workers want consistency and alignment. Literature supports these findings. Hornik (2002) and Melkote and Steeves (2001) emphasised the importance of community-based programming.

Diffusion of Innovation Theory (Rogers, 2003) provides theoretical anchoring. Innovations spread more effectively when communicated through trusted channels, presented in culturally relevant ways, and reinforced by social networks. Breeze FM's participatory approach fulfilled these conditions. ZANIS, on the other hand, relied on a top-down style that lacked interactivity and cultural resonance.

The significance of these findings is that nutrition campaigns should prioritise interactive vernacular radio to maximise comprehension and retention, while ensuring consistency with clinic messaging. Campaigns must also consider economic constraints faced by mothers and caregivers, as knowledge alone is insufficient without resources to implement behaviour change.

11.3.4 Challenges in Implementation

While many mothers reported positive behavioural changes such as preparing more nutritious meals, attending antenatal clinics more regularly, and encouraging others to do the same, they also talked about challenges. Economic constraints were a recurring theme. One respondent lamented, *"Sometimes we don't have the food they talk about."* This pointed to a gap between knowledge and practice, where motivation existed but resources were lacking.

Hence, the challenge came from the economic constraint. While the respondents often understood the nutrition messages, yet they lacked the resources to act on them. Mothers explained that while they knew what foods were recommended, they could not afford them. This disconnect between knowledge and practice shows that communication strategies must be supported by interventions that address poverty. Ruel (2001) and UNICEF (2013) emphasised that economic empowerment is essential for sustained behaviour change. The present study extends this by showing that awareness without resources leads to frustration rather than improvement.

Another challenge emanated from the inconsistency between clinic teachings and radio broadcasts. Health professionals noted that at times, messages delivered on radio did not match what was taught at clinics, leading to confusion among mothers. This inconsistency undermines trust and reduces the likelihood of behaviour change. Salami and Ihensekhien (2019) cautioned that misinformation from unqualified sources can confuse the public. The present study confirms that coordination between media houses and health facilities is essential to avoid mixed messages.

Lack of correlation was also evident in cases where respondents reported awareness but no change in practice. Some mothers continued with previous feeding habits despite understanding the recommended practices. This shows that behaviour change depends on multiple factors beyond exposure, including cultural norms, habits, and social support. Hornik (1985) observed that while media campaigns can change awareness, changes in nutritional status are less common. The present study confirms this by showing that awareness alone does not guarantee improved outcomes.

The theoretical explanation for these exceptions lies in the limits of agenda-setting and diffusion. While Breeze FM successfully placed nutrition on the community agenda and facilitated diffusion of practices, structural barriers weakened the correlation between awareness and behaviour change. Severin and Tankard (1988) noted that media can set the public agenda, but adoption of new practices requires supportive conditions. The present study demonstrates that without resources and consistency, agenda-setting and diffusion processes are incomplete.

11.3.5 Programme Frequency and Engagement

Several programmes were mentioned by name, including 'Mwana Wanga' and 'Tiyeni Tisamale' on Breeze FM. ZANIS was noted for airing nutrition bulletins and official announcements during community events. While both efforts were acknowledged,

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respondents consistently described Breeze FM's programming as more frequent and engaging. "*Breeze FM is with us every day,"* one respondent said, contrasting it with ZANIS, which was described as *"good when they come, but they don't come often."*

Respondents attributed Breeze FM's success to its consistency and community involvement. They noted that listener response was "*immediate and visible*," while ZANIS was seen as more formal and less interactive. Strategies like mobile vans and public address systems were mentioned as ZANIS's strengths, particularly during large events.

11.3.6 Health Professionals' Observations

Health professionals provided grounded insights into media influence. They observed that caregivers who listened to Breeze FM were more likely to engage in discussions and seek clarification. A nurse shared, *"They come to the clinic and say, 'I heard this on Breeze FM, is it true?'"* Another added, *"We rarely hear them mention ZANIS unless it's about a government programme.*" A SUN focal point explained, "*Breeze FM is easier to work with because they let us explain things in detail."*

These observations suggested that Breeze FM not only informed but also stimulated dialogue between caregivers and health providers, reinforcing learning and encouraging proactive behaviour.

11.3.7 Media Staff Reflections

From the media staff perspective, Breeze FM emphasised community engagement. One staff member stated, "*We try to make our programmes interactive so that people can call in and ask questions.*" In contrast, a ZANIS reporter remarked, "*Our challenge is that we depend on directives from above, so sometimes we wait for content.*" Another ZANIS staff member added, "*We are aware of the SUN Programme and we do cover it, but sometimes the frequency depends on the instructions we receive."*

These comments revealed structural differences in how each media house operated. While Breeze FM appeared to have editorial autonomy and a grassroots approach, ZANIS functioned within a more centralised framework, which may have limited its responsiveness and frequency of coverage.

From the findings, it became evident that while both media houses contributed to public understanding of the SUN Programme, Breeze FM held a more intimate and sustained presence in the lives of caregivers. Familiarity, language, and frequency of messaging emerged as pivotal factors in shaping behaviour. This aligned with communication principles that emphasised the role of trust, reliability, and consistency in enhancing message retention and encouraging behavioural change.

11.4 Challenges experienced by the Media in implementing the SUN proramme

The third objective was to find out the challenges which the media experienced in implementing the SUN programme in Chipata District.

One of the challenges came from the economic constraint. While the respondents often understood the nutrition messages, yet they lacked the resources to act on them. Mothers explained that while they knew what foods were recommended, yet they could not afford them. This disconnect between knowledge and practice shows that communication strategies must be supported by interventions that address poverty. Ruel (2001) and UNICEF (2013) emphasised that economic empowerment is essential for sustained behaviour change. The present study extends this by showing that awareness without resources leads to frustration rather than improvement.

Another challenge emanated from the inconsistency between clinic teachings and radio broadcasts. Health professionals noted that at times, messages delivered on radio did not match what was taught at clinics, leading to confusion among mothers. This inconsistency undermines trust and reduces the likelihood of behaviour change. Salami and Ihensekhien (2019) cautioned that

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misinformation from unqualified sources can confuse the public. The present study confirms that coordination between media houses and health facilities is essential to avoid mixed messages.

Lack of correlation was also evident in cases where respondents reported awareness but no change in practice. Some mothers continued with previous feeding habits despite understanding the recommended practices. This shows that behaviour change depends on multiple factors beyond exposure, including cultural norms, habits, and social support. Hornik (1985) observed that while media campaigns can change awareness, changes in nutritional status are less common. The present study confirms this by showing that awareness alone does not guarantee improved outcomes.

The theoretical explanation for these exceptions lies in the limits of agenda-setting and diffusion. While Breeze FM successfully placed nutrition on the community agenda and facilitated diffusion of practices, structural barriers weakened the correlation between awareness and behaviour change. Severin and Tankard (1988) noted that media can set the public agenda, but adoption of new practices requires supportive conditions. The present study demonstrates that without resources and consistency, agenda-setting and diffusion processes are incomplete.

Comparative views show that mothers want relatable and practical content, media staff want resources and collaboration, and health workers want consistency and alignment. Literature supports these findings.

Lack of skills for the mothers to help them generate income, such as tailoring, food processing, or small-scale farming, so they could afford nutritious food. One mother explained, “If we had jobs or small businesses, we could buy the right food they talk about on radio.” Some suggested that trained mothers could serve as paid community volunteers, moving within their neighbourhoods to sensitise others.

Media staff also contributed suggestions. A producer from Breeze FM stated, “We need more training and support to create better content. Sometimes we want to do more, but we don’t have the resources.” Another colleague emphasised collaboration, saying, “If health workers came to the studio more often, we could make the programmes stronger.” ZANIS staff noted challenges of autonomy, explaining that they followed instructions from above and could not always respond quickly to community needs.

Health professionals reinforced the need for consistency with clinic teachings. One SUN focal point explained, “Sometimes what is said on radio and what we teach at the clinic don’t match, and that confuses mothers.” Another stressed, “When mothers hear the same thing from the clinic and the radio, they are more likely to believe and follow it.” These perspectives connect with Diffusion of Innovation Theory, which emphasises the importance of involving communities in the design and dissemination of messages.

Comparative views show that mothers want relatable and practical content, media staff want resources and collaboration, and health workers want consistency and alignment. Literature supports these findings. Hornik (2002) and Melkote and Steeves (2001) emphasised the importance of community-based programming, while Airhihenbuwa (1995) and Nutbeam (2000) argued that knowledge alone is insufficient without supportive structures. Ruel (2001) noted that economic empowerment is essential for sustained behaviour change.

Accessibility was another challenge. Some respondents lacked radios or electricity, limiting their exposure to broadcasts. This shows that reliance on radio alone excludes certain groups. A diversified communication strategy is needed, one that includes community meetings, demonstrations, and peer-to-peer education. This exclusion highlights a structural barrier that undermines the reach of media campaigns. Kabore and Serra (2015) similarly found that rural areas in Kenya were less reached by nutrition coverage, despite radio being the most frequent medium. The present study confirms that even when radio is effective, its impact is uneven across socio-economic groups.

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Exceptions were evident. Some mothers understood the messages but lacked the means to act. Others wanted demonstrations to make the advice more practical. These exceptions show that communication must be accompanied by supportive interventions.

The significance of these findings is that nutrition campaigns should combine radio with demonstrations, economic support, and community volunteers to bridge the gap between knowledge and practice. Campaigns should also ensure collaboration between media houses and health workers to create consistent and credible content.

11.5 Critical Analysis of Media Effectiveness and Communication Gaps

The results of this study show that both ZANIS and Breeze FM contributed to nutrition awareness, but their approaches differed in effectiveness. A critical evaluation reveals that the strengths of one often expose the weaknesses of the other, and that gaps remain between knowledge and practice.

Breeze FM's strength lay in its ability to engage audiences through language and format. Programmes delivered in Chinyanja were not only understood but remembered, and interactive segments allowed listeners to ask questions and share experiences. This participatory style transformed nutrition advice into something practical and relatable. The strength here is not simply in message delivery but in the way audiences felt ownership of the information.

ZANIS, by contrast, relied on authority and formality. While its broadcasts carried official weight, respondents described them as less engaging and less frequent. The weakness is not in accuracy but in accessibility. Messages that are technically correct but delivered in a rigid style fail to resonate with audiences who expect dialogue and cultural relevance. This shows that authority alone does not guarantee effectiveness.

Another strength of the communication process was the complementary role of clinics and media. Health workers provided credibility, while radio extended reach. Yet this strength also exposed a weakness: inconsistency. Health professionals noted that at times, radio messages did not align with clinic teachings, leading to confusion. This inconsistency undermines trust and reduces the likelihood of behaviour change.

Economic constraints emerged as a major gap. Respondents often understood the nutrition messages but lacked the resources to act on them. For example, mothers explained that they could not afford the foods recommended. This disconnect between knowledge and practice shows that communication strategies must be supported by interventions that address structural barriers. Without such support, awareness does not translate into improved nutrition.

Exceptions and lack of correlation were evident. While many respondents reported behaviour change after listening to Breeze FM, others did not. Some understood the messages but continued with previous practices due to habit, poverty, or lack of support. This shows that communication effectiveness is not uniform and that behaviour change depends on multiple factors beyond exposure.

The significance of this analysis lies in its ability to explain why certain approaches succeed while others fail. It demonstrates that vernacular radio can achieve strong resonance, but only when supported by consistent clinic messaging and structural interventions. It also shows that institutional authority, while important, must be combined with accessibility and interactivity to achieve impact.

The implication is that nutrition campaigns must adopt a multi-layered strategy. Health workers should continue to provide interpersonal communication, while media houses should deliver consistent, culturally relevant, and interactive programming. Campaigns must also integrate economic empowerment initiatives to enable mothers to act on the information they receive. Finally, coordination between media houses and health facilities is essential to ensure credibility and avoid confusion.

11.6 Significance of the Findings

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The findings of this study are significant both academically and practically. They contribute to knowledge in mass communication and health promotion, extend theoretical understanding, and offer lessons for policy and practice.

Academically, the study demonstrates that vernacular radio, when aligned with clinic messaging, can significantly enhance nutrition awareness and behaviour change. This confirms earlier studies in Zambia and internationally that emphasised the importance of culturally relevant communication (UNICEF India, 2019; Chowdhury et al., 2013). However, the study also challenges assumptions about the effectiveness of official communication channels. ZANIS, despite its authority, had limited impact compared to Breeze FM. This divergence contributes to knowledge by showing that authority alone is insufficient without resonance and accessibility.

Theoretically, the findings extend Agenda-Setting Theory and Diffusion of Innovation Theory. They show that agenda-setting is most effective when messages are frequent and culturally relevant, and that diffusion requires trust, interactivity, and reinforcement through social networks. The study also highlights the limits of these theories, demonstrating that structural barriers such as poverty can weaken the correlation between awareness and behaviour change. This extension of theory contributes to a more nuanced understanding of communication effectiveness.

Practically, the findings provide evidence that nutrition campaigns should prioritise vernacular radio, interactive formats, and collaboration between media houses and health facilities. They also show that campaigns must address structural barriers by integrating economic empowerment initiatives. Respondents' testimonies about lacking resources to act on messages highlight the importance of combining communication with supportive interventions. This practical lesson is critical for policymakers and practitioners designing future campaigns.

The findings are also significant for Zambia's nutrition landscape. With 35 percent of children under five chronically undernourished (ZamStats, 2022), effective communication strategies are essential. The study provides evidence that community radio can play a vital role in addressing this challenge, but only when supported by consistent clinic messaging and structural interventions. This contribution is timely, given Zambia's commitment to the First 1000 Most Critical Days Programme (NFNC, 2014).

Internationally, the findings add to the body of evidence showing that media can influence health behaviours but must be integrated with interpersonal communication and supportive structures. They confirm lessons from Bangladesh, India, Brazil, Kenya, Nigeria, South Africa, and Ethiopia, while providing new insights from Zambia. This contribution strengthens the global understanding of how media can promote nutrition during the first 1,000 days of life.

The overall significance of the findings is that they provide a comprehensive understanding of communication effectiveness in nutrition promotion. They show that awareness is necessary but not sufficient, that authority must be combined with resonance, and that communication must be supported by structural interventions.

12. Conclusion

In wrapping up this study on the influence of media on nutrition behaviour among caregivers in Chipata District, the findings affirm that media, particularly radio, plays a central role in shaping how nutrition messages are received and acted upon (Katz et al., 1973; Wakefield et al., 2010). Breeze FM emerged as the most effective platform due to its consistent use of local languages, relatable content, and interactive formats that allowed listeners to engage directly with the information shared (Manyozo, 2012). On the other hand, ZANIS, though respected for its official status, was less impactful due to its limited presence and formal delivery style (Chibita, 2016).

Despite the overall positive role of media, the study revealed that most nutrition messaging was directed at mothers, leaving fathers and male guardians less involved in the conversation (Ditekemena et al., 2012; Doyle et al., 2018). In terms of community

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engagement, respondents expressed a strong preference for programmes that reflect their daily realities and offer practical guidance they can apply at home (Manyozo, 2012).

These findings show that the success of media in promoting nutrition depends not only on the message but also on how it is delivered, who it reaches, and whether it encourages participation from all members of the household (Wakefield et al., 2010). These findings also point to the importance of collaboration between media houses and health professionals to ensure that messages are accurate, consistent, and aligned with public health goals (World Health Organization, 2017; Kreps and Thornton, 1992). On the broader scale, the study reinforces the value of community-based communication strategies that are inclusive, participatory, and grounded in the cultural and linguistic context of the audience (Manyozo, 2012; Servaes, 2008). Media, when used effectively, can become more than just a source of information; it can be a trusted partner in improving family health and nutrition outcomes across the district (Wakefield et al., 2010), aligning with the agenda-setting theory by McCombs and Shaw (1972).

The findings are consistent with existing literature, including works by Bunce (2005), Blake (1997), Callamard (2010), Kovach and Rosenstiel (2014), and others, which emphasize the critical role of media in shaping public perception and engagement. The study also highlighted the need for policy interventions to support media freedom and independence. Organizations such as Freedom House (2017) and MISA Zambia (2013) have underscored the importance of these interventions in enabling media to effectively fulfill their role in society.

These findings align with previous studies, including Mathews Mhuru (2018), which emphasize the critical role of media in raising awareness and mobilizing social action on nutrition. Furthermore, calls by organizations such as the International Society for Media in Public Health reinforce the need for media practitioners to actively promote good nutrition practices to combat malnutrition.

This finding is consistent with the communication ecology theory, which suggests that individuals rely on media that are embedded in their daily lives and accessible within their socio-economic and cultural contexts, (Ball-Rokeach, S. J., & DeFleur, M. L, 1976) it also aligns with the first level of the agenda-setting theory, where media influences what the public perceives as important (Maxwell McCombs and Donald L. Shaw 1972).

The preference for radio aligns with findings by Banda (2018), who emphasised the role of community radio in health communication in Zambia. Similarly, Manda and Mweetwa (2020) found that vernacular radio enhances message retention and comprehension, particularly in rural areas where literacy levels may be low. These studies reinforce the idea that the medium of communication must be tailored to the audience's linguistic and cultural realities to be effective.

Moreover, the study's conclusion indicates that enhancing the technical capacity and training of journalists could significantly improve the quality of media campaigns focused on nutritional awareness (UNESCO, 2015; Wakefield et al., 2010). This would enable journalists to produce more compelling and informative content that resonates with the public (Kreps and Thornton, 1992). Furthermore, fostering collaborations between media outlets and health facilities can provide the necessary support and resources to sustain long-term awareness campaigns (World Health Organization, 2017; Servaes, 2008). By addressing the identified challenges and implementing these recommendations, media outlets can become more effective in sensitizing the public about good nutrition in children, ultimately contributing to a better and healthier society (Wakefield et al., 2010).

All in all, the study reaffirms the essential role of media in nutritional awareness and underscores the need for concerted efforts to address the challenges faced by media outlets. These efforts will enable media to better serve the public and promote healthier lifestyles (Manyozo, 2012).

13. Recommendations

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The study identified several challenges, including limited funding, government and corporate interference, technical limitations, and lack of training for journalists. These findings were derived from both survey data and interviews with media personnel and health and nutritional staff. Recommendations were made to address these challenges, emphasising the need for increased funding to the SUN programme, specialised training in reporting on nutrition and safeguarding journalistic independence.

First and foremost, there is need to increase funding for overall nutritional programmes. This will help different media houses to ensure that they cover all topics to do nutrition. This recommendation is in line with the respondent's proposals where they emphasised the need for dedicated budgets to ensure the production of high-quality, regular content.

Respondents proposed a variety of strategies to enhance media influence on nutrition behavioru in the first 1000 days of life. These included integrating nutrition messages into entertainment formats, involving local leaders, and utilising community-based programming to foster engagement and credibility (Hornik, 2002; Melkote & Steeves, 2001).

The majority of mothers indicated that radio was their primary source of information. Other media such as television, newspapers, and social media were less frequently accessed, often due to cost or lack of infrastructure. One respondent explained, "*I don't have a phone with internet, but I hear things from the radio and when we meet at the clinic.*"

Another suggestion that emerged strongly was the need for training programmes that empowered mothers economically. Respondents proposed that mothers be equipped with skills that could help them generate income such as tailoring, food processing, or small-scale farming so that they could afford nutritious food for their families. One mother explained, " *If we had jobs or small businesses, we could buy the right food they talk about on radio*." In addition to economic empowerment, some suggested that trained mothers could serve as paid community volunteers, moving within their neighbourhoods to sensitise others about nutrition. "*We can teach each other*," one respondent said, "*but it would be better if we were trained and supported with something small for transport or airtime."* This approach was seen as both sustainable and empowering, allowing mothers to become agents of change within their own communities (Melkote & Steeves, 2001; Airhihenbuwa, 1995).

The suggestions did not come only from mothers but also from media staff. A producer from Breeze FM suggested, "*We need more training and support to create better content. Sometimes we want to do more, but we don't have the resources*."Another colleague emphasized the importance of collaboration: "*If health workers came to the studio more often, we could make the programmes stronger. We try to make our shows interactive, but we need more feedback from the community,"* added another Breeze FM staff member.

A staff member from ZANIS highlighted the challenge of autonomy over content, stating, "*We follow instructions from above, so we can't always respond quickly to community needs."* They also pointed out the need for better equipment and transport to reach rural areas, as well as more localised content. Another ZANIS staff member added, "*We are aware of the SUN Programme and we do cover it, but sometimes the frequency depends on the instructions we receive."* These responses revealed that while the intent to inform existed, structural and logistical limitations often hindered optimal delivery.

One SUN focal point commended Breeze FM's flexibility and community engagement but noted that ZANIS had the advantage of government backing. "*This is because ZANIS is trusted for official information,"* she said. Equally important, she stressed, was the need for both stations to align their messages with health facility teachings to avoid confusion. She added, "*Sometimes what is said on radio and what we teach at the clinic don't match, and that confuses mothers."* Another health worker emphasized the need for consistent messaging across platforms, noting that "*when mothers hear the same thing from the clinic and the radio, they are more likely to believe and follow it."* A third health worker added that "*radio should not just be about telling people what to do, but also listening to what they need."*

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Owing to the logistical and structural challenges faced by both media houses, other suggestions brought to the table included increasing the frequency of nutrition programmes, using drama and storytelling more often, and involving local leaders in message dissemination. One respondent proposed,"*Let the headmen talk on radio too. People listen to them.*" Another added, "*Use songs. We remember songs better than speeches.*" These creative approaches were seen as ways to make nutrition messages more memorable and culturally resonant. Others suggested that mobile radio units could be used to reach remote areas, and that nutrition messages could be integrated into popular entertainment segments to increase listenership. A few even proposed that nutrition messages be aired during peak listening hours, such as early mornings and evenings, when most caregivers are at home.

To improve the reach and effectiveness of media-based nutrition communication, there is a need for more inclusive and responsive strategies. Based on the findings and discussions in the main report, the following recommendations are proposed:

- Develop nutrition programmes that actively involve fathers and male guardians as co-parents and decision-makers
- Strengthen collaboration between media houses and health professionals to ensure message accuracy and consistency.
- Provide community radio stations with resources and training to support regular high-quality local programming
- Use interactive formats such as call-ins and community discussions to encourage listener participation and feedback
- Link nutrition messages with practical advice on affordable food choices and household-level solutions.

14. Future studies

Based on these findings, there is need for the next researcher to talk about how the media can promote local and affordable nutritious foods in the first 1000 days of life in Zambia.

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