Effect of Interactive Radio Platforms on Family Planning Comprehension in Kigali City

[1]Jacqueline UWAMWEZI, [2]Dr. Hellen Mberia, [3]Dr. Margaret Jjuuko

[1,2,3]Jomo Kenyatta University of Agriculture and Technology,
Kigali Department of Mass-communication

Abstract

Nowadays, people can access radio broadcasts whenever they want by using different distribution platforms. The objectives of this study are; to determine the level of interactive radio platform to the Comprehension of family planning in Kigali city, to assess the level of audience participation to the Comprehension of family planning in Kigali city and to analyze the effect of radio content to the Comprehension of family planning in Kigali city. In this study, the researcher used a descriptive research design because the study aimed at obtaining information concerning the current status of interactive platforms in radio broadcasts on family planning. For the purpose of this study, a sample size of 399 respondents was determined from total population of women lives in Kigali city. ANOVA results further show that types of interactive radio platforms, audience participation and radio content explains variations of comprehension of family planning. The results show that the sig value (0.000) is less than the level significance (0.05). The F-statistics (F=214.145) is far greater than the P-value (0.000) hence a further confirmation that aspects of types of interactive radio platforms, Audience participation and radio content are significantly influential the comprehension of family planning. The interactive radio platform were significant with (sig=0.000 and 0.01) while radio content is not significant with (0.021 is greater than 0.005). This means that all variables influence the comprehension of family planning except the radio content. Further, there is a positive and significant effect of interactive radio broadcast content on the comprehension of family planning programs in the selected radio stations and radio programs among the population of in Kigali City. A big number of females still believe that women asking men to use condoms mean that they are promiscuous. Therefore, it is recommended for radio program directors and presenters to give more content on this topic and allow more audience participation so that listeners can from each other.

Keywords

Interactive Radio Platforms, Family Planning, Women and Kigali City.

I. Introduction

The mass media, particularly radio, are recognized to play a big role in informing and educating communities on matters pertaining to health (Jooste, 2015). Today, the Internet has introduced new ways to listen to radio and brought about a revolution in the way the listener and the broadcaster can communicate and share content. Before the advent of the Internet, the revolution has been led by the radio industry, driving and controlling the innovation by embracing scientific discovery, technical developments and innovation in production techniques. In contrast, the 'Internet revolution' has been largely driven by the audience (Link& McLeish, 2015). Radio today is multimedia, multi-platform and convergent. It has sound and image an it is more interactive and more participatory. These attributes contribute to enhancing radio's capacity to create feelings of community among listeners. Individuals use radio platforms and gadgets to communicate and/or entertain, seduced by their level of individualisation, multimedia features and interactivity (Cordeiro, 2012).

Radio is claimed to remain a source of health information and there is a widespread assumptions about the capacity of interactive technologies to provide active environments for health education and promotion. The World Health Organization (2016) indicates that promoting family planning in countries with high birth rates has the potential to reduce poverty and hunger and avert 32% of all maternal deaths and nearly 10% of childhood deaths. It would also contribute substantially to women's empowerment, achievement of universal primary schooling, and long-term environmental sustainability (Ezeh et al., 2006).

Rwanda, the smallest country in East African region in terms of land mass, has 11,4 million people and an annual population growth rate of 2.4% (RDHS, 2006). The government of Rwanda began to integrate family planning into maternal and child health care services in 1981, when the National Office of Population (ONAPO) was created. Between 1981 and 1990, ONAPO focused on improving access to family planning services and promoting family planning through trained communicators known as abakangurambaga "awakeners of the people" (Solo, 2008). In 1990, the government adopted a national population policy calling for wider dissemination of family planning information.5 A private-sector condom marketing program began in 1992.

In Rwanda, radio stations use different dissemination platforms in their radio shows to educate people on issues pertinent to health. A good example of the popular drama Urunana (Hand in Hand), a project of Health Poverty Action formerly Health Unlimited's Well Women Media Project, a radio soap opera that works with local audiences to develop interactive weekly programmes that promote positive attitudes to women's reproductive and sexual health. Urunana went on the air in 1999 as a Kinyarwanda radio soap opera, written and produced in Rwanda (Urunana, 2010).

II. Statement of the Problem

Unlike in analogue era where audiences were passive receivers of information content, with interactive technologies, the audience becomes an active partner in shaping their own information environment. Nowadays, people can access radio broadcasts whenever they want by using different distribution platforms. With the advent of developments in the transmission of radio sound, audience can participate in radio programs through interactions facilitated by different radio platforms. Despite the growing digital communication tools facilitated by internet technologies, radio is still believed to play an important role in the prevention and reduction of disease burden (Adam and Harford, 1999). Adam and Harford assert that even in this age of digital communications radio remains a powerful force to confront the health and social challenges posed by diseases.

Unfortunately, despite the existence of mass media including radio with existing distribution platforms, problems around

understanding health information remain an issue in Rwanda and in other parts of the world. For instance, on international level, there is unmet need for the use of contraception for family planning which is estimated to 225 million women in developing countries (WHO, 2016) because of reasons that can be avoided through effective communications including fear or experience of side-effects; cultural or religious opposition; poor quality of available services; users and providers bias gender-based barriers. In Rwanda, there are still myths, rumors and misperceptions about Family Planning methods and their side effects, which require efforts to address them with correct information (Ministry of Health, 2012).

At national level, Rwanda faces problems of having high population density of 459.73 which hinders economic development of the country. A high population growth rate of 2.32% a year in the period 1995– 1996 is one of them (DHS, 1995). In view of the foregoing, it is important to assess to which extent development in radio broadcast contributes to understanding health information since access to adequate information and knowledge related to health is essential not only on individual level but also it helps the country in making informed policy decisions and for planning, monitoring, and evaluating existing programs related to health in general, at both the national and regional levels (DHS, 1995).

This research therefore explored the effects of interactive radio platforms on the comprehension of health information in Kigali City and specifically on family planning through radio broadcasts related to family planning.

III. Research objectives

A. General Objective
The objectives of this study are divided into two broad objectives including; general objective and specific objectives.

B. Specific Objectives
1. To determine the level of interactive radio platform to the Comprehension of family planning in Kigali city.
2. To assess the level of audience participation to the Comprehension of family planning in Kigali city.
3. To analyze the effect of radio content to the Comprehension of family planning in Kigali city.

C. Research Questions
1. What is the level of interactive radio platform to the Comprehension of family planning in Kigali city?
2. What is the level of audience participation to the Comprehension of family planning in Kigali city?
3. What is the effect of radio content to the Comprehension of family planning in Kigali city?

V. Research Design

In this study, the researcher used a descriptive research design because the study aimed at obtaining information concerning the current status of interactive platforms in radio broadcasts on family planning. The descriptive research design enabled a researcher to get a deeper understanding of the interactive platforms used in radio shows broadcasting family planning, how they are used, and how they affect audience's comprehension of family planning issues.

VII. Target Population

The study targeted the Rwanda Women lives in three districts (Gasabo, Kicukiro and Nyarugenge). The total numbers of women lives in those three districts is women.

VII. Sample Size

For the purpose of this study, a sample size of 399 respondents was determined from total population of women.

Table 1: Sampling Population of Women Lives in Kigali City

Category	Population	Sample size
Nyarugenge	136.429	105
Kicukiro	155.119	119
Gasabo	225.015	175
Total	**516563**	399

Source: *Rwanda Population and Housing Census, 2014*

VIII. Sampling Techniques

Researcher has used randomly sampling technique to reduce costs, time of doing research and to increase the degree of accuracy of the study. The selection criteria for someone to be among the target population is that they should possessed at the time of the study at least a mobile phone set and being aged between 15 and 49 years old; active listener and participant of radio program radio programs on family planning.

IX. Data Collection Instrument

Data collection instruments for the purpose of this study researcher were used questionnaires and interview technique. This questionnaire was consisted of close ended questions since they allow for intensity and richness of individual perception in responding the asked.

X. Data Processing and Analysis

The data for this study were analyzed quantitatively using percentages, frequencies and using linear regressions. The regression model used was $Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + e$. The results were presented using tables for ease of understanding. This allowed the researcher to interpret the findings and also generate recommendations from the findings.

XI. Data Processing and Analysis

The primary data was analyzed by using descriptive research. The researcher used the Statistical Package for Social Sciences (SPSS) version 23 in coming up with the statistical analysis for the study.

XII. Research Findings and Discussion

Table 2: Radio Station Listened to by Respondents

		Frequency	Percent
Valid	Radio Rwanda	208	52.1
	Radio 10	96	24.1
	Radio Salus	95	23.8
	Total	399	100.0

Source: *Primary Data, 2017*

Respondents were asked to indicate the radio stations they listen to. The researcher depending on the purpose of the study identified three radio station deemed to be relevant. These were Radio Rwanda, Radio 10 and Radio Salus. However, provision was provided for those respondents who do tune in or listen to any of the Radios provided by the Researcher.

Out of 399 respondents reached by the researcher, 276 response (52.1%) listen to Radio Rwanda, followed by Radio 10, 96(24.%)and Radio Salus 95(23.8%). This result is true because Radio Rwanda is the Radio with the highest coverage in Rwanda with a variety of programs. Secondly Radio Rwanda broadcasts live and their programs are interactive for different many people.

Table 3: Program Listened to by Respondents

		Frequency	Percent
Valid	Urunana	167	41.9
	Ni nyampinga	149	37.3
	Masenge Umuhoza	83	20.8
	Total	**399**	**100.0**

Source: *Primary Data, 2017*

On the questionnaire respondents were asked to indicate the program they listen to. The researcher provided some programs that were relevant to the study but still left a gap or space for respondents to provide or give other programs that they think are relevant to the study.

The study finding revealed that Urunana is the most listened to Program (with response rate of 167(41.9%), followed by Ni nyampinga 149(37.3%) and Masenge Umuhoza 83(20.8%). These results are due to the fact that Urunana is the oldest program, it is in form of soap or drama, therefore respondent are entertained as they learn. The mode of broadcast is also another contributor because the soap runs and thereafter there is follow-up program to find out the feedback from the listeners.

Table 4: Audience participation through InteractiveRadio Platforms

Statements	Sometimes		Usually		Always		Total	
	F	%	F	%	F	%	F	%
How often do you listen (Urunana)	328	82.2	71	17.8	-	-	399	100
How often do you listen (Ni Nyampinga)	342	85.7	52	13.0	5	1.3	399	100
Masenge Umuhoza	326	81.7	68	17.0	5	1.3	399	100

Source: *Primary Data, 2017*

From the study conducted, it was discovered that the Frequency of participating in radio program though interactive platform, those radio program are talking about family planning are (Urunana, Ni nyampinga and Masenge Umuhoza). As showen in the above table 4.9 the 3 most popular radio progam tough the about family planning are Urunana 71%, Masenge Umuhoza with (68%) and Ni nyampinga with (52%).

The study is in agreement with the study conducted by Janto M. N. at el (1999) on the International perspective on sexual and reproductive health. Their findings indicate that media source information on contraception reinforce one another and extend the reach of family planning campaign. Complementary messages may help create an environment where the practice of contraception is perceived as a social norm. Interactive media platforms should continue to be used to promote family planning and other reproductive health issues.

During interviews, respondents revealed that after listening to Urunana, the following day the tune in for Masenge Umuhoza for supplement information. Issues they fail to comprehend during the Soap they can be clarified in Masenge where the audience in given opportunity to call and participate in the program. Clarifications are made by either the program hosts or other active listener. During Umuhoza callers share their life experience with their colleagues.

Participation of People in Radio Platform Using Social Media

Respondents were asked how they use social madia on participating on family planning on different radio program.

Table 5: Participation Channels Participating on Family Planning

		Frequency	Percent
Valid	Phone call	157	39.3
	SMS	107	26.8
	Facebook	101	25.3
	Whatsapp	34	8.5
	Total	**399**	**100.0**

Source: *Primary Data, 2017*

Table 5 shows the views of respondents regarding to their participation on family planning radio program by using social media,, the data shows that phone call as the highly rated platform with response rate 157 (39.3%) used by respondents to participate in radio programs on family planning comprehension. It was followed by SMS 107 response (26.8%), Facebook 101 response (25.3%), and WhatsApp 34 responses (8.5%). This is true because in Rwanda almost everyone has a phone and making a call and sending SMS are the easiest means to communicate. It does not call for one being too much literate to make a phone call or even to send an SMS. But the rest like Facebook, WhatsApp and Instagram need one to have a smart phone that should be connected to internet. Secondly one should know how to write, read and understand either English or French which is not common.

Program directors and presenters interviewed revealed that these days they experience high call jam during interactive platforms. They said that at times SMS are too much to be read in live broadcast and this shows listeners level of participation.

Table 6: Family Planning Methods Learnt From Interactive Radio Broadcasts

		Frequency	Percent
Valid	Use of condoms	207	51.9
	Injectable contraceptives	83	20.8
	In plants	27	6.8
	Pills	37	9.3
	Contraceptive Virginal Rings (CVR)	25	6.3
	Calendar method or rhythm method	20	5.0
	Total	**399**	**100.0**

Source: *Primary Data, 2017*

The above Table 6 shows the Family planning methods learnt from interactive radio broadcasts used by different family here in Kigali.

Of the 399 respondents, 207 (51.9%) used condoms, 83(20.8%) used ijectable contraceptive,37 (9.3%) used contraceptive pills, 27 (6.8%) indicated using an Implant, 25(6.3%) used CVR while 20 (5.0%%) are used calender method. There are no respondents who did not reply to this question, which could indicate their utilization or knowledge of contraceptives and family planning in general. No reasons for making limited use of calendar method or rhythm method could be derived from the questionnaires.

Table 7: Regression Results for all variables

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.953a	.909	.905	.160
a. Predictors: (Constant), Types of interactive radio platforms, Audience participation and radio content				

According to results in Table 7 above, interactive radio platforms, Audience participation and radio content and Comprehension of family planning, where (R=0.953) with variations in aspects of interactive radio platforms, Audience participation and radio content 90.5% to Comprehension of family planning. This implies that interactive radio platforms, Audience participation and radio content have a positive significant to the Comprehension of family planning.

Table 8: ANOVA Results for Independent Variable and Family Planning

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.930	4	5.483	214.145	.000a
	Residual	2.202	86	.026		
	Total	24.132	90			
a. Predictors: (Constant), Types of interactive radio platforms, Audience participation and radio content						
b. Dependent Variable: Comprehension of family planning						

ANOVA results further show that types of interactive radio platforms, audience participation and radio content explains variations of comprehension of family planning. The table above 4.16 shows the sig value (0.000) less than the level significance (0.05). The F-statistics (F=214.145) is far greater than the P-value (0.000) hence a further confirmation that aspects of types of interactive radio platforms, Audience participation and radio content are significantly influential the comprehension of family planning. Further, the residual value (2.202) is less than the regression value (21.930) which means that all independent variables contribute to the Comprehension of family planning.

Table 9: Regression Analysis of interactive radio platforms and family planning

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.671	.145		4.618	.000
	Interactive radio platforms	.448	.085	.505	5.264	.000
	Audience participation	.283	.084	.329	3.361	.001
	radio content	.045	.069	.057	.653	.021
a. Dependent Variable: Comprehension of family planning						

Using linear regression analysis from SPSS, show that interactive radio platform were significant with (sig=0.000 and 0.01) while radio content is not significant with (0.021 is greater than 0.005). This means that all variables influence the comprehension of family planning except the radio content. Where interactive radio platforms (beta=0.505,t=5.264) and Audience participation (beta=0.329,t=3.361) while radio content (beta=0.057,t=0.653). $Y=0.671+0.448x1+ 0.283x2+.045x3+\varepsilon$

Table 10 : Relationship Between Interactive Radio Platforms and Family Planning

		Comprehension of family planning	Interactive radio platforms
Comprehension of family planning	Pearson Correlation	1	.763**
	Sig. (2-tailed)		.000
	N	399	399
Interactive radio platforms	Pearson Correlation	.763**	1
	Sig. (2-tailed)	.000	
	N	399	399
**. Correlation is significant at the 0.01 level (2-tailed).			

Pearson correlation coefficient, (r=0.763) shows that there is positive and significant relationship between Interactive radio platforms and comprehension of family planning. The result shows that, there is Positive high correlation between Interactive radio platforms and comprehension of family planning, where the P-value is (P=0.000). The directional change in the independent variable (Interactive radio platforms) leads to the same directional change in the dependent variable (family planning).

It was discovered that the Frequency of participating in radio program though interactive platform was fairly satisfactory among the population who participated in the selected Radios and broadcast program in Kigali City.
Radio Rwanda is the highly listened to station and Urunana is the program which is highly listened to in regard to family planning matters. Phone call and SMSs are the highly used channels to participate in interactive programs on family planning while condom is the most used family planning method.

XIII. Recommendations

Urunana program, a radio soap opera is the most listened to intercative radio program. Other radio stations in Rwanda should learn from Radio Rwanda and Radio10 and bring entertainment into their radio programs related to family planning which has some aspects of taboo to allow participants to learn in more relaxed way.
A big number of females still believe that women asking men to use condoms mean that they are promiscuous. Therefore, it is recommended for radio program directors and presenters to give more content on this topic and allow more audience participation so that listeners can from each other.

References
[1] Adam, G., Harford, N. (1999), "Radio and HIV/AIDS: Making a Difference", [Online] Available: http://data.unaids. org/Publications/IRC-pub05/JC429-Radio_en.pdf;

[2]   Cordeiro, P. (2012),"Radio becoming r@dio: Convergence, interactivity and broadcasting trends in perspective", Journal of Audience & Reception Studies. [Online] Available: http://www.participations.org/Volume%209/Issue%202/27%20 Cordeiro.pdf;

[3]   RDHS, A.; Faundes, A.; Glasier, A.; Innis, J., (2006), "Family planning: The unfinished agenda. The Lancet Sexual and Reproductive Health Series", [Online] Available: http://www.who.int/reproductivehealth/publications/general/lancet_3.pdf;

[4]   Ezeh et al.,"Family planning in Rwanda: How a Taboo Topic became Priority Number One? Chapel Hill, NC, USA: IntraHealth, 2006.

[5]   Janto M. N. at el (1999),"What is social media?", [Online] Available: http://whatis.techtarget.com/definition/social-media

[6]   Jooste,"On the use of mass media for important things", American Sociological Review, 38, pp. 164-181, 2015.

[7]   Link, McLeish,"The Impact of Multimedia Family Planning Promotion on the Contraceptive Behavior of Women in Tanzania. Guttmacher Institute", 2015.

[8]   Ministry of Health,"Health policy and system research: A methodology reader edited by Lucy Gilson", 2012.

[9]   The World Health Organization,"Unmet Need for Contraception in Developing Countries: Examining Women's Reasons for Not Using a Method", Guttmacher Institute, US, 2016.