

The Role of Community Radio in Promoting Child Nutrition in Rural Communities of Rwanda: A Case of Isangano Community Radio

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Abstract: *The community radio broadcast has never been considered in Rwanda since independence until 1990s when airwaves were liberalised. In Rwanda social and demographic researchers have persistently indicated that the levels of chronic malnutrition among children under five years continue to be high at 38 percent especially in rural areas. A nutrition and food security report highlights the possible causes of persistent chronic malnutrition in Rwanda as due to illiteracy among other causes. The objectives of this study: To determine the role of community radio programmes in promoting child nutrition in rural communities of Rwanda, to analyze the role of community radio participants in promoting child nutrition in rural communities of Rwanda and to examine the role of community radio messages in promoting child nutrition in rural communities of Rwanda. For this study researcher applied descriptive research design to reach at the findings. The population of this research study is 267 people comprised of breast feeding mothers from two sectors of Gitesi and Rubengera selected randomly from Karongi. The sample size of this study is 158 breast feeding mothers. Researcher used questionnaire and interview technique the main research instrument of data collection taking Isangano community radio located in rural Karongi district as a case study. Various research has indicated that, the preparation of quality child food requires a basic knowledge of what constitutes a nutritious diet and how breast feeding mothers can best meet their nutritional needs from available resources. This research has found out that 90.5% of respondents accepted that they listen to radio Isangano where nutrition expert are always on air educating the mothers on how they can prepare good nutrition for their children. The views of respondents also show that (79.7% & 13.9%), agreed that breastfeeding women have information about the introduction of solid, semi-solid or soft foods for children. R square is 0.743, implying that community radio have impact on promoting child nutrition in rural communities in Karongi district. In general community radio is very important in promoting child nutrition in rural communities in Rwanda. According to the results of the research, most of the time information delivered through community radio program for rural communities, the targeted population especially breastfeeding mothers in rural areas listens and embraces messages. Therefore this research confirms the role of community radio in promoting good child nutrition. However, it is could be important for community radio program designers understand elements of good child feeding and investigate the information gap to better prepare good messages that responds to the information needed by breast feeding mothers to better feed their children and reduce child malnutrition.*

Keywords: community radio, child nutrition and rural communities

1. Introduction

According to UNESCO, the general concept of the term "Community radio" is a social process in which members of a particular community associates together with a common denomination which motivates them to design Radio programmes, produce them and air them for the common cause (UNESCO, 2011). In this context, therefore, the community takes on the primary to act, design and communicate their own destiny with a common solution for their own needs. The relevance of community radio is community ownership especially members of the community who shares neighborhood, common needs or challenges and can be able to interact, discuss and collectively participate in discussions that can lead to designing solutions to the community problems.

The community radio broadcast has never been considered in Rwanda since independence until 1990s when airwaves were liberalised. By 2013, Rwanda had 32 radio stations, over 40 newspapers and magazines and one free to air television station (Rwanda Media barometer, 2013). These media outlets together play an important role in information dissemination and provide a platform for debate and public participation in policy making and governance. Studies shows that radio is the most frequent source of information in Rwanda with 93%, followed by television (33%) and

newspapers (32%) (Rwanda media barometer, 2013). However, the 2015 demographic and health survey (DHS, 2015) carried out by the Rwanda Institute of Statistics and other partner institutions indicates that; malnutrition among children under five years is high at 38 percent nationally, and rural areas being the most affected where 14 percent children under five years are severely stunted (chronically malnourished) despite the efforts made by the Rwanda government to reduce malnutrition in the country. The survey indicates that stunting increases with the age of the child, rising from 18 percent among children age 6-8 months to a peak of 49 percent among children age 18-23 months before gradually declining to 37 percent among children age 48-59 months.

The identified possible causes of chronic malnutrition in Rwanda includes; illiteracy, poor feeding practices and food insecurity. The demographic health survey indicates that, the prevalence of chronic malnutrition is higher among children living in the poorest households (49 percent) than among children in the richest households (21 percent) and higher among children whose mothers have no education (47 percent) than among those whose mothers have a secondary education or higher (19 percent) (DHS, 2015).

Considering the fact that, Radio is the most frequent source of information in Rwanda where by 93 percent of the

Rwandans get information through radio (Rwanda media barometer, 2013), the researcher would like to find out the role of community radio in promoting good nutrition in rural Rwanda. Community radio would educate the community especially mothers to be able to understand the causes of malnutrition, effects of malnutrition on child growth, longer term effects on the family and community development.

1.1 Statement of the Problem

In the last 20 years, Rwanda has made steady progress democratization, rural development, and has invested much in health, education and agriculture sector among many other development sectors (Rwanda Media Barometer, 2013). However, social and demographic researchers have persistently indicated that the levels of chronic malnutrition among children under five years continue to be high at 38 percent especially in rural areas (DHS, 2015). Nutrition and food security reports highlights the possible causes of persistent chronic malnutrition in Rwanda as due to illiteracy among other causes (CFSVA, 2015). Despite the fact that researchers have clearly revealed that radio is the dominant mass-medium in Africa with the widest geographical coverage and the highest audiences compared with Television (TVs) newspapers and other Information and telecommunication (ICTs). Rwanda is also part of Africa where radio is the most frequent source of information with 93 percent followed by television 33 percent and newspapers 32 percent (Rwanda Media barometer, 2013).

Study indicates that 55 percent of Rwandan population own Radio handsets and Radio listeners are measured at 62 percent in the country. With the fact that radio is the most obvious channel of communication in Rwanda, therefore, it can be the channel to transmit the nutrition messages and contribute to reduction of malnutrition burden among the rural population in Rwanda (Rwanda Media Barometer, 2013). There has not been researches carried out on this particular topic in Rwanda, however, the researcher would like to consider relevant experiences from South Africa, Ecuador, Ghana, Nepal and Philippines to indicate that community radios can promote good nutrition in rural Rwanda. Chaguarurco (now you're not alone) community radio in Ecuador served community members to share experiences and problems (UNESCO, 2001). This particular community radio succeeded in the struggle to enable community members to obtain electricity, good drinking water (UNESCO, 2001). The community engaged opinion leaders and successful members of the community on radio and explained how they went about it, the procedures, and what public offices they had to go to. This made it much easier for others community members to follow and get electricity and clean water (UNESCO, 2001). Through the Chaguarurco community radio, solutions to everyday problems in the community were shared. Such ideas includes farming techniques, latrine building and other health services (UNESCO, 2001).

Bush radio 89.5 fm in South Africa is also another example where community radio contributed to health and hygiene among the community members. The objective of Bush community radio was to inform and educate the poor on subjects like literacy, hygiene, health and other relevant

political issues (UNESCO, 2001). From discussions and calls during these programmes, community members explain the role they play and how the community can access their services such as help for rape victims, health, childcare, pensions for the aged among other community services. Bush Radio helped to reduce social diseases such as alcoholism in the community (UNESCO, 2001).

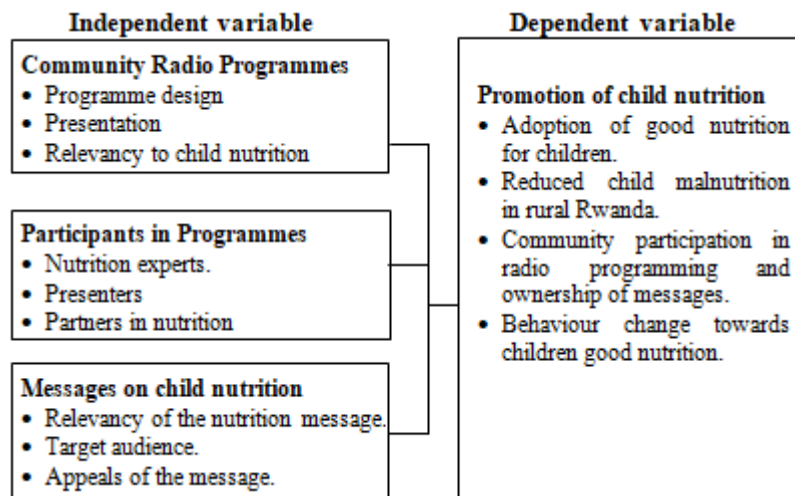
With clear understanding of the power of community radio in behaviour change and community development, the researcher would like to find out how the community radio can play a role in promoting good nutrition in rural Rwanda. Through community radio, community members are able to analyse their nutritional needs in detail, and thinks about the causes of malnutrition problems, and come to the conclusion that it needs communication processes to help community members share common understanding about good nutrition to achieve the common goals of promoting good nutrition (UNESCO, 2011). Community radio responds to the needs of the community it serves (good nutrition in this context), contributes to community development within advanced outlooks in favour of social change towards sustainable good nutrition among children. Community radio strives to democratize communication through community participation in different forms in accordance with each specific social context (UNESCO, 2001). Community radio encourages community participation communicate about their needs and about options for solving them in a sustainable way. It is in this context therefore that the community lays the foundation for collective action in which they actively participate is promoting good nutrition (UNESCO, 2011). Community radio encourages participation by providing a platform for debate, analysis, and the exchange of ideas and opinions, hence, paving the way for promoting good nutrition. Community radio allows for the sharing of information and innovation. For example, one family or group in a community may have solved some problem that is common to many other people, this knowledge sharing and shared experiences could contribute to promotion of good nutrition in rural Rwanda. A broadcast account by them explaining how they went about it and the procedures required would be the stimulus for other families to do the same. Another example might be providing information about a farmer in the area who had multiplied seed of an improved vegetable variety and was willing to sell it. The appropriate use of community broadcasting is to satisfy community and social needs. In the process of doing so, people are able to access information on which they base their day-to-day decisions (UNESCO, 2011).

1.2 Specific objectives

- 1) To determine the role of community radio programmes in promoting child nutrition in rural communities of Rwanda.
- 2) To analyse the role of community radio participants in promoting child nutrition in rural communities of Rwanda.
- 3) To examine the role of community radio messages in promoting child nutrition in rural communities of Rwanda.

2. Conceptual Framework

The conceptual framework in the diagram below is a model that reflects the interrelationship between the two variables



Source: Researcher compilation, 2017

3. Research Design

According to (Kothari, 2007), research design is the conceptual structure within which the research is conducted. For this research study therefore, descriptive and cross-sectional research design was applied. This help in describe the role of community radio in promoting child nutrition in rural Rwanda through randomly selected breast feeding mothers in all cells in Rubengera and Gitesi sectors selected randomly from all sectors of Karongi district. The test for relationship between listening to the community radio programs and promotion of child nutrition was carried out. Data was collected, recorded, analyzed and interpreted in order to understand the role of community radio in promoting child nutrition.

3.1 Population of the study

The population of this research study was comprised of breast feeding mothers (subjects) conducted in all cells from two sectors of Gitesi and Rubengera selected randomly from Karongi district western province. The total population of breastfeeding mothers was selected from the total population of breastfeeding mothers from the two sectors mentioned above was 267.

3.2 Sample size and sampling technique

From a population of 267 breastfeeding mothers' list from Gitesi and Rubengera health centres, the researcher selected randomly from the list to determine the number of respondents. However, to clearly determine the sample size, the researcher applied Krejcie and Morgan formula to calculate the sample size.

$$S = \frac{\chi^2 NP(1 - P)}{d^2(N - 1) + \chi^2 P(1 - P)}$$

Where: S: Sample size

in the study. According to that model, the independent variable "Community radio" is conceptualized in terms of the dependent variable "promoting good nutrition in rural Rwanda" which it affect.

N: Study population

χ^2 : Table value of Chi-square for 1 degree of freedom at the desired confidence level

P: P-value;

D: degree of freedom.

In this case; $\chi^2 = 3.841$, $N = 267$, $P = 0.5$, $d^2 = (0.05)^2 = 0.0025$

$$S = \frac{3.841 * 267 * 0.5(1 - 0.5)}{0.0025(267 - 1) + 3.841 * 0.5(1 - 0.5)}$$

$$= \frac{256.38675}{0.665 + 0.96025} = 1.62525$$

$$= \frac{256.38675}{1.62525}$$

$$= 158 \text{ breast feeding mothers.}$$

For the breast feeding mothers, random sampling technique was applied to select them in the two cells whom are directly concerned with child nutrition.

4. Results and Discussion

Table 4.1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.437a	0.743	0.641	252
a. Predictors: (Constant), Community Radio Programmes, Participants in Programmes and Messages on child nutrition.				

Table 1 presents the coefficients of model fitness on how community radio explains promotion of child nutrition in Karongi district. The profitability has an overall correlation with community radio of 0.743 which is strong and positive. This means that approximately 74.3% variations from promotion of child nutrition in Karongi district are explained by the community radio variables at 5% level of significance. These indicate good fit of the regression equation used. Therefore, this is a good indication of the true position of community radio Community explained by

Radio Programmes, Participants in Programmes and Messages on child nutrition.

The rule of Thumb is that, usually an R square of more than 50% is considered as better. This study proves the rule of Thumb the R² is (0.743).

The rule of thumb is that, usually an R square of more than 50% is considered as better, this study show that R square is (0.743) implying that community radio have impact on promoting child nutrition in rural communities in Karongi district.

Table 2: ANOVA^b

Model	Sum of Squares	Df	Mean Square	F	Sig.	
1	Regression	27.612	3	6.401	6.301	.001a
	Residual	0.752	154	0.01		
	Total	33.355	157			
a. Predictors: (Constant), Community Radio Programmes, Participants in Programmes and Messages on child nutrition.						
a. Dependent Variable: Promoting child nutrition						

Table 2 shows the overall significance of the regression estimation model. It indicates that the model is significant in explaining the relationship between community radio and promotion of child nutrition at 5% level of significance. Analysis of Variance shows that f-calculated is greater than f-critical that is 6.301 > 0.01. This implies that the regression equation was well specified and therefore the co-efficient of the regression shows that there is a strong relationship between community radio and promoting child nutrition in Karongi district. The analysis of variance of the predictors of the model has a significance of 0.001. What requires is that, civil society organisations and the government institutions should design the targeted and appropriate messages to be aired on community radios to promote good feeding practices among mothers in the rural community in order to reduce child malnutrition.

Table 3: Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	0.152	0.081		1.728	.031
	Community Radio Programmes	0.716	0.054	0.833	22.050	.000
	Participants in Programmes	0.502	0.064	0.052	1.631	.000
	Messages on child nutrition	0.724	0.034	0.014	0.122	0.000
a. Dependent Variable: Child nutrition in rural communities						

From table 3, the regression model therefore becomes:
 Model specification
 $Y = 0.152 + 0.716x_1 + 0.502x_2 + 0.724x_3 + \epsilon$

On table 4.3 the regression coefficients of the predictors (community radio) are presented. Results indicate that messages on child nutrition are the most significant in explaining Child nutrition in rural communities with a significance of 0.000 which is less than a p-value of 0.05 and beta value is 0.724.

This therefore means that the community radio programmes would be at 0.716 when participants in programmes and messages on child nutrition are held at a zero constants. Community radio programmes is positively related to promoting child nutrition in Karongi district and therefore a unit increase of the number of promoting child nutrition would lead to an increase in the promotion of child nutrition in Karongi district by 0.716. However, this is significant at 5% level of confidence. When participants in Programmes increase by 1 unit and remaining Community Radio Programmes and messages on child nutrition constants, the promotion of child nutrition in Karongi district would increase 0.502. Even when messages on child nutrition increase by 1 unit and remaining Community Radio Programmes and participants in Programmes constants, the the promotion of child nutrition in Karongi district would result in an increase 0.724.

Table 4: Relationship between community radio programmes on promoting child nutrition in rural communities

		promoting child nutrition	Communities radio
promoting child nutrition	Pearson Correlation	1	.754**
	Sig. (2-tailed)		.000
	N	158	158
Community radio	Pearson Correlation	.754**	1
	Sig. (2-tailed)	.000	
	N	158	158
**. Correlation is significant at the 0.01 level (2-tailed).			

Pearson correlation coefficient, (r=0.754) shows that there is a positive and high correlation relationship between Community radio and promoting child nutrition in rural communities where the P-value (0.000 < 0.05). This means that the community radio have a big contribution on promoting child nutrition in rural communities in Rwanda, especial in Karongi district.

5. Conclusion

In general community radio is very important in promoting child nutrition in rural communities in Rwanda. Community Radio stations in Rwanda are considered among the most efficient channels for good child nutrition messages and are the best contributors of good child nutrition in rural community especially by taking an example of radio Isangano.

Community radio programs focused especially on social and economic issues in society, it is important because it inspires population to participate in development and it opens their thoughts to different aspects in order to improve their life status. Another value is that mothers participate in the delivering their views on a given theme especially the on child nutrition, and this is very crucial to the social economic transformation, because targeted population are easily convinced when ideas came from his partner or their neighbors. This kind of program makes mothers feel at ease to speak and this is a source society's social economic transformation on promoting child nutrition. As the results shows, breast feeding mothers believe in Isangano radio program as a medium which promotes child nutrition which could be a foundation of social and economic transformation

to solve their problems of child malnutrition. The media, especially radio Isangano which can reach even in the rural area has a role to promote ideas which breast feeding mothers need in their every day's life.

6. Recommendation

The role of community radio in promoting child nutrition in rural communities of Rwanda is not an issue of one day. According to the history of the media in Rwanda, media played a big role in promoting child nutrition in Rwanda. Considering this research the social economic radio programs should be a clearest path to reach rural areas, and on this point the breast feeding mothers targeted was involved in bring ideas which could be a source of promoting child nutrition. After conducting this research then the researcher provides the recommendations that follow:

6.1 To the radio management and program producer

Should design programmes based on research and understanding of what the target audience needs especially regarding good child nutrition. The community should participate and interact with feedback to evaluate the conception of the message. Population from far rural areas should be good if the program producer visits them then they could express their views and expose their problems and could be a good way to involve them in this program directly.

It is good if the program producer investigate what breast feeding mothers need to know, about problem affecting mothers and special program should be allocated to those issues.

6.2 To the audience of the program

On the other hand when there is a discussion some mothers refuse to speak, and this should be a challenge to the realization of the program. And they can stimulate others to say no, and this is a great challenge to the realization of the program.

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