

Radio-Medicine and Public Health in Rural Ghana

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Abstract

Radio is know-how that comes with low manufacturing costs, and low infrastructure costs and its marginal cost of distribution is very low which is close to zero. This study was conducted to examine the rate at which radios advertise medical services and products; the factors that promote the patronage of radio-medicine and evaluate the effects of radio-medicine on people who patronize it. The study took place at Agogo by interviewing 50 people belonging to 10 different professional groups as follows: Farmers, Drivers, shopkeepers, tailors/seamstresses, teachers, hairdressers, barbers, market women, students and the unemployed. Through SPSS, the data was analyzed and the result indicated that 44.0% listen to radio once a day, 14.0% listen every hour, and 42.0% listen all day. On the reasons for patronizing radio-medicine, 24% bought per testimonies shared from others, 12% said it is easy to patronize, 12.0% do that for affordability and effectiveness, 8.0% said it is good, 4.0% were highly convinced by suppliers, 4.0% patronized because there are no side effects, 12.0% were for just trials, 10.0% said there is no time to go to the hospital, 8.0% did so because they had minor conditions and 6.0% patronized for first aid and relieve of symptoms. In addition, 68.0% agreed that the medicine worked for them as expected but 32.0% agreed that the medicine did not work as expected. It was concluded that most people listen to radio all day and most of them participate, in medicines advertised on the radio, because of testimonies shared by others. Even-though majority of the respondents thought they could be affected they did not care about it. Recommendations have been made to the Ministry of Health to regulate radio-medicine and its patronage and also for further research by research institutions.

Keywords

Radio, Medicine, Public Health, Rural, Advertisement

1. Introduction

Africa, a continent faced with a lot of challenges ranging from epidemics, civil wars, and disasters, also lacks efficient healthcare infrastructure in the form of information and communications technology (ICT) to ensure continuity of patient health which lots of research considered a lifesaving resource.

Radio is a low-cost technology, with low setup costs and with the costs of distribution being close to zero. As an auditory medium, it does include those who are unable to read or write and it is ideally suited to conveying content in vernacular languages. For these reasons, it is possibly not surprising that radio has become an intimate and pervasive presence throughout the developed world and, at the same time, has penetrated into the remotest areas of the poorest undeveloped countries [1]. A momentous growth and expansion of radio-based mediations for health at international, national and community levels have happened in recent years [2]. In part, this is due to the deregulation of the airwaves that has occurred in many developing countries and recognition that radio is a cheap and effective means of communicating issues relating to health, policy and health service delivery.

Advertising is the main weapon in every organization for its survival in this era of competition. Therefore, to succeed in winning customers in the face of competition, it is vital for the organization to present its services and products in a way that the customers would choose between alternatives (consumer buying behaviors). Buying behavior is the way in which customers act, and the processes involved in making a purchase decision. Many medical-based organizations produce many products which are advertised in different ways that have the tendency to affect the health of the consumer or public in general. Radio-medicine can be described as medicines advertisement on radio for human patronage and consumption. This is gaining ground in extremely poor countries and in communities with deprived health infrastructure but has received little attention in literature. In Ghana, promotion of goods and services through radio is becoming the norm and these promotions are done not only to attract consumers but also to inform, educate and gain competitive advantage over competitors and eventually overall market share and sales [3].

A long-standing condemnation of mass media (e.g., radio) has been that they are “one-way” channels that can, for instance, tell people about health, human rights or small enterprise development, but cannot allow the audience to talk back or get involved [1]. It has been observed that community mass media are increasingly being seen as a solution to these very health problems. The dangers of obtaining some information through radio could be poor quality information. In addition, health professionals given the information are mostly not known but since they have paid for the media the information is limited, and lacks quality and reliability [4].

In their study, Ayimey, Awunyo-Vitor and Gadawusu (2013) [5] indicated that 90% of the people interviewed in Ho indicated that they preferred radio as

the medium of advertisement. They gave easy accessibility and timeliness of the information as the main reasons for their preference. For example, a patient who sits in the comfort of his or her house and listens to the radio advertising a product relating partly to his or her health condition would get up and acquire it. The source of such information is often unknown, probably incomplete but less costly and easily accessible.

For most of the observed health cases, patients go to seek health professional support about their health conditions when it's almost in their chronic state. From the history of the patient, it could be realized that the patient would have had the condition for a long time but was trying medicines advertised on mass media (mostly radio and/or television) (personal observations).

Currently, electronic/social media have become a platform for more information to be given or to be heard than for an individual to walk to a health center for that information or services. In terms of medical delivery, emerging trends such as telemedicine, online doctor, etc., are available where the patients get health services in the comfort of their home or office. However, in rural areas endowed with illiteracy, poor access to internet and poverty reign supreme, people resort to depending mostly on radio advertisement for their health requirements. Advertisers advertise their medicines with several interesting and exciting jargons to catch the interest of the public [6]. The consumers may not have the luxury of reading the dose or most of the time there are no prescriptions. The rate at which these medical advertisements are carried out, the factors compelling people to patronize these products and the possible effects on the consumer have not been investigated widely. The main objective of the study is to evaluate the performance of health delivery through electronic mass media and how it affects the health of the public in rural areas. Specifically, the study sought to examine the rate at which radios advertise medical services and products; factors that promote patronage of radio-medicine and the effects of radio-medicine on people who patronize it.

2. Materials and Methods

Study Area

The study took place at Agogo in the Asante-Akyem North Municipal Assembly in the Ashanti Region. The major occupation is farming but there are several secondary occupations such as masonry, driving, seamstress, hairdressing, teaching and others.

Sample size estimation

The study employed convenient sampling of 50 people in the study area due to limited resources. The fifty convenient people were selected to represent the major occupations in the study area.

Data Collection Procedure

The study was done by interviewing people who listen to the radio and patronize radio-medicine. Two weeks of data collection in January 2020 were con-

ducted during study. It is believed that listening to radio varies by occupation. For example, people engaged in activities such as farming, hairdressing, driving, marketing tend to listen to radio more often while working. A semi-structured interview guide was used to interview 50 inhabitants of Agogo who have purchased some form of medicine for consumption or for someone based on radio advertisement.

The semi-structured interview guide was composed of biodata of the respondents, the factors that make them patronize the radio-medicine and the results they got after consuming the medicine (Appendix 1). The participants were recruited by identifying the first five people who confirmed to the researcher that they have lived in the rural area for more than five years, were 18 years and above, listens to radio and patronized on radio-medicine and were willing to give information; from the following organized professional groups: Farmers, Drivers, shopkeepers, tailors/seamstress, teachers, hairdressers, barbers, market women, students and unemployed.

Data analysis was mainly descriptive and presented in tables and charts. The Statistical Package for Social Sciences (SPSS) version 20 and Microsoft Excel were used for data entry and analysis.

3. Results and Discussions

Demography of Respondents

All 50 people participated in the research and out of this number, 46.0% were males and 54.0% were females. This can be interpreted as either female listening to the radio more than males or the researcher was biased toward females because she was a female. In terms of age, 8.0% were below 20 years, 44.0% were between 21 - 30 years, 24.0% were between 31 - 40 years, 14.0% were between 41 - 50 years and 10.0% were above 50 years. This may be as a result of active working group *i.e.*, 21 - 30 years who usually depend on the radio for current affair than other age groups. In terms of educational level, 26.0% had never gone to school, 24.0% had education to primary/JSS, 2.0% had education to secondary level, and 48.0% had education to the tertiary level. In terms of occupation 10.0% were farmers, 10.0% were students, 10.0% were hairdressers, 10.0% were barbers, 10.0% were tailors/seamstress, 10.0% were market women, 10.0% were teachers, 10.0% were shopkeeper, 10.0% were drivers, 10.0% were unemployed. Out of these were farmers comprising 1 male and 4 females, students 2 males and 3 females, hairdresser 0 male and 5 females, Barber 5 males and 0 females, Tailor/seamstress 2 males and 3 females, market women 0 males and 5 female, teachers 2 males and 3 females, shop keepers 4 males and 1 female, Drivers 5 males and 0 females, unemployed 2 males and 3 females work at these places (**Figure 1**). In terms of religion, 80.0% were Christian, 12.0% were Muslims, 8.0% were traditionalist (**Table 1**).

The Rate at Which Medicine Is Advertise on Radio

On the rate at which respondents listen to radio, 44.0% said they listen to it once a day, 14.0% said they listen to it every hour, 42.0% said they listen to it

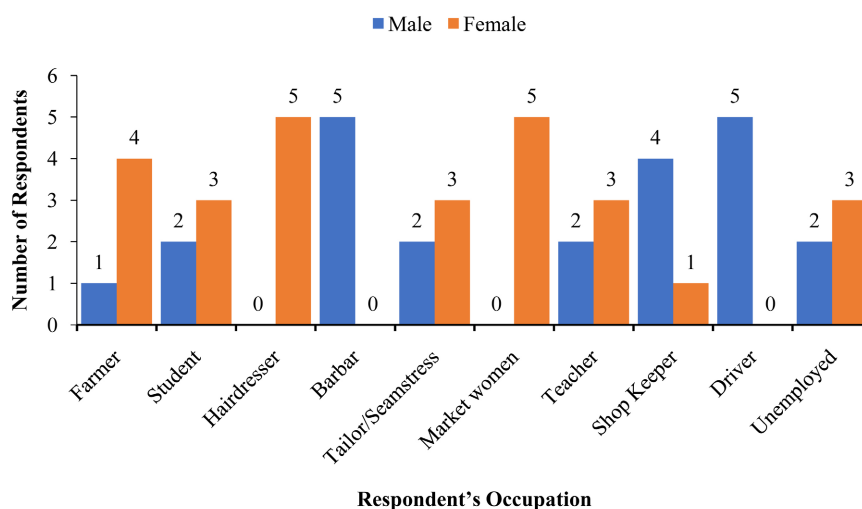


Figure 1. Number of male and females against occupation.

Table 1. Demographic information of the respondents.

Demographic Factors		Number (N = 50)	Percentage (%)
Sex	Male	23	46.0
	Female	27	54.0
Age	Below 20 years	4	8.0
	21 - 30 years	22	44.0
	31 - 40 years	12	24.0
	51 - 50 years	7	14.0
	Above 50 years	5	10.0
Educational level	None	13	26.0
	Primary/JSS	12	24.0
	Secondary	1	2.0
	Tertiary	24	48.0
Religion	Christian	40	80.0
	Islamic	6	12.0
	Traditional	4	8.0

all day. Out of this, for every hour four males and three females listen to radio, 11 males and 11 females listen to the radio once a day, and eight males and 13 females listen to them all the time (**Figure 2**). In terms of frequency, the result showed that 26.0% listen not often, 18.0% listen as and when it is advertised, 36.0% listen all the time, and 20.0% listen when they need the medicine. On the time of the day when the people listen to the radio, 14.0% said they listen to it in the morning, 14.0% said they listen to it in the afternoon, 16.0% said they listen to it in the evening, 10.0% listen to it at dawn, 22.0% listen to it in morning and

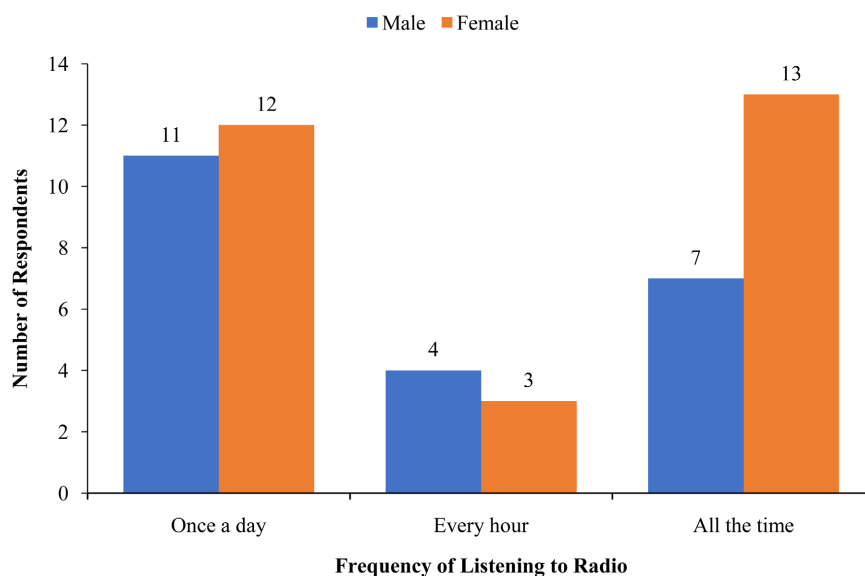


Figure 2. Number of respondents and time of listening to the radio.

evening, 4.0% listen to it in the evening and dawn, 8.0% listen to it in the morning, afternoon and evening, 10.0% listen to it in the morning, afternoon, evening and dawn, 2.0% listen to it in the afternoon and dawn. This indicated that the majority of the respondents listen to the radio in the morning and evening. The interview further probed into the time of listening to adverts on medical products on the radio and 16.0% said they listen to it once a while, 12.0% listen to it every hour, 72.0% listen to it every news time. It could be deduced that the majority of the respondents listen to the advert every news time, probably because most of the adverts are tagged to the news.

Reasons for the Patronage in Radio Medicine

Public participate in radio medicine for several reasons, the result of this research indicated that 24% bought per testimonies shared from others, 12% said it was easy to patronize, 12.0% indicated it was affordable and effective, 8.0% said it is good, 4.0% indicated it is highly convinced by suppliers, 4.0 % said it has no side effects, 12.0% said it is just trials, 10.0% indicated has no time to go to the hospital, 8.0% said it is for minor conditions, 6.0% said it is for first aid and relieve of symptoms. Out of this seven males and five females said they buy these medicines with the testimonies from other people, three males and three females said it is easy to patronize, two males and four females said these medicines are affordable and effective, one male and one female said those medicines were highly convinced by their suppliers, two males and no female said these medicines have no side effects, two males and four females said they take these medicines just for trails to check if it will work, one male and four females said they do not have time to go to the hospital, one male and three females said they take these medicines only for minor conditions, two males and one female said they take these medications as first aid and to relieve them of their symptoms (**Figure 3**).

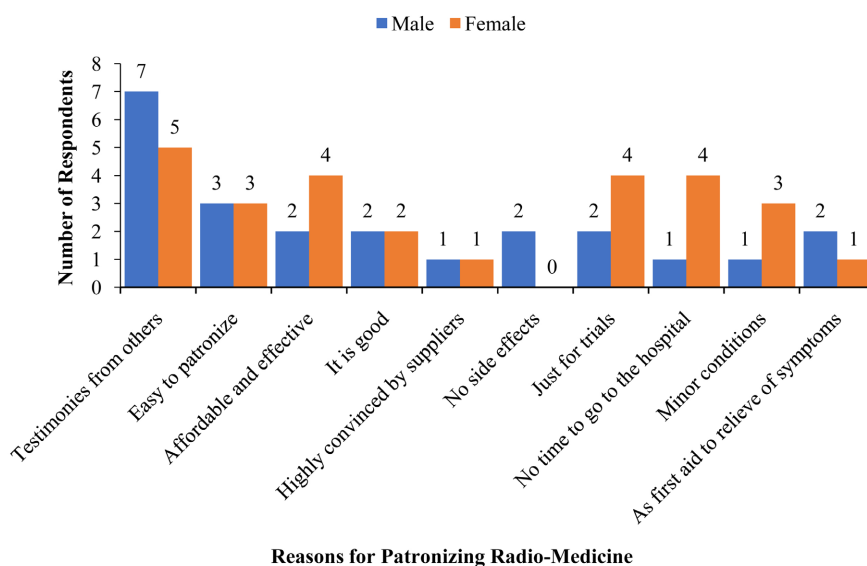


Figure 3. Reasons for patronizing in medicines advertised on radio in terms of sex differences.

Effects of Radio-Medicine on Participants

On the possible effects that radio medicine might have had on the people, 68.0% agreed that the medicine worked for them as expected but 32.0% agreed that the medicine did not work as expected. Of those that agreed that it worked for them positively as expected, 14 were males and 20 were females; nine males and seven females said these drugs did not work for them as expected (**Figure 4**). The result further showed that 42.0% went to the hospital with their condition before hearing the advert on radio and 58.0% did not go to the hospital with their condition before hearing the advert on radio. Furthermore, 38.0% purchase these medicines from licensed chemical shop, 40% purchase these medicine as directed in the advert, and 22.0% purchase these medicines from any chemical shop.

On the changes that occur after patronizing a radio medicine, 40.0% were helpful, 20.0% were not helpful, 26.0% were informative, and 14.0% were helpful and informative. On the effects of radio medicine, 56.0% were not affected by the medicine, 24.0% were affected after taking the medicine, 8.0% said the symptoms still persisted after taking the medicine, 6.0% said the symptoms were relieved after taking the medicine, 6.0% said the medicine added more complications after taking the medicine (**Figure 5**). In expressing how satisfied a respondent was with radio-medicine, Madam Akosua Oforiwaa a 50-year-old market trader said “*I have never been to the hospital but always use herbal drugs and buy from medicine advertised on radio (Dr. Cesar) and even as at now (the time of the interview) I am waiting for his program on the radio*”.

From **Table 2**, participants described the level of expectancy of radio-medicine effectiveness to be their main reason for patronage 34 (68%). Some respondents who patronized radio-medicine later sought care from health facilities as well 15 (30%) (**Table 2**).

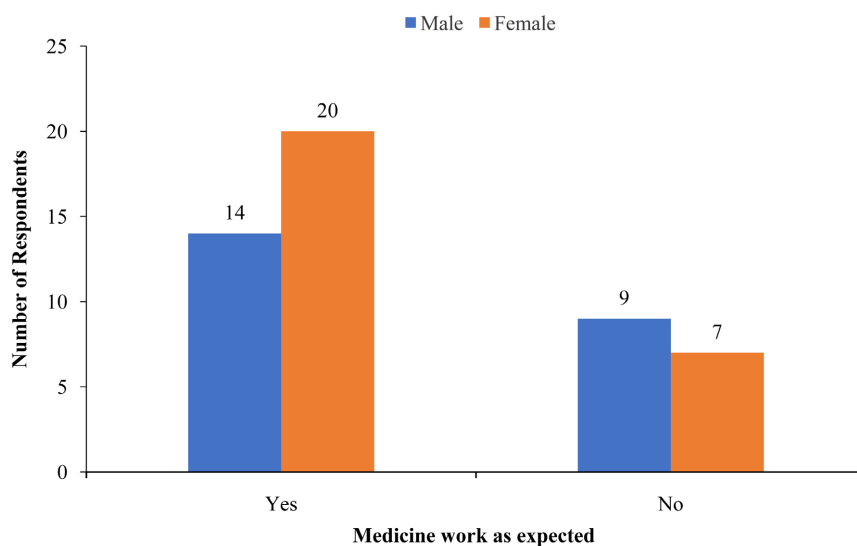


Figure 4. Level of expectation of the performance of radio-medicine.

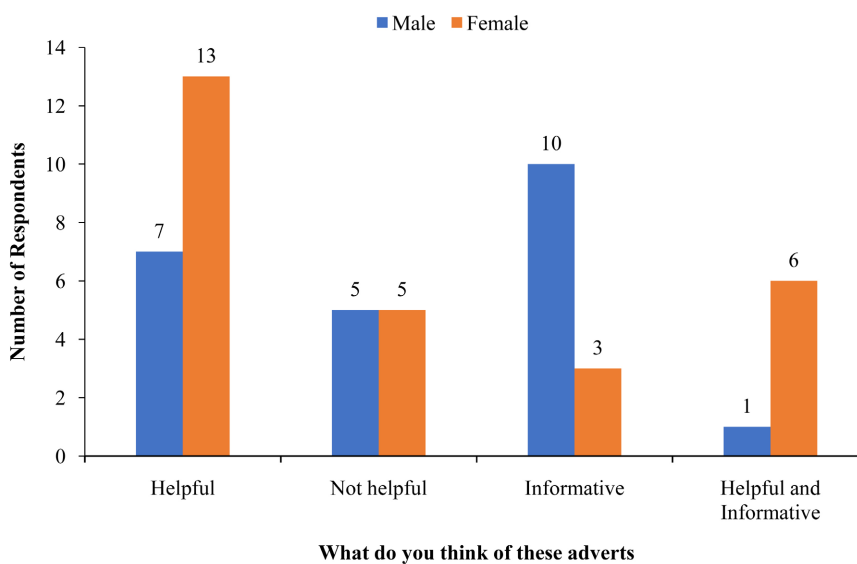


Figure 5. Perception about radio medicine.

Table 2. Effects of radio-medicine people patronize.

Effects of the Radio-Medicine		Number	Percentage (%)
The level of expectancy of radio-medicine	Yes	34	68.0
	No	16	32.0
Respondents visited the hospital for further management	Yes	15	30.0
	No	31	62.0
Any complication after taking this advertised medicine	Yes	11	22.0
	No	39	78.0
Were these suppliers meet after the complication	Yes	10	20.0
	No	40	80.0

4. Discussion

This study set out with the aim to examine the rate at which radios advertise medical services and product; factors that promote patronage of radio-medicine and the effects of radio-medicine on people who patronize it. The study additionally assessed the demographic characteristics such as age, sex, level of education, occupation, and religion of these people who uses radio-medicine.

Our study found high rate of listening to the radio among the participants. These results reflect those of [3] who reported the increasing use of radio for goods and services promotion. A possible explanation for this might be that these radio stations are also used in promoting radio medicine in the study area.

Consistent with the literature [5], this research found that participants who reported using radio-medicine were based on the testimonies shared by others while listening to the radio.

These results reflect those of Ofosu *et al.* (2013) [6] who also found that participants who used radio-medicine did not go to the hospital and agreed that it worked for them as expected. This result may be explained by the fact that most of these radio-medicines are herbal-based medicines and are marketed to be efficacious against several conditions.

This result is in agreement with [5] finding which showed that participants who sit in the comfort of their homes and use radio-medicine re-seek health care when the condition is in its chronic state. There is, however, other possible explanation that the participant used radio-medicine as an alternative for their chronic illness until seeking professional health care when it is not working.

We deduced in our study that among the people who bought radio-medicine, their reason was primarily due to fact that they were already attended to by a health professional. However, these people did not purchase the drugs that were prescribed by the health professional due to advert on the radio indicating that a particular radio-medicine could treat their condition diagnosed by the health professional.

One major limitation of this study is the use of convenient sampling and the small number of people involved. Nevertheless, this study was exploratory and descriptive in nature and we were able to achieve our objective.

5. Conclusions and Recommendations

Based on the results the following conclusions were drawn: Firstly, the majority of the respondents listen to the radio all day and the minority of the respondents listen to the radio every hour and others listen to the radio once a day. Greater part of the radio adverts is listened to by the respondents all the time and lesser part of the radio adverts are listened to by the respondents as and when it is advertised, few of the radio adverts are listened to by the respondents when the medicine is needed, other radio adverts are listened by the respondents not very often.

Secondly, most of the participants responded that testimonies shared by oth-

ers gave them the reason to patronize these medicines advertised on the radio, some of the participants also responded that those medicine advertised are easy to patronize, affordable and very effective, some respondents said it is good, few of the participants responded that it is just for trials and if it works, some of the participants responded that they had no time to visit the hospital and for treating minor conditions, lesser part of the participants responded that these medicines do not have any side effects that is why they patronize these medicine.

Thirdly, smaller portion of the participants responded that they go to the hospital with their condition before they heard of the advert for the medicine on radio. The larger portion of the participants affirmed that the radio-medicine has helped them a lot and would continue to patronize it.

It is, therefore, recommended that the Ministry of Health should assign medical doctors to the rural radio stations for them to monitor the kind of medical information that is been given. In addition, Foods and Drugs Authority should sensitize the kind of information that is attached to medicines advertised on the radio. Lastly, the MMDAs should establish information centers for people to authenticate general information.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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Appendix 1

Questionnaire

Radio-Medicine and Public Health in Rural Ghana

Introduction and informed consent

Dear participant,

My name is _____, I am from Presbyterian University College Ghana, Agogo. We are conducting this study to assess the impact of radio-medicine on public health in rural Ghana.

This questionnaire is designed to assess the impact of radio-medicine on public health in rural Ghana. Please read each item carefully and provide your candid opinion and answers to them. There are no harmful implications in the filling of this questionnaire. For the success of this study, you are strongly assured of confidentiality and thus information gathered in this study is strictly for the purpose of academic work and will have no overt implications. Participating in this study is voluntary and where any participant finds the question uncomfortable, one is at liberty not to answer or choose to withdraw from the study at any time.

However, I hope that you participate fully in this study since your views are extremely important.

Participant signature/thumbprint: _____

Date: _____

Research signature: _____

Date: _____

Instruction: Please tick where appropriate.

Section A: Demographic data

1) Sex:

a) Male () b) Female ()

2) Age:

a) 18 - 20 () b) 21 - 30 () c) 31 - 40 () d) 41 - 50 () e) 51 - 60 () f) >60 ()

3) Educational level:

a) None () b) Primary/JSS () c) Secondary () d) Tertiary ()

4) Occupation.....

5) Religion

Section B: To examine the rate at which radio advertise medical services and products

1) How often do you listen to the radio?

a) Once a day b) Every hour c) All the time

2) How often do you listen to medical services and products on radio?

a) Not often b) As and when it is advertised c) All the time d) When I need the medicine

3) What time of the day do you listen? (tick as many as possible)

a) Morning () b) Afternoon () c) Evening () d) Dawn ()

4) How many times do they advertise medicine on radio/information centre?

- a) Once a day b) Every hour c) every news time

Section C: Reasons for patronage in radio-medicine

- 1) Give the reason(s) for patronizing in medicine advertised on the radio by you or someone you know

.....
.....

- 2) Did you go to the hospital with your condition before you heard the advert on radio?

.....
.....

- 3) Why would you buy medicine from the radio than to go the hospital?

.....
.....

- 4) Where do you purchase medicine advertised on radio from?

- a) Licensed Chemical shops b) As directed in the advert c) Any chemical shop

- 5) What do you think of advertised medical products and services on radio?
(tick as many as possible)

- a) Helpful () b) Not helpful () c) Informative ()

Section D: To evaluate the effects of radio-medicine on people who patronize it

- 1) Did the medicine you buy work as expected?

- a) Yes () b) No ()

- 2) Did it affect you in any way?

.....

- 3) Did you go to the hospital for further management after taking these drugs?

- a) Yes () b) No ()

- 4) Did you have any complications after taking these advertised medicines?

- a) Yes () b) No ()

- 5) Did you ever get to meet these suppliers after the complications?

- a) Yes () b) No ()