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Original Research Article

Media Exposure and Awareness Creation: Examination of a Vernacular Radio Health Programme on Type 2 Diabetes

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Abstract

Communication research has established a cause-effect relationship between amount of media exposure and audience awareness about issues in the society. Against this, different media programmes have been rolled out in an effort to help in combatting the scourge of non-communicable diseases. Among them is in Ramogi FM, a local radio station that broadcast 'Miya Ngima programme which seeks to inform and educate its listeners on type 2 diabetes prevention among other diseases. Despite the existence of this programme, the disease prevalence seems to be on the rise coupled with low awareness levels within the area of study. This study, therefore, purposed to examine the efficacy Miya Ngima radio programme on awareness creation about type 2 diabetes prevention. McCombs and Shaw's (1972) Agenda-Setting Theory was used in the study. The study adopted descriptive and correlational research designs. Systematic random sampling was used to get 400 programme listeners. Purposive sampling was used to select 2 Miya Ngima programmes on type 2 diabetes and 1 Miya Ngima programme host. In collecting data from listeners and the programme host, questionnaires and structured interviews were used respectively. Coding sheets were used to obtain data from Miya Ngima programmes. The findings revealed that amount of audience exposure to Miya Ngima programme resulted in increased audience awareness about type 2 diabetes.

Keywords: Diabetes, awareness, symptoms, exposure, listenership, programme, risk-factors, respondents.

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1. INTRODUCTION

The effectiveness of mass media in educating and influencing public opinion extends beyond political communication to other areas like health communication (Vemula & Gavaravarapu, Couch et al., (2015) argued that by informing public about diseases, the media assist in shaping public's perception, which is important for diseases' prevention strategies. Andersson (2007) asserts that specific communication strategies are employed by mass media to raise awareness. The more people are exposed to certain media messages, therefore, the higher the chances of increased awareness (Matthews et al., 2014).

Numerous empirical investigations have been done to demonstrate the link between audience exposure to mass media and the degree of awareness about issues affecting the society. Ziba *et al.*, (2015) for instance assessed awareness and knowledge level of women on cervical cancer in Upper East Region of Ghana. Using a sample size of 150, structured questionnaires were administered with 70.7% of the study respondents indicating of having heard of cervical

cancer. Of those who had heard, 36.7% got their information from mass media as compared to 25.3% from health workers. The researchers however observed low levels of awareness about cervical cancer symptoms with 30% of the respondent's lacking knowledge. Mass media users were however 11.4% more likely to be more aware of cervical cancer than those who received information from non-personal sources.

The effectiveness of media in creation of awareness have also been demonstrated by other researchers. Bago and Lompo (2018) conducted an investigation on the effects of mass media exposure on HIV testing and HIV-related knowledge in Uganda among adolescents. As relates to newspaper readership, the researchers found out that there was a positive correlation between newspaper readership and respondents' levels of knowledge about type 2 diabetes. In particular, those who read at least once a week had an average score of 9.64% compared to non-readers at 9.12%. In addition, radio listenership at least once a

week increased the score on HIV-related knowledge by 5.52%.

Nonetheless, while confirming the preference of radio as a tool for creation of awareness, still some studies fail to link awareness by respondents to exposure to radio programmes. One such study is by Stoskopf and Kim (2003) who investigated sources of information from 99 respondents sampled across 12 rural villages in Coastal parts of Kenya. Using interviews, the researchers established that radio was the leading source of information on HIV/AIDS transmission and prevention at 83.8% as compared to other sources like medical personel at 40.4% and print materials at 39.4%. Though radio was the main source of information for respondents, Stoskopf and Kim (2003) did not find a significant relationship between radio listenership and respondents awareness levels.

According to a 2019 survey by Kenya Audience Research Foundation (KARF, 2019), over 75% of Kenyans prefer radio as their primary source of information. Ramogi FM is a commercial, nationwide radio station that was started in 2003 by Royal Media Services (Okoth, 2015). Ramogi FM broadcasts in *Dholuo*, a vernacular language spoken by people mainly from the Luo community who reside in the Western parts of Kenya.

Ramogi FM has various programmes including *Miya Ngima*, a health programme. The progamme which translates to '*Give me Life*,'aims to educate and raise public awareness on a variety of illnesses, including type 2 diabetes (Ndege, 2015). It is aired between 4.15 p.m. to 5 p.m. every Sunday. With a talk show format, it features a host and an invited guest who is an expert on the issue at hand. Listeners are also able to share their concern via call-in sessions. According to KARF (2019) who undertakes media consumption in Kenya, an average of 3527 people listen to *Miya Ngima* programme within Kisumu Central Sub-County where the study was conducted.

Despite the existence of programmes like *Miya Ngima* in Ramogi FM and other health programmes in other media, type 2 diabetes awareness levels seem to be on the rise in Kenya. Over 60% of those diagnosed with type 2 diabetes present complaints unrelated to the disease when visiting health facilities Kenya National Diabetes Strategy (KNDS, 2015). In Kisumu where the respondents of this study were drawn, the trend is equally the same. When looked at in comparison to other non-communicable diseases, records shows that type 2 diabetes prevalence is on the rise with cases almost doubling between the years 2016 and 2019, from 4,310 to 8,197 (Otieno, 2019). According to the Kenya Stepwise Survey for Non-Communicable Diseases (KSS-NCD, 2015) report, prevalence rates urban areas

is about 10.7% compared to a national average of about 4.56%.

In Kisumu Central, Ramogi FM, a Dholuo radio station, commands an estimated 57% Of the market share. It airs "Miya Ngima," a health programme which aims to educate and inform its viewers about diseases hence impacting on behaviour change. In spite of Ramogi FM's preference as the primary information source for Kisumu Central Sub- County residents, over 60% of people with type 2 diabetes who visited medical facilities complained of issues unrelated to the illness. Additionally, the disease prevalence is on the rise among those living in these areas with an average of about 10.7% compared to a national average of 4.56%. The presentation of unrelated complaints after diagnosis and the rising prevalence of type 2 diabetes may suggest that there may be a lack of understanding regarding the effectiveness of radio campaign programmes like Miya Ngima as far as the creation of disease awareness is to go by.

The objective of the study was therefore to determine whether the amount of exposure to the *Miya Ngima* programme on type 2 diabetes affected awareness among listeners

Agenda-setting theory, which McCombs and Shaw devised in 1972, argues that public opinion will change as a result of the media's attention to certain issues in the society (Mcquail & Windahl, 2013). The 1968 US presidential campaigns served as the foundation for the first comprehensive examination of agenda-setting. In their research, McCombs and Shaw (1972) focussed on undecided voters in Chapel Hill, North Carolina.

The researchers hypothesized that "undecideds" were supposed to be particularly more vulnerable to agenda-setting effects. A sample of 100 respondents were interviewed with the data subjected to content analysis. Respondents were asked to list the nation's most important issues as were reported in the media (Mcquail & Windahl, 2013). According to McCombs and Shaw (1972), those issues that received more media exposure over time increased in familiarity and perceived importance among the audiences (Mcquail & Windahl, 2013).

Later studies for instance by Winter and Eyal (1980) demonstrated a cause-effect relationship between media coverage and public awareness. The researchers observed that the agenda-setting function of the media was also dependent on the amount of exposure to media issues. The more one was exposed to a given media's messages, the higher the chances of increased awareness in line with media representations. According to Winter and Eyal (1980), the media influenced how audiences perceived reality

and sparked public awareness and change. This was later confirmed by other researchers including Wanta and Hu (1993) who concluded that the more the exposure to mass media, the more familiar individuals became about the issues. This study therefore adopted this concept in addressing the study's objective.

2. MATERIAL AND METHODS

The study used mixed methods research consisting of descriptive and correlational research designs. Kisumu. The study was conducted in Kisumu Central sub-county which is predominantly an urban set up. Research shows that radio listenership is higher in informal settlements within urban areas (Gathigi, 2009). Study Population

This study used systematic random sampling for selecting 400 listeners of *Miya Ngima* programme from Kondele ward, Kisumu Central sub-county. The researcher determined the sample size for *Miya Ngima* respondents using Yamane (1967) formula;

$$n=\frac{N}{1+N(e)^2}$$

Where,

 \mathbf{n} = the sample size

e = level of precision at 95% confidence interval.

N = population size.

$$n = \frac{3,527}{1 + 3,527 (0.05)^2}$$
$$n = \frac{3,527}{8.82}$$

n = 400 listeners

Purposive sampling was used to select 2 *Miya Ngima* programmes on type 2 diabetes and one *Miya Ngima* programme host. Questionnaires were used to assess *Miya Ngima* listeners' awareness about type 2 diabetes. Coding sheets acted as the extraction tools for obtaining information from *Miya Ngima* programme audio records. There was one key informant interview session with *Miya Ngima* programme host.

Descriptive, inferential and textual analyses were used in the analysis of amount of issue coverage and respondents' awareness levels. *Miya Ngima* programme listenership was considered as dichotomous variable with two levels; frequent listeners (weekly exposure) and occasional listeners (irregular exposure). In the analysis, listenership to *Miya Ngima* was used as an independent variable while type 2 diabetes symptoms and risk factors scores were used as dependent variables. Simple linear regression, was then used to examine the effects of *Miya Ngima* programmes' listenership on audience awareness about type 2 diabetes (diabetes risk symptoms and risk factors).

3. RESULTS AND DISCUSSION

Table 1 provide results of simple linear regression of Miya Ngima listenership and type 2 diabetes symptoms.

Table 1: Simple linear regression of listenership and awareness levels

Model S	Summary						
Model	R	R Square	quare Adjusted R Square			Std. Error of the	
						Estimate	
1	.456 ^a	208	.206			1.546	
a. Predi	ctors: (Constan	t), Dummy Miya Ngim	a Listenershij)			
Anova							
Model		Sum of Squares	df		Mean Square	F	Sig.
1	Regression	242.128	1		242.128	101.259	.000 ^t
	Residual	922.996	386		2.391		
	Total	1165.124	387				
a. Depe	ndent Variable	: Type 2 diabetes symp	toms				
b. Predi	ctors: (Constan	t), Dummy Miya Ngim	a Listenershi	p			
Coeffic	ients						
Model					Standardized	T	Sig.
					Coefficients		
			В	Std. Error	Beta		
1	(Constant)		2.941	.114		25.865	.000
	Dummy Miya Ngima Listenership		1.582	.157	.456	10.063	.000

From the model summary section in Table 1, the researcher found a significance value of .000. Since this value was less than 0.05, ($p \le 0.05$), it suggests that

Miya Ngima programme listenership was a significant predictor of respondents' awareness levels about type 2 diabetes symptoms. The coefficient of determination

statistics was 0.206 ($R^2 = 0.206$). This means that *Miya Ngima* programme listenership could explain about 20.6% of the variation in awareness levels about type 2 diabetes among *Miya Ngima* programme listeners in Kondele ward, Kisumu Central Sub-County, ($R^2 = 0$. 206, F (1,386) = 101.259, p = .000).

The coefficients summary section in *table 4.5* provides a beta coefficient statistic of 1.582, (β = 1.582, t = 10.063). This value tells us that listenership to *Miya Ngima* programme was positively correlated to awareness about type 2 diabetes symptoms. Specifically, every time one listened to *Miya Ngima* programme on type 2 diabetes symptoms, there was an associated increase of awareness about the disease's symptoms by 1.582 points.

The findings of Table 1 suggested that *Miya Ngima* listenership led to increased awareness by the audiences. This was supported by a number of respondents when asked on whether the programme improved their awareness of type 2 diabetes symptoms. Their responses were as shown in excerpts (i) and (ii) below;

i. Respondent 13: "...winjo chenro ni osemiyo koro ang'eyo lach maoluwore kod olo nyalo bedo ranyisi ni in kod tuoni."

Gloss: "... listening to this programme has made me be aware that frequent urination and fatigue can be indications of type 2 diabetes."

ii. Respondent 56: "sani kor ang'eyo ranyisi mag tuo mar sukari."

Gloss: "Now, I'm aware of the symptoms of type 2 diabetes."

As can be seen from the excerpts, respondents 13 for instance mentioned that as a result of listenership to *Miya Ngima* programme, he was knowledgeable on type 2 diabetes symptoms; "...has made me be aware that frequent urination and fatigue..." In the same manner, respondent 56 also said that he was aware of type 2 diabetes symptoms as a result of listenership to Miya Ngima programme; "Now, I'm aware of the symptoms of type 2 diabetes."

The findings from Table 1 and by respondents 13 and 56 shows that exposure to Miya Ngima listenership increased audience awareness about type diabetes. This was in line with Agenda- setting theory's concept of visibility that states that exposure to mass media increased audience awareness about issues with increased exposure leading to a likelihood of being more aware of the issues Wanta and Hu (1993) Other studies that also found that also found exposure to mass media to have an in effect on audiences' awareness levels include Bago and Lompo (2018). In an investigation on effects of mass media exposure on HIV testing HIV-relatedated knowledge in Uganda, Bago and Lompo (2018) found out a positive correlation between newspaper readership and respondents' levels of knowledge about type 2 diabetes. In particular, the researchers observed that those who read at least once a week had an average score of 9.64% compared to nonreaders at 9.12%. In addition, radio listenership at least once a week increased the score on HIV-related knowledge by 5.52%.

Table 2 provide results of simple linear regression of *Miya Ngima* listenership and type 2 diabetes risk factors.

Table 2: Simple linear regression of listenership and awareness levels

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.398 ^a	.159	.157	1.41057		
a. Predic	ctors: (Constant), Dummy M	<i>iya Ngima</i> Listen	ership			
Anova						
Model		Sum of	Df	Mean Square	F	Sig.
		Squares				
1	Regression	144.964	1	144.964	72.857	.000 ^b
	Residual	768.026	386	1.990		
	Total	912.990	387			
a. Deper	ndent Variable: Type 2 diabe	etes risk factors				
b. Predi	ctors: (Constant), Dummy M	<i>iya Ngima</i> Listen	ership			
Coeffici	ients		-			
Model		Unstandardized Coefficients		Standardized	t	Sig.
				Coefficients		
		В	Std. Error	Beta		
1	(Constant)	2.865	.104		27.625	.000
	Dummy Miya Ngima	1.224	.143	.398	8.536	.000
	Listenership					
a. Deper	ndent Variable: Type 2 diabe	etes risk factors				

Source: Field Data

In the model summary section in Table 2, the investigator found a significance value of .000. The p-value was less than 0.05, (p \le 0.05), suggests *Miya Ngima* programme listenership was a significant predictor of respondents' awareness levels about type 2 diabetes risk factors. The coefficient of determination statistics was 0. 157 ($R^2 = 0.157$).

This means that *Miya Ngima* programme listenership could explain about 16% of the variation in awareness levels about type 2 diabetes risk factors among the programme listeners in Kondele ward, Kisumu Central Sub-County, ($R^2 = 0.157$, F (1,386) = 72.857, p = .000). The coefficients summary section in Table 4.4 provides a beta coefficient value of 1.224, ($\beta = 1.224$, t = 8.536). This value tells us that listenership to *Miya Ngima* programme was positively correlated to awareness about type 2 diabetes symptoms. Specifically, every time one listened to *Miya Ngima* programme on type 2 diabetes risk factor, there was an associated increase of awareness about the disease's risk factors by 1.224 points.

The findings of Table 2 that listenership to *Miya Ngima* programme led to increased awareness by the audiences resonated with respondents' comments, when they were asked on how listenership to *Miya Ngima* has improved their awareness of type 2 diabetes risk factors. This was as evidenced by excerpts (iii) and (iv);

iii. Respondent 13: "Nikech koro ang'eyo kaka onengo achiem, kit chiemo ma onego acham. Koro ang'eyo ni ginyalo kelo tuo. Omiyo, ogoyone gi erokamano kuom chenro mar Miya Ngima."

Gloss: Because now I know how to eat, the food I buy. Now I know that they can give me disease. So, I thank them for Miya Ngima programme.

iv. Respondent 48: "Osepuonja kaka kuom gik ma onego acham kod kaka onego arit ngima mara."

Gloss: It has taught me for instance on what I need to eat and how my lifestyle should be.

Respondent 13 for instance mentioned diet as risk factor, "now I know how to eat... Now I know that they can give me disease." In the same manner, respondent 48 confirmed that his awareness of the disease's risk factors had improved. He also cited diet and lifestyle as some of the risk factors, "... what I need to eat and how my lifestyle should be."

The findings from Table 2 and by respondents 13 and 48 which suggest increased awareness as a result of exposure. These findings were further supported by Miya Ngima programme host. When asked on how important the amount of exposure was towards creation

of awareness in programmes like *Miya Ngima*, the host stated that;

Host: "...you'll find them saying, 'based on what I heard you talk about last week or last week but one, now we have discovered that it was not actually high blood pressure, it must have been diabetes that killed my sister or my brother. So that one can tell you that by listening to the program regularly or frequently, the listeners end up being more sensitized" - James Raballa _ Miya Ngima Programme Host.

According the host by the programme host, Miya Ngima programme listenership increased awareness levels of the respondents, "...So that one can tell you that by listening to the program regularly or frequently, the listeners end up being more sensitized." Effect of awareness was verified during call-in sessions with audiences relating what was being discussed to previous discussions and cited what they had learnt; "... you'll find them saying, 'based on what I heard you talk about last week or last week but one, now we have discovered that it was not actually high blood pressure, it must have been diabetes that killed my sister or my brother."

The findings from Table 2, respondents 13 and 48, and the *host* by the host which suggest increased awareness as a result of exposure are in line with the concept of visibility from Agenda-setting theory which argues that increased exposure to issues over the mass media lead to increased awareness from the audience Wanta and Hu (1993). Similar observations on the effect of exposure to mass media and increased awareness among audiences have been observed by other researchers. Keating *et al.*, (2006) did an examination of the extent to which media exposure increased awareness and prevention of HIV/AIDS in Nigeria.

The researchers observed that those with high exposure were over twice as likely to be aware that condom use reduced chances of HIV infections. Igbinoba $et\ al.$, (2019) also found out that exposure to mass media was a significant predictor of maternal health awareness with radio accounting for 88.3% of the variation in awareness scores ($R^2=0.883$). The present study as shown in Tables 1 and 2 also noted increased likelihood of awareness among frequent listeners as compared to occasional listeners, an effect which was significant. These findings therefore as such suggests that amount of exposure to *Miya Ngima* programme affected audience awareness levels about type 2 diabetes.

4. CONCLUSION

The objective of this study was to determine whether the amount of exposure to the Miya Ngima

programme on type 2 diabetes affected awareness among listeners. The findings revealed that media exposure increased awareness among listeners. Miya Ngima programme exposure was a significant positive predictor of audience awareness levels about type 2 diabetes symptoms ($\beta = 1.582$, t = 10.063). Exposure to the programme on type 2 diabetes was associated with an increment in awareness about type t symptoms by 1.582 points. Exposure to Miya Ngima programme was also a significant positive predictor of audience awareness levels about type 2 diabetes risk factors, (β = 1.224, t = 8.536). Exposure to the programme on type 2 diabetes was associated with an increase of awareness about the disease risk factors by 1.224 points. The study recommends that radio should as well be used more as an avenue for enhancing disease risk perception which is key in adoption of positive behaviours.

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