IMPACT OF ADVERTISING ON RURAL DWELLERS' BUYING BEHAVIOUR OF SELECTED ANTI-MALARIA DRUGS IN KWARA STATE, NIGERIA

BY

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CERTIFICATION

This Ph.D. Research Thesis was carried out by BELLO, Kamal Asola with Matric. Number 98/66MC139, has been read and approved as meeting the requirements for the Award of Ph.D. in Business Administration in the Department of Business Administration, Faculty of Management Sciences, University of Ilorin, Nigeria.

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DEDICATION

This work is dedicated to Almighty Allah who sustained and gave me the rare opportunity to study.

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ABSTRACT

Given the government control on drug manufacturing and advertisement in Nigeria, Capital Media has been the only body allowed to undertake advertisement of drugs on behalf of the manufactures. Incidentally, among the available means of advertisement, jingles, drumming and radio jingles are the most common in the rural areas especially on malaria and other diseases. However, because of the belief in traditional and local herbs, less attention is put to advertisement even with availability of radio. Therefore, the objectives of the study were to: (i) examine the effect of advertisement on awareness of anti-malaria drugs among rural dwellers in Kwara State; (ii) determine the impact of advertisement on the stimulation of interest on patronage of anti-malaria drugs; (iii) examine the effect of advertisement on the conviction towards buying anti-malaria drugs; and (iv) determine the effect of advertisement on buying behaviour of rural dwellers towards the purchase of anti-malaria drugs.

The study employed survey design. The population of the study comprised of all rural dwellers in the sixteen local government areas of Kwara State. Convenience sampling technique was employed because of easy accessibility to respondents and a sample size of 400 respondents was selected for the study using Yamane model. The sample was proportionally distributed based on the population size of each local government area using Kumar model. Data were collected through a structured questionnaire. Factor analysis was used to condense the key variables while multiple regression analysis was used for the analysis of data obtained. The hypotheses were tested at 0.05 level of significance.

The findings of the study were that:

i advertising jingles have significant effect on awareness of anti-malaria drugs by rural dwellers in Kwara State with simple and catchy jingles, funny jingles and jingles in local dialects having $\beta_1 = 0.228$, $\beta_2 = 0.217$ and $\beta_3 = 0.129$ respectively with $p < 0.05$;

ii simple and catchy jingles, funny jingles and jingles in local dialects have significant impact on stimulation of rural dwellers' interest, with $\beta_1 = 0.279$, $\beta_2 = 0.375$ and $\beta_3 = 0.148$ respectively and $p < 0.05$;

iii advertising jingles have significant effect on the conviction towards buying anti-malaria drugs by rural dwellers in Kwara State with $\beta_1 = 0.181$ and $\beta_3 = 0.110$ for simple and catchy jingles and jingles in local dialects respectively having $p < 0.05$, while funny jingles does not ($\beta_2 = 0.103$ and $p > 0.05$); and

iv simple and catchy jingles and funny jingles have significant effect on buying behaviour of rural dwellers towards the purchase of anti-malaria drugs in Kwara State with $\beta_1 = 0.115$ and $\beta_2 = 0.120$ respectively having $p < 0.05$, while jingles in local dialects have inverse relationship with $\beta_3 = -0.010$.

The study concluded that advertising anti-malaria drugs through jingles has significant effect on buying behaviour of rural dwellers. The study recommended that companies producing anti-malaria drugs should intensify their efforts by investing more in advertisement through jingles to influence rural dwellers buying behaviour.

Word Count: 492

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Malaria is a very serious health problem people face today in tropical countries. According to UN (2010), it is a medical threat to over 50 percent of the total human population in the 21st century. In tropical Africa, malaria incidence accounts for about 90% which causes the deaths of pregnant women and children (UN, 2014). In Nigeria, malaria has been identified as a major cause of morbidity and mortality (FMOH, 2015). About 50% of the population suffers from one episode of malaria or the other each year. The disease is the commonest cause of outpatient attendance across all age groups.

However, it was observed that the categories of people in the rural areas that are at highest risk of infection include farmers, hunters, artisans, students, teachers as well as traders. Others include, children aged 5 years and less as well as pregnant women (FMOH, 2015). It is endemic throughout Nigeria with seasonal variation in different geopolitical zones. The result of the most comprehensive study on malaria situation in Nigeria conducted across the six geographical zones shows the following breakdown: South-South 32.7%, South West 36.6%, South East 30.7%, North Central 58.8%, North East 55.3% and North West 33.6%.(Tide Nigeria, 2006).

The National Policy on Malaria (2005) stated that malaria is the commonest cause of hospital attendance in all age groups in all parts of Nigeria. It is characterized by a stable and perennial transmission in all over the country. Transmission is higher in the raining season than in the dry season. Meanwhile, Nigeria has a population of one hundred and forty million, three thousand,

five hundred and forty two (140,003,542) people (Census, 2006). Fifty one (51) percent of this population lives in rural areas, without access to adequate basic necessities of life and health care (UN, 2016). The supplies of drinking water and electricity as well as schools to cope with ever increasing population of enrolments are grossly inadequate. Most importantly, the few number of hospitals where patients are treated for one ailment or the other, lack qualified medical personnel. This has impacted negatively on the healthcare of rural dwellers.

However, out of the above population figure, Kwara State has a population of two million, three hundred and sixty five thousand, three hundred and thirty five (2,365,353). The reasons why Kwara State was chosen as the case study is because of highest percentage (58.8%) of malaria incidence in the North Central where Kwara State belongs. Saraki, 2008 opined that malaria accounts for 60% of hospital attendance by patients in Kwara State. It is also responsible for one (1) out of every ten (10) deaths during pregnancy and three (3) out of every ten (10) deaths of under 5 mortality. These indicators are worrisome which portray negative impacts on the productive and population growth of the economy with much as 25% loss of household earnings and 6% in the Gross Domestic Product. Also, because of the easy accessibility, familiarity of the researcher with the terrain as well as common presence of rural areas in Kwara State.

Therefore, Kwara State government has been making serious efforts in curbing the incidence of malaria by spending huge amount of money to buy mosquito nets, drugs with a dual launching of 'malaria free' programme to fight the disease and made the malaria treatment for pregnant women and children within five years of age free. Similarly, anti malaria drugs were distributed across the State in March, 2016 for the continuity of 'malaria free' programme (Segun, 2017).

In order to prevent malaria in Nigeria most especially in Kwara State, awareness creation via the use of semiotics in advertising is highly necessary. The study focused on the use of semiotics in advertising anti-malaria drugs because majority of rural dwellers are much more interested in jingles (songs) signs and symbols which demonstrate the advertising message being passed across. Various advertising media have played significant roles in ensuring that people are educated on the need to avoid mosquito bites, treat individuals with confirmed or suspected infection and prevent infection in individuals living in and visiting malaria. Despite these efforts, rural dwellers find still it very difficult to attach necessary importance to advertising messages that mosquito bite is dangerous and it should be prevented as much as possible.

Rural dwellers do share a common notion that local anti-malaria herbs are very efficacious as such they show no much interest in advertising message that will change their belief. At this junction, what is of interest to these rural dwellers is an advertising message that involves music/songs which people do not forget easily. Even if they tend to forget it, other people such as children, teenagers and students in their neighbourhood can't seem to stop humming the music which will motivate rural dwellers to pay attention to it. Jingles therefore seem to be easily recalled even if they have not been heard for years (Wanda, 1991). Music is used in advertising to enrich the key message and may be the single most stimulating component in a commercial (Hecker, l984)

As a result, malaria jingles are being run on radio, as well as television as a means of advertising anti-malaria drugs by pharmaceutical companies producing anti-malaria drugs in order to eradicate malaria, ensure better patronage and capture sales for their products with a view to maximizing profits. While Non-Governmental Organizations (NGO) such as Society for Family

Health as well as National Action Committee on Aids also creates awareness against the scourge in order to reduce the contraction as well as the mortality rate in the State.

This study therefore examined the impact of advertising, most especially, radio jingles on the buying behaviour of rural dwellers of anti-malaria drugs in Kwara State of Nigeria. These rural dwellers comprised of students, farmers, artisans, traders, teachers, as well as hunters. Rural people enjoy listening to radio programmes more than any other medium of advertising due to the fact that radio is the most common and has wider coverage. Also it is affordable, portable and it can be used even without electricity unlike television. Radio Kwara which rural dwellers in Kwara State mostly listen to, covers Kwara, Kogi, Niger, Ekiti, Oyo as well as Osun State while Radio Nigeria covers the entire Nigeria and some other neighbouring West-African countries like Cameroun, Republic of Benin, Niger, Ghana, and Togo.

Radio jingles usually are associated with music. Music plays a more significant role in advertising because people are more prone to remember information from commercials accompanied by songs which is usually embedded in someone's thoughts thereby ending up contemplating about the goods in question compared to those that just involve talking. Most other varieties of advertising call for continual renewal, but a jingle can last for decades, maintaining the products in people's brain and inspiring profits (Alam, 2012).

However, when a particular jingle is heard, people will begin to form a positive opinion about the product that eventually leads to purchase. Jingles are small, easy to comprehend and easily recognizable. If a jingle does not have these traits, it is practically sure to be forgotten (Calotta, 2001). Advertising being a medium of influencing and educating consumers on buying decisions

necessitates its choice for changing the rural dwellers' buying decisions from local anti-malaria herbal medicines to anti-malaria drugs.

Finally, malaria jingles have tendencies of changing the buying behaviour of rural dwellers towards purchasing anti-malaria drugs. Having listened to jingles, rural dwellers do give the use of anti-malaria drugs a trial and if it works in line with their expectation, they end up educating and convincing others on the need to patronize anti-malaria drugs. This is so because majority of rural dwellers always share a common belief and lifestyle, hence anything that affects one person's lifestyle must certainly affect others. This chain of interaction has been a source of tremendous assistance to advertisers towards ensuring that the advertised products are purchased in a very large amount with less expenses and stress.

What is important is that anti-malaria being advertised should be very effective and efficacious so that the targeted rural dwellers could derive the benefits as claimed by the advertiser. If not, they may influence others not to patronize anti-malaria drugs.

Anti-malaria drugs come in tablet, capsule, as well as injection forms. Notable among the commonly used anti-malaria drugs are Amartem, Laridox, Artesunate, Lonart, Vitadar, Amalar, Artemef, Fansidar, Artemeter, and Combisunate. The dosage of anti-malaria to be recommended for malaria patients depends on the type of anti-malaria drugs, it's strength as well as the form in which it is being used (such as tablet or injection).

1.2 Statement of the Problem

Rural areas in Kwara State are dominated by people who usually share a common old-fashioned way of life and difficult to be convinced to accept change especially when it is foreign to their traditions. As such, self medication of treating malaria which has been the most common practice among rural dwellers possesses a lot of health risks. They prefer it to using anti-malaria drugs, believing that it has been in existence for long and it is working effectively for them.

However, rural environments provide suitable conditions for breeding of anopheles mosquitoes, the female of which is the vector of the Plasmodium falciparum that causes malaria in man (Cephas, 2009). The two broad categories of predisposing factors are implicated in the prevalence of malaria in Nigeria are behavioural and non-behavioural factors. The behavioural factors are the cultural practices that promote mosquito breeding and its access to the people as well as the failure of vulnerable populations to use proven and effective interventions for the treatment, control and prevention of malaria. The non-behavioural factors include geographical or ecological peculiarities such as tropical (warm) climate and vegetation that promote breeding and sustenance of mosquitoes and the causative agents, the Plasmodium species (Tide Nigeria, 2006)

Despite series of advertising messages against malaria, rural dwellers are still more prone to malaria attack because mosquitoes bite them on daily basis. This is as a result of not attaching much importance to taking necessary precautions such as using an effective mosquito repellent cream, wearing of long sleeves and covering their legs, especially at nights and covering windows with nets in order to disallow mosquitoes from entering into the house. Others include, using a bed net to sleep, spraying homes and surrounding areas with insecticide to kill

mosquitoes, clearing the bush around the house that helps mosquitoes hide, and preventing stagnant water around the house which helps breed mosquitoes.

Besides, rural dwellers are not adequately aware or informed of the need to be using anti-malaria drugs whenever they have malaria and majority of them are absolutely dogmatic to self medication and that is the more reason why it is very necessary to aggressively advertise the anti-malaria drugs via (semiotics) jingles in order for them to have a change of attitude. Advertising via malaria jingles is very necessary because rural dwellers do not pay much attention to almost all other forms of advertising due to the fact that some of them are uneducated and preoccupied with series of local activities such as sharing old stories with the younger ones, engagement in farming, hunting as well as paying unscheduled visits to their loved ones.

It will be very funny and amazing to note that a typical villager erroneously believes that "mosquitoes can only kill a lazy man". This common erroneous belief has really contributed in no small measure to their already established nonchalant attitude towards mosquito bites, self medication and poor attitude to advertising messages that involve only talking. There is also a serious need to educate rural dwellers via malaria jingles on the dangers that usually emanate from self medication so as to accept modern method of treating malaria.

Meanwhile, rural dwellers can not really be blamed for their attitude because majority of them are unaware of the damage mosquitoe is capable of causing to their health and even those that are a bit aware do not necessarily attach much importance to it due to their nonchalant as well as primitive attitude to malaria treatment. Therefore, rural dwellers ought to be seriously educated through semiotic advertising strategy (malaria jingles) on the need to take necessary precautions against mosquitoe bites which has been identified as the cause of malaria in man. More

specifically, the use of anti-malaria drugs whenever they have malaria instead of local anti-malaria herbs.

Hawking of anti-malaria drugs and sales of anti-malaria drugs in retail shops (pharmaceutical stores) are mostly common in the rural areas in which the buyers are being deprived of some adequate information about anti-malaria drugs such as dose, administration, functions and likely their side effects. These anti-malaria drug hawkers and retailers are not well-trained; they lack the required skills and competence to properly educate the users on the importance of anti-malaria drugs. The inability of hawkers and retailers to provide the above information to the buyers necessitates the need for aggressive advertising of anti-malaria drugs through semiotics because majority of rural people are non-literate. More so, advertising through semiotics (jingles) on Radio also has a wider coverage more than the incomplete and wrong information being provided by anti-malaria drug hawkers and retailers in the rural areas.

In view of the above, much emphasis needs to be placed on the mode of advertising especially radio jingles in English, Hausa, Nupe, Baruba/Batunu, Fulani/Fulfude and Yoruba languages which are the languages being spoken by the people in Kwara State.

Indeed, there appears to be a paucity of related studies on impact of advertising on rural dwellers' buying behaviour of selected anti-malaria drugs in Kwara State. It is on the basis of this, that the study was carried out.

1.3 Research Questions

The study seeks to address the following questions:

i What is the effect of advertising via the use of jingles on the awareness of anti-malaria drugs by rural dwellers of Kwara State?

ii Does advertising have any impact on the stimulation of Kwara State's rural dwellers' interest to patronise anti-malaria drug?

iii Does advertising have any effect on the level of conviction of rural dwellers in Kwara State towards buying anti-malaria drugs?

iv What is the effect of advertising on attitudinal change by the rural dwellers towards the purchase of anti-malaria drugs in Kwara State?

1.4 Objectives of the Study

The main objective of this study is to examine the impact of advertising on the rural dwellers' buying behaviour of anti-malaria drugs in Kwara State.

The specific objectives are, to:

i. examine the effect of advertising through the use of semiotics on the awareness of anti-malaria drugs in rural dwellers of Kwara State;

ii. determine the impact of advertising on the stimulation of interest in patronising anti- malaria drugs by the rural dwellers in Kwara State;

iii. examine the effect of advertising on the level of conviction towards buying anti-malaria drugs by the rural dwellers in Kwara State; and

iv. determine the effect of advertising on attitudinal change by the rural dwellers towards the purchase of anti-malaria drugs in Kwara State.

1.5 Research Hypotheses

In line with the research questions and to achieve the stated objectives; the following hypotheses are formulated and tested in the study.

Ho_1: Advertising does not have any significant effect on awareness of anti-malaria drugs in rural dwellers in Kwara State.

Ho_2: Advertising does not have any significant impact in stimulating interest to patronise anti-malaria drugs by the rural dwellers in Kwara State.

Ho_3: Advertising does not have any significant effect on the level of conviction of rural dwellers of Kwara State towards buying anti-malaria drugs

Ho_4: Advertising does not have any significant effect on attitudinal change by the rural dwellers towards the purchase of anti-malaria drugs in Kwara State.

1.6 Significance of the Study

The study is of great importance guiding the stakeholders (i.e Kwara State government, other State governments as well as federal government) on the ways to further intensify the use audio malaria jingles to educate citizens on the dangers of malaria attack with a view to eradicating malaria. It also sensitises the rural dwellers on need to disallow/prevent mosquitoes from biting them in order to guard them against malaria attack. The study would assist companies producing anti-malaria drugs to re-examine their advertising policies in order to capture more sales for their

products. Similarly, it assists the public to be aware of the dangers of self medication as well as embrace the modern healthcare to be a panacea for health problems.

The study serves as a guide for researchers conducting research in similar studies and ads to the existing knowledge.

1.7 Justification for the Study

It is a known fact that majority of human beings find it very difficult to accept changes especially when it is foreign to their tradition. However, the primitive attitudes of majority of our rural dwellers most especially with respect to self medication makes it very difficult to embrace anti-malaria drugs because they believe in the use of anti-malaria local herbs, hence the need for aggressive advertising of anti-malaria drugs. They also hold the common notion that anti-malaria drugs have one side effect or the other.

Meanwhile, anti-malaria local herbs that are allegedly supposed to be a cure for malaria do not work as expected perhaps due to its overdose, wrong combination therapy as well as its quack methods of processing. Advertising is very important because it creates necessary awareness, persuades and reminds the people about the products and eventually brings about a change in buying attitude of prospective consumers, thereby increasing sales. This is evident in the studies conducted in the past such as Ng (2011), Bello, Abdularaheem and Imoukhome (2016), Hafiz, Mudasar, Nabila, Wasim and Sara (2014), Samar and Samareen (2015), Fazal, Tariq, Aminllah and Shabir (2014), Sajuyigbe, Amusat and Oloyede (2013), Olufayo, Ladipo and Bakare (2012) and Suparn and Jyoti (2009)

But still, rural dwellers do not attach much importance to all forms of advertising messages probably due to the fact that they do not create the required time to give the advertising messages

attention so as to digest it properly. Although, even if they feel reluctant to pay required attention to malaria jingles as they do to all other varieties of advertising, it is extremely difficult for them to avoid it because people's attention is usually and unavoidably drawn to music which goes directly into one's mind, making it very difficult to forget.

This study therefore is very necessary because malaria jingles (music) draw the attention of everybody to anti-malaria drugs including those who may not care to listen. This is achieved through repeated singing of malaria jingles by children and other people at their convenience which serves as a reminder of the advertised anti-malaria drugs.

1.8 Scope of the Study

Kwara State shares boundary with Niger State in the North, Kogi and Ekiti States in the East, Osun and Oyo States in the South and an International boundary with the Republic of Benin in the West. The State has sixteen Local Government Areas and falls in the North Central geo-political zone of Nigeria.

However, the study focused on the impact of advertising on rural dwellers' buying behaviour with much emphasis on the use of jingles in educating the rural dwellers on the need to convincingly accept the use of anti-malaria drugs and discard the idea of self medication of treating malaria. However, pharmaceutical companies produce anti-malaria drugs with a view to eradicating the scourge of malaria attack by selling at profit. Non Governmental Organisations such as Society for Family Health creates awareness in order to sensitize people on the dangers involved in malaria attack so as to reduce the degree of mortality in the State.

The study therefore spanned through a period of ten (10) years from 2007 to 2016 because a particular malaria jingle can last effectively for a decade without being renewed. Also it covered

the entire sixteen local government areas of Kwara State which include Edu, Baruteen, Ifelodun, Irepodun, Asa, Patigi, Moro, Ilorin West, Ilorin South, Ilorin East, Kiama, Isin, Offa, Oyun, Ekiti, as well as Oke-ero. It also focused on ten (10) anti-malaria drugs such as Amartem, Laridox, Artesunate, Lonart, Vitadar, Amalar, Artemef, Fansidar, Artemeter and Combisunate which are currently and commonly advertised via jingles in the network news of Federal Radio Corporation of Nigeria (FRCN) as well as Radio Kwara, Ilorin

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter seeks to achieve three main overriding goals. First, it tried to define advertising. Second, it attempted to offer a review of existing theoretical literature that link advertising (malaria jingles) to buying behaviour. The central aim is to describe the theoretical blocks on which the study was based. The third objective of this chapter is to carry out a review of the empirical literature of advertising.

2.2 Conceptual Clarifications

2.2.1 Advertising

Advertising is a paid and non-personal form of presentation and promotion of ideas, goods or services by an identified sponsor (Martin, 2006). The advertiser tries to spread his message and ideas to the prospective customers and diffuse information to them. By this method, he tries to popularise the products/services which is the basic aim of the activity (Martin, 2006). Kotler (2002), saw advertising to be a paid form of non-personal presentation and promotion of ideas, goods, or services by an identified sponsor. He maintained that advertisers include not only business firms, but also museums, charitable organisations, and government agencies that direct messages to target publics.

The overall purpose of advertising is to increase profits by stimulating sales beyond the unit and Naira levels otherwise possible. More specifically, the producer or seller hopes that additional units sold as a result of advertising will contribute to overhead cost on amount greater than the

cost of advertising (Arowomole, Abimbola and Ebeloku, 2004). Other purposes include: reminding customers and potential buyers of the availability of existing products as well as its superiority and benefits. Creating awareness about, build interest in and make prospective buyers conscious of a need for the product. Thus, advertising is used independently to measure a change in sales (Aaker, 1989). Advertising is most effective because it increases the sales of a product over and above those that would have happened without advertising (Jain, 1990)

Advertising can be broadly classified into three categories which include informative, reminder, and persuasive. Informative advertising gives information about the products, their features, their style, their value, price and availability. It educates the customer of its nutritional values (Martin, 2006). According to Yahya (2013), informative advertising also creates awareness among customers regarding the products or services the company offers for them first time. While persuasive advertising helps in keeping update knowledge of the customers regarding products availability in the markets (Martins, 2006). The advertiser is giving advertisements with the interest to remind them repeatedly so that it would become difficult for them to avoid advertisement. The objective is to persuade them for the desired action but the only thing is that if time taken by the customer to get persuaded is longer than it may be costly for the advertiser due to repeat advertisements for a longer period (Yahya, 2013).

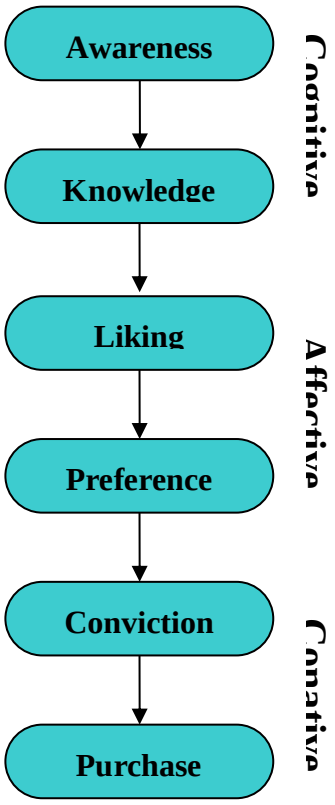
Reminder Advertising is advertisements released in a short period of time so that the consumer is reminded of the product and its benefits constantly and at short intervals of time (Martins, 2006). Yahya (2013) opined that reminder advertising is when advertiser gives advertisement second time or repeatedly its objective is to remind regarding the first advertisement. This helps in keeping update knowledge of the customers regarding products availability in the markets, companies embarking on this advertisement with this objective in market competitive situation.

The main aim of advertising is to bring attitudinal changes in the minds of the consumer. It is done by imparting knowledge to the consumer by touching his or her emotions and playing with the feeling of likes and dislikes towards products, handled in a manner that leads to action/ purchase (Martin, 2012).

2.2.2 Hierarchy of Effects Model

The following model comprises of six steps, starting from product advertising to purchase.

Hierarchy of Effects Model



Source: Adapted from Lavidge and Steiner

Lavidge and Steiner (1961) identified the following as steps involved in the Hierarchy of Effect Model:

Awareness

Awareness creation is key because it gives the necessary information about the product as well as introduces the product or service and also explains the benefits to be derived from the products being advertised to the target market. Awareness happens to be the first in the cognitive stage to attract customers be in the communication process where consumers are made to be aware of the product through advertising (Ashcroft and Hoey, 2001)

Knowledge

Here, prospective buyers must be supplied with every information necessary about the product because if the advertiser fails to do that they would quickly move to competitors' brand. It is very important for the prospective buyers to know much more about the products and have brand knowledge of the product.

Liking

Advertisers must understand the product's features to be promoted so that customers will like them. Having known the product by the target audience, the advertiser must understand their feelings about it and if it is not favourable, the advertiser must also find out the reason. If the unfavourable view is based on real problems, a communication campaign alone cannot do the job. For product problem it is important to first solve the problem and make renewed quality known to the target audience.

Preference

Consumers may like more than one product brand and may not eventually buy any one of them. At this stage advertisers will ensure that the consumer is disconnected from rival products and focus on their own particular product. Consumers should be able to differentiate a particular

brand from that of competitors by being unique in terms of benefits. In this case, the communicator can build consumer preference by promoting quality and other features. The communicator can check the campaigns success by measuring audience preference before and after the campaign.

Conviction

This stage is about creating the customer's desire to purchase the product. Advertisers may encourage conviction by allowing consumers to test or sample the product. Governments at all levels provide anti-malaria drugs free of charge to the people which actually give them the opportunity to have a feel of the taste, brands and packaging. A target audience might prefer a particular product but not develop a conviction about buying it. The advertiser can build conviction among the target audience by explaining the features and benefits of their products that how much value they will get there (Richardson, 2013)

Purchase

Having passed through the above stages, the advertiser will want the customer to purchase their product. This stage needs to be simple and easy; otherwise the customer will be bored and walk away without purchasing the product. However, some rural dwellers might have conviction but not quite get around to making the purchase. They may wait for more information or plan to act later. They must take the final step, perhaps by offering the product at a low price, offering a premium. Customers are ready to pay for the products to fulfil their intense desire for a particular product or services as a result of a number of incentives offered which will persuade a customer to purchase the product. The major criticism of the model is that Smith and Taylor, 2002, asserted that all buyers go through all stages, the stages do not necessarily occur in hierarchical sequence, and impulse purchases contract the process. However, not all consumers be in rural or

urban areas pass through all steps in Hierarchy of Effects Model before buying a particular product.

2.2.3 Application of Hierarchy of Effects Model

The table below shows the application of Hierarchy of Effects Model where a question is asked at each stage except the last stage, which forms the basis of moving to the next stage until the process is completed.

Stage	**Application**
Awareness	Majority of rural dwellers in Kwara State are unaware of anti-malaria drugs, therefore there is serious need to make awareness creation the first order of advertising priority. To test awareness, I might ask them: Have you heard of anti-malaria drugs?
Knowledge	Awareness can answer the question of whether or not rural dwellers know of anti-malaria drugs, however, they may not know and accurately describe what the anti-malaria drugs stand for. To test for knowledge, I might ask: Do you know what anti-malaria drugs stand for?
Liking	Having known what anti-malaria drugs stand for, they begin to form opinions about it. Perhaps, due to increased awareness, rural dwellers now seem to be listening attentively to malaria jingles on radio, television, see them on handbills, posters, and newspapers. They're forming an opinion of whether or not they like it. To test for liking, I might ask: What is your overall perception of anti-malaria drugs? (ranging from efficacious to

	inefficacious)
Preference	The preference stage is where we begin to see the real value of the Hierarchy of Effect display its power. When in the preference stage, rural dwellers have a clear definition of why they would want to buy anti-malaria drugs. To test for preference, I might ask: Why do you now prefer anti-malaria drugs to local herbal medicines that you are already familiar with?
Conviction	At this stage, rural dwellers in Kwara State have already been convinced that anti-malaria drugs are the solutions when they have malaria. Testing for conviction is now a matter of moving the conversation to purchase.
Purchase	Ultimately, the work to move the rural dwellers through the hierarchy will result in their purchasing anti-malaria drugs.

Source: Author's Research (2017)

2.3 Concept of Buying Behaviour

Consumer buying behaviour is the study of the ways of buying and disposing of goods, services, ideas or experiences by the individuals, groups and organizations in order to satisfy their needs and wants (John, 2013). According to Shawn (2007), saw it as the sum total of a consumer's attitudes, preferences, intentions, and decisions regarding the consumer's behaviour in the marketplace when purchasing a product or service. However, consumers go through five stages before purchasing products or services for his end use. The stages include problem recognition, information search, evaluation, purchase and post purchase evaluation. Problem recognition is when the consumer realises he/she has an unfulfilled need or want, then gather relevant needed information to solve the perceived problem. He/she goes further to evaluate the gathered

information against their needs, wants, preferences, and financial resources available for purchase thereby make a purchase decision based on factors such as price or availability of the product concerned. Finally, after purchase and the consumer might have used the product, he /she will decide whether the purchase actually satisfies their needs and wants.

While attitude change refers to a modification of an individual's general evaluative perception of a stimulus or a set of stimuli (John, Richard and Stephen, 1986). Change of attitude is a process of changing individual's behaviour through the use of persuasion (Symon, 2000). However, it is very difficult for rural dwellers to have a change of attitude from using local anti-malaria herbs to anti-malaria drugs because they believe that the local herbs are more efficacious but with the aid of advertising via malaria jingles they are better informed of the advantages of using anti-malaria drugs. In changing the existing attitude, is to change what people believe and what they know by influencing their beliefs and providing them with information capable of changing their buying behaviour through advertising via malaria jingles since individuals keep their beliefs and attitudes consistent (Symon, 2000).

2.3.1 Buying Behaviour of Rural People

Consumer behaviour is the acquisition, consumption and disposition of goods, services, time and ideas by decision making units (Jacob, 1976). Consumer behaviour encompasses the problems encountered by members of society in the acquisition and realization of their standard of living (Arndt, 1976). The hierarchy of effects model postulates that behaviour comprises of three dimensions: cognitive, affective and behavioural. The cognitive dimension involves developing awareness and knowledge, the affective has to do with developing feelings and attitudes, while

the behavioural dimension is the development of conviction or intention and actual behaviour, such as purchase decision making technique. (Lavidge and Steiner, 1961).

However, rural people buying decisions are affected by a number of factors such as culture, product packaging, price, age and advertising. Behaviour are greatly characterised by their lifestyle, level of education as well as buying power which make them different from their urban counterparts. Meanwhile, the above three major characteristics are usually affected by a number of factors as explained below:

2.3.2 Factors Affecting Buying Decisions in the Rural Areas

Culture

Culture happens to be a very important determinant of a person's behaviour in rural area. As a child grows up in a rural environment, he/she will begin to acquire norms, values and behaviour being exhibited by the peer group and his character will be a resemblance of what has been learnt. However the degree of impact that culture will have on behaviour depends on the narrowness of a culture or its merger with other cultures. Rituals, festivals, harvesting seasons and inhibition to buy new things are some of the key features of rural consumers. This could be attested to by the belief rural people inherited from their forefathers that majority of herbal medicines including herbal anti-malaria are very efficacious and preferable to modern medicines. Culture therefore plays a major role in the lives of people because it has the tendency of affecting on the behaviour of individuals.

Product Packaging

Packaging plays a major role in the product offering for rural markets as it is related with affordability, the ability to identify, ease to users and the appeal of the product. Rural buyers appreciate products that are well packaged and those that have easy way of usage. Packaging at the primary level involves protecting the product, whereas at the secondary level, it adds to the aesthetics and sales appeal of the product. Packaging for rural markets needs a special focus because of various troubles like poor transport system, difficulties of safe storage due to poor cold storage and insufficient power supply in the rural areas.

Price

It is the amount of money a consumer must pay to obtain the right to use a product (Hawkins, Best & Coney 2001).The right price influences the quantities of various products or services that the rural consumers will buy. Marketers often erroneously perceive price as their only bludgeon when targeting rural consumers. In reality rural consumers are driven by value for money and not price alone. Rural dwellers attach very much importance to every kobo they spend on buying a particular product since majority of are very poor. They therefore find very difficult to waste money on the purchase of products that they may likely to get benefits from. Although drugs generally in rural areas are usually more expensive than in urban areas because of high costs of transportation that will eventually be spread over the selling price of each anti-malaria drug most especially in the remote rural areas. This is seriously affecting sales of anti-malaria drugs in the rural areas. High priced products with difficult to handle features is generally not liked by rural consumers. Rural consumers generally compare a products price to a reference price considered

reasonable for a certain type of product thereby be able to reasonably judge whether a particular price is high or not.

Age

The purchase of products and their forms are influenced by age. Youth in the rural areas prefer using anti-malaria drugs to local herbs due to the fact that some of them are a little bit educated while the middle-aged as well as old people mostly prefer local anti-malaria herbs to modern drugs. Age group of twenty to forty the consumption of motorcycle, mobile, readymade clothes is more as compared to a person above sixty. Young adults like buying mobile handsets with the latest features and technology whereas elders are content with second hand mobiles with simple and basic features.

Advertising

Low literacy level, poor media reach and exposure and the huge and diverse rural audience characterized by variations in language, culture and lifestyle poses multiple challenges for communicating with the rural audience. For rural consumers who are majorly illiterate may not be able to read and write properly therefore enjoy advertising via sound (jingles) which involves music that usually sticks to their minds (Selvaraj, 2007).

It is very imperative to briefly examine the effects of some factors of rural areas (lifestyle, education level and buying power) on rural consumers buying behaviour.

Lifestyle

Lifestyle is the pattern of one's life that he/she chooses to perform certain activities. Moore (1963) presented his opinion that "lifestyle is a patterned way of life into which people fit

various products, events or resources. Moreover, consumer purchasing is an interrelated, patterned phenomenon and products are purchased as part of a lifestyle". The life pattern and products usage of rural area is different than urban areas.

Education Level

Education in the rural areas in Kwara State is really suffering neglect because government concentrate higher institutions of learning including Universities, Polytechnics, School of Nursing, as well as Colleges of Education in Ilorin, Oke-Ode and Offa respectively. Although there are two Colleges of Education at Oro, Lafiagi and Elemono which also give the inhabitants of the areas opportunities to be educated. Secondary schools that are located in rural areas are not well equipped and both the primary and secondary school teachers posted to those schools may not willing to stay because of unavailability of basic amenities of life such as pipe borne water, electricity and good road.

Consumers' Buying Power

Majority of Nigerian rural population relies mainly on agriculture, livestock. They have low purchasing power and lack of education.

Lifestyle, education level and buying power are the issues that affect the consumers buying behaviour, especially in rural areas. The buying power of rural people is low compared to urban areas most especially in remote villages and hamlets where dwellers are predominantly school children and old people usually above sixty (60) years of age, who depend on the working class for survival. These people are mostly interested in food as well as taking good care of their health so that they can live long. Although these old people are those that commonly indulge in

self medication, who need an aggressive persuasion to have a change of buying attitude to modern anti-malaria drugs.

2.4 Advertising Expenditure

According to Arun and Meenakshi (2013), companies must decide the percentage of advertising cost(s) to be incurred as one of the components of its integrated communication campaign. They further said that advertising expenditure can be based on either of the following.

Percentage of the sales method: A company's advertising budget is a specified percentage of its current or expected sales revenue which can be based on company or industry tradition. The method is very easy to apply and discourages expensive advertising wars if all competitors adhere to their traditional percentage. The major demerit here is that there is decline in advertising expenditure when sales decline, which reduces sales further.

Affordability Method: Here, the executive judgement decides on the amount that can be afforded to be spent on advertising. Its use as the sole criterion for budget setting neglects the communication objectives and the market opportunity that may exist to grow sales as well as profit (Arun and Meenakshi, 2013).

Matching Competition: A company matches the advertising budget of its major competitors, or uses the same percentage of sales figure as its advertising budget, as its major competitors. When a company does that, it assumes that its competitors have arrived at the correct level of advertising spend, which may not be true. Its competitors may be as clueless about how much to spend as the company is, or its competitors may be different from strategic objectives of the company (Arun and Meenakshi, 2013)

Objective and task method: A company's advertising budget depends largely on its communication objectives and costs of activities required to achieve them. If the objective is to increase its awareness level from 50 percent to 70 percent, the costs of developing the necessary campaign and using appropriate media like television and press are calculated, and the total of all such costs is the company's advertising budget (Arun and Meenakshi, 2013).

2.4.1 Developing Advertising Campaign

Developing advertising campaign by companies depends on their resources, the nature of product and the types of audiences to be reached (Arowomole, Abimbola and Ebeloku, 2004).

However, advertising anti-malaria drugs is usually targeted at the entire populace because malaria attack is very common in Nigeria. A times, campaign may be slanted to a particular portion of target market, say rural dwellers. It is imperative to note that the objectives of advertising of anti-malaria drugs are to sell the drugs, create awareness about dangers involved in malaria attack as well as reduce mortality rate. Malaria jingles enable the rural people have a strong feeling that anti-malaria drugs are capable of providing a kind of first aid (relief) to malaria patients before they visit the hospital for treatment. This is gotten through the very last message usually contained in every malaria jingle that "If the symptom persists after three days, consult your doctor". Advertising appropriates of anti-malaria drugs by various companies producing the drugs is largely determined by the duration of such advertising. Some companies base theirs on quarterly while some on yearly plan, depending on their financial capabilities/strengths.

The major media of anti-malaria jingles are radio and television, but the study made use of two major radio stations in Kwara State i.e Radio Kwara and Radio Nigeria, Abuja. Rural dwellers in

Kwara State as a whole often enjoy listening to radio Kwara programmes more than any other radio stations because of the fact that run most of their programmes in English language, Yoruba and other local dialects that exist in Kwara State. In the same vein, Radio Nigeria covers the entire country in its broadcasting but mostly uses English language as a medium of communication. On this station, malaria jingles are run during the network news broadcasting which catches the attention of the majority because of the anxiety of wanting to be abreast of happenings around Nigeria. By listening to network news being read either in the morning or evening, people definitely listened to malaria jingles.

Meanwhile, some malaria jingles are meant to sell the drugs with a view to making profits while others are for awareness creation and sensitization against malaria. The messages embedded in malaria jingles are capable of convincing the users of anti-malaria drugs that the drug is a panacea to malaria attack.

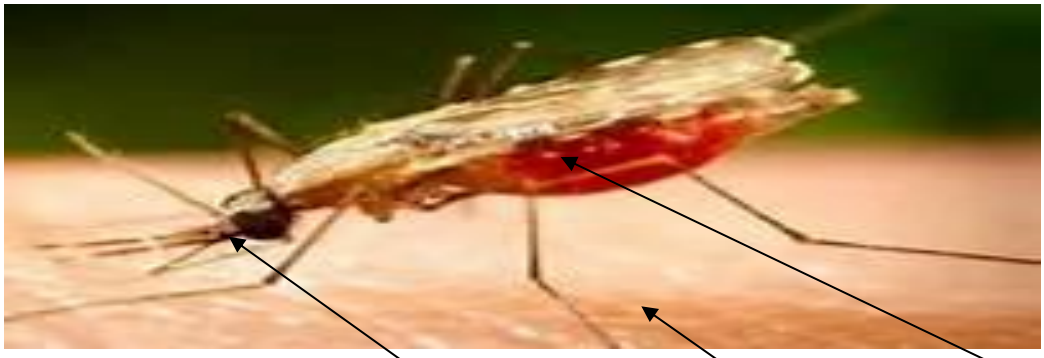
2.5 Semiotics in Advertising

Semiotics in advertising is the use of signs/symbols to express or convey the advertiser's message to the targeted audience. This is very useful in this study because majority of rural buyers are non-literate who find it very difficult to read and write thereby do not attach much importance to advertising messages that involve talking. Examples of semiotics in advertising include sound, image, process as well as text which convey advertising messages mostly in a simple form so that it will make meanings and be easily understood by a lay man.

Sound (jingles) these are short tune of music that is used in advertising for commercial purposes. Malaria jingles are used as a means of advertising to create a positive impression about anti-malaria drugs in the minds of the prospective and potential buyers/consumers (Jones, 2009). This

is crucial in advertising anti-malaria drugs in the rural areas because majority of rural dwellers are dogmatic in their beliefs about that anti-malaria local herbs are more efficacious than modern anti-malaria medicines. Melodious music/songs and jokes that are embedded in malaria jingles make the rural dwellers develop interest in giving anti-malaria drugs trial purchase and when it works effectively they repeatedly buy it. Some of the jingles are run in local languages/ dialects which make rural dwellers understand the content of advertising messages better.

Secondly, anti-malaria drug semiotics also makes use of image which is mosquitoe that bites and sucks blood from the flesh of human beings thereby transmitting malaria into it. However, this is clearly demonstrated through malaria that serves as the sign showing presence of mosquitoes, mosquitoe as an object/sign-vehicle that carries the disease and the red abdomen filled with human blood as the interpretant which gives a very simple understanding to even a lay man that mosquitoes suck blood and transmit malaria to man. Hence, the red abdomen of blood-sucking insect is the code which indicates the health danger that mosquitoes are capable of causing in man, usually if not treated at the right time; it results to untimely death (Wikipedia, 2015). The anti-malaria semiotics is usually and conspicuously shown at the back of anti-malaria drug pack. The following diagram shows the image commonly found almost on all anti-malaria drugs' packs.



Adapted from: Bello et al, 2016

Another example is a picture of skull and crossbones next to a pack of cigarettes could be used to advertise the harmful nature of cigarette smoking.

Thirdly, one word (text) can be used to convey a message with the same effectiveness as an entire picture, like ‘Ugly Creature’ that is being used to describe muquitoe which is a major cause of malaria in man. This portrays musquitoe to be a bad and unfriendly insect. Similarly, a positive message can also be conveyed to endorse a political candidate, using words such as "bravery" or "conservative" to set the candidate apart from his opponents.

However, people also hawk anti-malaria drugs both in the rural and urban areas as a means of advertising because they find it very difficult to get white collar jobs and also feel that it is very simple to do which does not require any special skills. Hawking of wares and food products on the roads and motor parks is an economic means of making ends meet, either sponsored by parents or the child personal interest (Ebgbo, 2003). Hawking of anti-malaria drugs is just like hawking every other drug; hawkers have to sing melodious songs which are tandem with the malaria jingles that are run to attract both the prospective and potential buyers to patronize anti-malaria drugs. They also shout loudly as well as dance if need be to attract customers even though the products are already known to majority of the buyers.

Meanwhile, hawking is mostly associated with female adults and children of school age and has a lot of implications. Ojo (2013) identified three implications that are associated with hawking which include physical, psychological and social. Physical consequences include: accidents, spread of communicable diseases, food poisoning and traffic congestion. Psychological consequences are stress, fatigue, depression, and anger and resultant ills. Social implications

include: unwanted pregnancies, prostitution, smoking, robbery, truancy and poor academic performance among others.

In order to guard against the above negative implications of anti-malaria drug hawking, malaria jingles is therefore a safe means of advertising that is reliable, easy effective and simple.

2.5.1 Jingle

A jingle is a short tune used in advertising and for other commercial uses. The jingle contains one or more hooks and meaning that explicitly promote the product being advertised, usually through the use of one or more advertising slogans. Buyers use jingles in radio and television commercials; they can also be used in non-advertising contexts to establish or maintain a brand image (Wikipedia, 2014). Jingles are usually catchy and cheerful little tunes that fit the product or service advertised. The jingle must be very catchy so as to associate a positive image with the company. In order to create a catchy jingle a composer must understand the product, mention and repeat the name of the product or company, and be in a major upbeat key. The tempo should be fast-paced and with a cool or funny rhythm (Wikipedia, 2013).

However, semiotics is being frequently used in advertising to signify an advertiser's message through the use of signs or symbols. A sign can be better understood as a signifier, or a symbol that signifies something else. As one of the semiotics of advertising, jingle serves as an example of sound which involves music and the actual content of the music itself can also be a symbol for an advertised product or message. Other examples include images, text as well as process *(Jared, 2015). Majority of rural dwellers are non-literate who understand signs or symbols better than any other forms of advertising because of the fact that images, sound as well as text that can be*

seen physically and heard which signifies the advertiser's message and impliedly giving meanings to the message being passed across.

Jingles should be simple and any words that slow down the song or produce an awkward verse should be jettisoned. Lastly, jingles should suggest some sort of relationship between product and person—whether that person is one individual or an entire group of people. Sometimes consumers pass on a product because they don't quite understand the relationship between product and consumer. An advertisement with a jingle makes this relationship clear: remember the old jingles (Wikipedia, 2013).

2.5.2 Significance of Jingles

The reason why jingles are used in advertising is that jingles help people remember the commercial. Jingle also involves repetition so that consumers will associate the product with the company and as well create an image of the company thereby making its image stick in customer's mind (Elise, 2014)

However, the function of a commercial jingle is to reinforce a product or service in the mind of the listener. People retain messages that are set to music far more effectively than a message alone. While consumers may block out commercials, they do not as automatically block out music, so a catchy tune paired with a phrase has a chance of being committed to memory. Jingles, unlike other commercials, can stay in people's minds for years (Jones, 2001). People are more prone to remember information from commercials accompanied by singing compared to those that just include talking. The main reason why commercial jingles work is that music has more powerful effect on our emotions (Jones, 2001).

However, mentally we are very receptive to music, if one sings lyrics to a catchy jingle; the person has experienced the commercial jingle effect. In an advertising saturated society, jingles are much more preferred because it is not only conveying the message, but also creating a very positive impression about the product in question (Jones, 2001). Music strongly influences the way people think, their buying attitude especially when one markets his or her products using catchy music logo. Listeners therefore remember the product whenever they are in the market for shopping (Jones, 2001)

Advertising jingles will therefore be the most simplistic type of advertising that are most effective. When a jingle turns eventually takes over someone's thoughts, such a person will be thinking about the product being advertised. Jingles operate like other types of advertising; the oftener one encounters them and the cleverer that they are, the more unforgettable they turn into. Profitable jingles have three characteristics: they are small, easy to comprehend and easily recognizable. If a jingle doesn't have these traits, it is practically sure to be forgotten (Alam, 2012). Most varieties of advertising call for continual renewal, but a superb jingle can last for decades, maintaining the organization on people's brain and inspiring profits (Jones, 2001).

2.5.3 Major Malaria Jingles

It is highly necessary to examine the major malaria jingles being frequently held on radio and television stations across Nigeria most especially in Kwara State. Most of these jingles are run as a means of advertising to sell anti-malaria drugs being sponsored by the pharmaceutical companies through Capital Medial, a Nigeria's premier advertising media agency located in Ikeja, Lagos. Others are in form of awareness creation and sensitizing people against malaria as well as population control. The following are the common malaria jingles in Kwara State:

2.5.4 Radio Jingles

Radio Jingles can be referred to as all elements of radio station branding or identification which those station branding elements that are either musical or sung. Sung jingles are the most common form of radio station branding otherwise known as imaging Wikipedia (2014). However, a radio jingle therefore is created in a studio by session singers and includes a musical representation of the radio station name and frequency. Radio stations will sub contract to specialist radio jingle producers who create musical sound and melody along with the recording the session singers. The elements will be dispatched to the radio station in various time variations to be edited by local radio producers before being broadcast in between songs or into and out of commercial breaks Wikipedia (2014). Advertising through radio has three major advantages which include cost effectiveness, time efficiency and measurability of results (Jones, 2009)

Meanwhile, Mateo (2017) indentified the benefits derivable from advertising via Radio over all other forms advertising are enormous which include the following: close contact, considerations, function, as well as potential.

Close Contact

People listen to radio almost all the time because it is very common and affordable which makes everybody to be more familiar with radio more than any other media of advertising. Radio is therefore a very effective medium of advertising since people can listen to it anywhere ie at work, home, when driving, jogging etc. Advertising via jingles which involved the use of music in the radio is of immense benefits, people remember music more easily and because one can hardly be in any environment that is devoid of radio.

Considerations

Advertising via radio targets audience demography as such advertising messages reach the advertiser's gender, age as well as economic status.

Significance

Advertising on local radio broadcasts are inexpensive compared to television commercial, print advertising and direct mail.

Function

Consumers do not need to stress themselves in order to read newspapers, watch television or star at any billboard before understanding the advertising message contents.

Potential

Radio stations offer a variety of promotional activities that support their advertising, being a partner in success, allowing the partner to give away promotional items with thier name and

logo, be live on-air and even hold broadcasts from the partner's place of business.

The study therefore made use of anti-malaria jingles being run in Radio Kwara as well as the network news of Radio Nigeria. These radio stations are the ones rural dwellers in Kwara State often and commonly listen to because majority of them don't have televisions due to lack of electricity in majority of these areas to power it and more so most of them are poor and could not afford to buy even the smallest generating-set. The following are some of anti-malaria jingles being run on Radio Kwara and Radio Nigeria.

"No one hates malaria, like armatem

For effective relief from malaria, take armatem

A solid combination of Atemic cell and lumenfantrin

Malaria will run for cover and you will recover

You will feel relieved and be well again

No one hates malaria, like armatem

For effective relief from malaria, take armatem

Mama, Baba, Sister, Children too, armatem

You will bounce back to life Armatem, a solid combination

of atemic cell and lumenfantrin

Armatem is effective against malaria

Armatm is well tolerated,

Armatem, is available as tablets for adults and

*Suspension for children Armatem, say **No** to malaria,*

*say **Yes** to life Marketed by LB fermer Ltd*

If the symptom persists after three days, consult your doctor."

Source: Radio Kwara, Ilorin(2017)

"Pasoka watin be that, why everybody dey momour?

Na Susan o! then say hin pickin dey sick, he just shake, come dey vomit,

hin body dey hot well well, na why him no dey come market

Pasoka don't mind dem, ha-ha! The pickin wey they play for sun every day,

why him body no go hot?

Baba Nkechi, this one no be sun, na Malaria o!

And ACT medicine wey get green leaf logo for hin body, na hin the pickin suppose take

ACT, na Artemisirin Combination Therapy wey dey for all age groups,

na correct Malaria medicine for small money if na small picking wey never reach five years, u

give am ACT quick quick, even if malaria test no dey.

Because malaria dey kill small picking fast fast.

Henhe! Wait make I go tell Suasana now, now

Chee! Basoka he be like say my body weak me,

heenhe! U self dey sick, treat am with ACT medicine malaria no be your friend,

ACT medicine wey get green leaf logo for him body and stop malaria before he stop u.

Na Roll Back malaria partners, carry dis message come"

Source: Radio Nigeria (Sponsored by Society for Family Health, 2017)

"He get some things wey person no dey take to play oo!

for the last village festival everybody dey jolly, say our King show face for first two years,

na him we hear pa!hay ooo! One man slapped the king.

Hah! People wey dey there say the king's face he red but,

dey say him just look the man, hmnn smile.

That kind smile wey king dey smile for you hen,

he go pack your load,

carry your family run for your life.

Na later we hear say mosquito wey him knack for king face,

the man want kill oo! But, no body fit find the man to hear him own story.

Hun! He slap king.

Malaria fit put you for serious trouble oo!

Naso mosquito take do him bad work. No take am play at all, at all.

That is why any where you see the roll back malaria sign,

na there then go give you better and quality prevention and treatment against malaria.

All na free for any government hospital or health centre,

but if na private hospital you go pay chinchini money.

Na the Roll Back malaria partners, carry this message come"

Source: Radio Nigeria (2017)

2.5.5 Costs of Sponsorship of Malaria Jingles

It is pertinent to note that malaria jingles are being sponsored at costs which might not be considered by this study because the study made use of primary data throughout but it is important to highlight this for emphasis sake. Malaria jingles in Radio Kwara are being sponsored by companies producing anti-malaria drugs through a premier advertising agency called Capital Media that is saddled with the responsibility of advertising controlled drugs. In the same vein, Society for Family Health, a non-governmental organization (NGO) and National Action Committee on Aids sponsor jingles in Radio Nigeria with a view to eradicating malaria and reducing mortality rate in the society.

However, the table below shows anti-malaria cost, drug, frequency and time of advertising of malaria drugs in both Radio Kwara and Network Service of Radio Nigeria.

Table 2: Showing Radio Stations, Cost per Slot of Anti-malaria Jingle, Drug, Quarterly Frequency and Duration

S/N	Radio Station	Cost(₦) per slot of Jingle	Anti-malaria Drug	Quaterly Frequency	Duration
1	Radio kwara	12,900	Amartem	120	45 seconds
2	Radio Kwara	12,900	Lonart	120	45 Seconds
3	Radio Nigeria	229,210	Artemether	24	60 seconds
4	Radio Nigeria	229, 210	Combisunate	24	60 Seconds
5	Radio Kwara	12,900	Amalar	120	45 seconds
6	Radio Kwara	12,900	Swidar/fansidar	120	45 seconds
7	Radio Kwara	12,900	Artesunate	24	60 seconds
8	Radio Nigeria	229,210	Laridox	24	45 seconds
9	Radio Kwara	12,900	Artemef	120	60 seconds
10	Radio Kwara	12,900	Vamadox	120	45 seconds

Source: Radio Kwara, Ilorin and Radio Nigeria, Abuja (2017)

The difference in the costs of malaria jingles per slot of the above two radio stations is due to the fact that Radio Nigeria covers the entire country in its broadcasting which makes anti-malaria drugs being advertised to be patronised more aggressively. However, the cost of malaria jingle per slot depends on the duration. Anti-malaria drugs are 'controlled drugs' that can only be advertised by the companies producing them through agencies authorised by the government, Non Governmental Organisations (NGOs) as well as National Action Committee on Aids (NACA). Consequently, society for family health and the national action committee on aids are the Co-sponsors of anti-malaria drugs in Radio Nigeria, Abuja.

On the other hand, Radio Kwara covers about six states namely: Kwara, Oyo, Kogi, Ekiti, Osun and Niger. The coverage compared to that of Radio Nigeria is smaller, which obviously is the main reason for the difference in the costs of advertising per slot. Radio Kwara broadcasts malaria jingles in various languages such as Yoruba, Baruba, Nupe, Funlani Hausa and English languages present in Kwara State. However, the frequency of malaria jingles is consequent on the advertising budget of the companies producing anti-malaria drugs and advertising standard set by each radio station.

2.5.6 Malaria Poems

The study also briefly examined how malaria poems play a significant role in support of malaria jingles by sensitizing people about the dangers of malaria attacks. Malaria poems are usually circulated through posters and handbills that show the various ways through which mosquitoes do their ugly work on human beings. The main essence of malaria poem is to sensitize the people on the need to avoid mosquitos' bites. But if one is already having malaria, such a person should use anti-malaria drugs and if the symptom persists after three days, consult his or her doctor.

Malaria poems

- ***The Sick Man***

"The man wheezes and coughs

He clutches and gropes the bed

The lumps and the bumps

Form a city of humps

Which ooze blood and puss

His fever burns on,

Like a maddened beast

And his last words are almost lost

"Death is the bliss of an end to this""

- ***The Way of the Mosquito***

"The small bug lands

On an arm or hand

And swiftly does its work

Then time spreads the poison

And brings on the symptoms

And soon the victim's grave is booked!"

Source: *Author's computation, 2017*

2.6 Home Management of Malaria

This is the part of first aid in treating malaria especially if the case is less severe. It is usually done at home before it gets to the hospital for treatment if need be. Therefore, managing malaria in the home starts from recognizing early signs and symptoms as well as taking prompt and appropriate actions (Folake, 2010)

The effectiveness of home treatment will depend upon early diagnosis, prompt, appropriate treatment, and proper health education about malaria. Early commencement of appropriate treatment will ensure better outcome and prevent the progression to severe malaria. An anti-

malarial drug to be used at home must be safe, effective, affordable, easy to administer and preferably in single dosage packs (FMOH, 2005).

However, anti-malaria drugs to be used to treat malaria just like every other drug must have been dully registered by NAFDAC, satisfy malaria treatment needs, have sufficient evidence of efficacy conditions and ability to withstand any adverse environmental conditions. Also its side effects should be known and the quality be certified by local institution as well as WHO for those that are imported (FMOH, 2005)

2.6.1 **Proscribed Anti-Malaria Drugs**

In order to ensure sanity in the health sector, some anti-malaria drugs have been proscribed by the government as a result of its inability to meet the required standard. The Nigerian Senate has seriously lamented that anti-malaria drugs that have been banned in Europe but are still sold in hospitals and pharmacies in Nigeria, the lawmakers therefore put a further ban on the already proscribed anti-malaria drugs (John, 2017). Therefore, malaria jingles do not cover any of the proscribed anti-malaria drugs so that it does not mislead the people to use the proscribed anti-malaria drugs. The following are the names of proscribed anti-malaria drugs, they are: Alaxin, Amodiaquine; Arinate; Arsumax; Artemax; Artémédine and Artenam, Artesiane. Others include: Artexin, Camoquin, Cotecxin, Daraprim and Falcinil.

2.7 Theoretical Review

The study is supported using learning, role, health belief as well as strong theories.

Learning Theory

The theory that can be related to t he Pavlov's dogs experiment. Pavlov trained his dogs to associate the arrival of food with the ringing of a bell; a sound that alone would lead to the salivation response among the dogs. Just like the bell in Pavlov's dogs experiment, advertising was seen as a stimulus that would give rise to a response, just like the dogs salivation response (McLeod, 2013)

Role theory

The theory emphasises that human behaviour is guided by expectations and as well predictable. In order to change human behaviour, it is very important to change roles because roles correspond to behaviour and vice versa. Roles are plans or blueprints that guide behaviour, influence beliefs and attitudes in which individuals will change their beliefs and attitudes to correspond with their roles (IEMF, 2003) Advertising via jingles has a very vital role to play in changing the rural dwellers' beliefs and attitudes towards buying anti-malaria drugs.

Health Belief Theory

The theory is based on the understanding that people are rational in their thoughts and actions, assuming that attitude and belief motivate action. People will take the best health-supporting action if they feel that a negative health condition can be avoided, taking a recommended action will avoid negative health condition and believe that they can successfully take a recommended health action. It is therefore a framework for motivating people to take positive health actions

that use the desires to avoid negative health consequences as the prime motivation (Medical dictionary, 2009).

Strong Theory

The theory states that consumers pass through the stage of awareness, interest, desire and action (AIDA). Advertising is strong enough to increase people's knowledge and change their attitudes, capable of persuading people who had not previously bought the product to buy it. Advertising therefore is assumed to have a powerful influence on consumers that new customers are persuaded to buy a particular brand (Arun and Meenakshi, 2013)

However, the study adopted strong theory as a support because it emphasises that the consumer has to pass through the stages of awareness, interest, desire and action which is in conformity with the Hierarchy of Effect Model in the study. The ability of malaria jingles to increase the people's knowledge and change the attitudes of buyers towards buying anti-malaria drugs is also a reason for the choice of this theory.

In a nut shell, advertising as expressed by the theory is capable of informing, reminding as well as persuading the potential buyers to patronize a particular product with a strong conviction that such a product is the best and capable of providing necessary benefits to the buyers.

2.8 Empirical Review

There are several studies carried out in related fields in which this study reviewed a number of them.

Ng (2011) examined the effectiveness of music in advertising towards consumers' buying behaviour. The aim of the study was to find out if music has effect on the buying behaviour on the students and working adults. It equally developed a path model in order to explain how music works and effective measures which includes attitude towards advertising as well as difference in buying behaviour. A sample of 100 students and working adults were taken with ages ranging from eighteen to twenty-five in which in-depth interviews were also conducted. Findings showed that music has a significant effect on consumers' buying behaviour.

Bello, Abdulraheem and Imoukhome (2016) examined the impact of semiotics on the awareness of anti-malaria drugs among rural dwellers in selected local government areas of Kwara State. The objective of the study was to investigate the impact of semiotics most especially via the use of image and sound on the creation of awareness about anti-malaria drugs among rural dwellers in Kwara State. A descriptive survey was adopted with a sample of 216 rural dwellers and multiple regression was employed to analyse the data collected. Findings indicated that the use of semiotics via image and sound has a significant impact on awareness creation among rural dwellers in Kwara State. It was concluded that the use of sound should be retained while image be strengthened more than before because it is very cheap, simple, reliable and effective.

Hafiz, Mudasar, Nabila, Wasim and Sara (2014) examined the impact of advertising on consumer buying behaviour. The main objective of the study was to examine how much emotional responses are generated after watching effective add that persuade consumer purchase

behavior. Environmental responses i.e. information rate and sensory stimulated activities represented in advertisements has also influence or even can change the buying behavior of consumers. Data was collected using non-probability sampling (N=300) through a pre-tested questionnaire from seven cities of Pakistan. Correlation, regressions, t-statistics, reliability analysis and descriptive statistics were also used to analyse the data collected. Demographics such as gender, age and qualification were included. Findings showed that emotional and environmental response factors have a significant impact on the purchase behavior of Pakistani consumers.

Samar and Samareen (2015) examined the impact of advertisement on buying behaviors of the consumers. The data was collected through the use of questionnaire administered to 200 young males or females who use different brands of cosmetics to check the influence of advertisement on their buying behavior while creating the awareness and building the perceptions. Correlation and regression analysis were used to identify the relationship between these variables. These results show that advertisements are very useful in creating the awareness among the people but have failed to build strong perceptions in the mind of consumers. Both of these variables such as consumer awareness and consumer perceptions will motivate the consumer to buy a certain product, as there is a positive relationship present in between them.

Fazal, Tariq, Aminllah and Shabir (2014) studied how advertising affects the buying behavior of consumers in rural area in Pakistan. It examined the effects of advertising and some factors of rural areas on consumer buying behavior. The study used questionnaire based survey to collect data from 416 repondents in rural areas. The collected data were analyzed through correlation statistics and simple regressions. Results indicated that advertising has positive and statistically significant effects, while, the factors of rural areas have negative but statistically significant

effects on consumers buying behavior. Further, advertising is positively but factors of rural areas are negatively correlated with consumers buying behavior.

Sajuyigbe, Amusat and Oloyede (2013) examined the impact of advertising on sales turnover with special reference to Nigerian Breweries Plc. Data were collected through structured questionnaire and six years annual reports and accounts of Nigerian Breweries. Sample size for the study was ninety (90) participants and data were analyzed through Pearson Product Moment Correlation coefficient with the aid of statistical package for social science (SPSS) version 16. Result showed that there is a strong positive significant relationship between advertising and sales

Olufayo, Ladipo and Bakare (2012), examined the effects of advertisement on the patronage of new products and the effects of budget allocations for advertising on sales volume of Nestle Nigeria Plc. Through descriptive survey research design, a structured questionnaire was used to elicit information from the target respondents who are employees and customers of Nestle Plc. Primary data was collected and processed in the study. 250 questionnaires were administered to respondents and results showed that there is relationship between advertising and consumer patronage just as it depicts that budget allocation to advertising has effect on sales volume.

Suparn and Jyoti (2009), examined the growth pattern and trend of sales and advertisement expenses as well as seeks to evaluate the effectiveness of advertisement expenses on sales of selected companies operating in India at aggregate and disaggregate levels categories. The study is based on panel or pooled secondary data collected for advertisement expenditure and sales revenue of 134 randomly selected sample companies operating in India over the period from 1992/93 to 2006/2007. In this study of Panel or Pooled data, Fixed Effect approach with and

without dummy variables are applied to evaluate the effectiveness of advertisement expenses on sales. Further, in case of non-manufacturing companies, they are less popular among the consumers and also spend less on advertisements as compared to manufacturing companies. The study concludes that to a large extent, trend of sales and advertising expenses depend on the nature and size of industries.

Soni and Verghese (2013), examined the various sales promotion tools and its impact on purchase decision towards white good (refrigerator). Data was collected using convenience sampling of 109 respondents through descriptive research design technique, analysed and the hypothesis tested by using multiple regression technique. The result shows that among the various sales promotion tools: offer, premium and contest are the most influencing variables for consumer purchase decision.

Oyedapo, Akinlabi and Sufian (2013), examined how sales promotion is used to generate higher sales, increase profitability and greater market share. The study focused on sales promotional tools and how NESTLE Nigeria Plc has adopted sales promotion to generate its revenue. The sample size employed was 205 respondents from NESTLE Food Nigeria Plc. However, the study made use of survey design and purposive sampling technique in selecting the respondents comprising management and staff of NESTLE Nigeria Plc. It was concluded that management may engage regularly in more promotional mix strategies, and also tend to be creative to consumers; this in turn would enhance and boost their sales revenue.

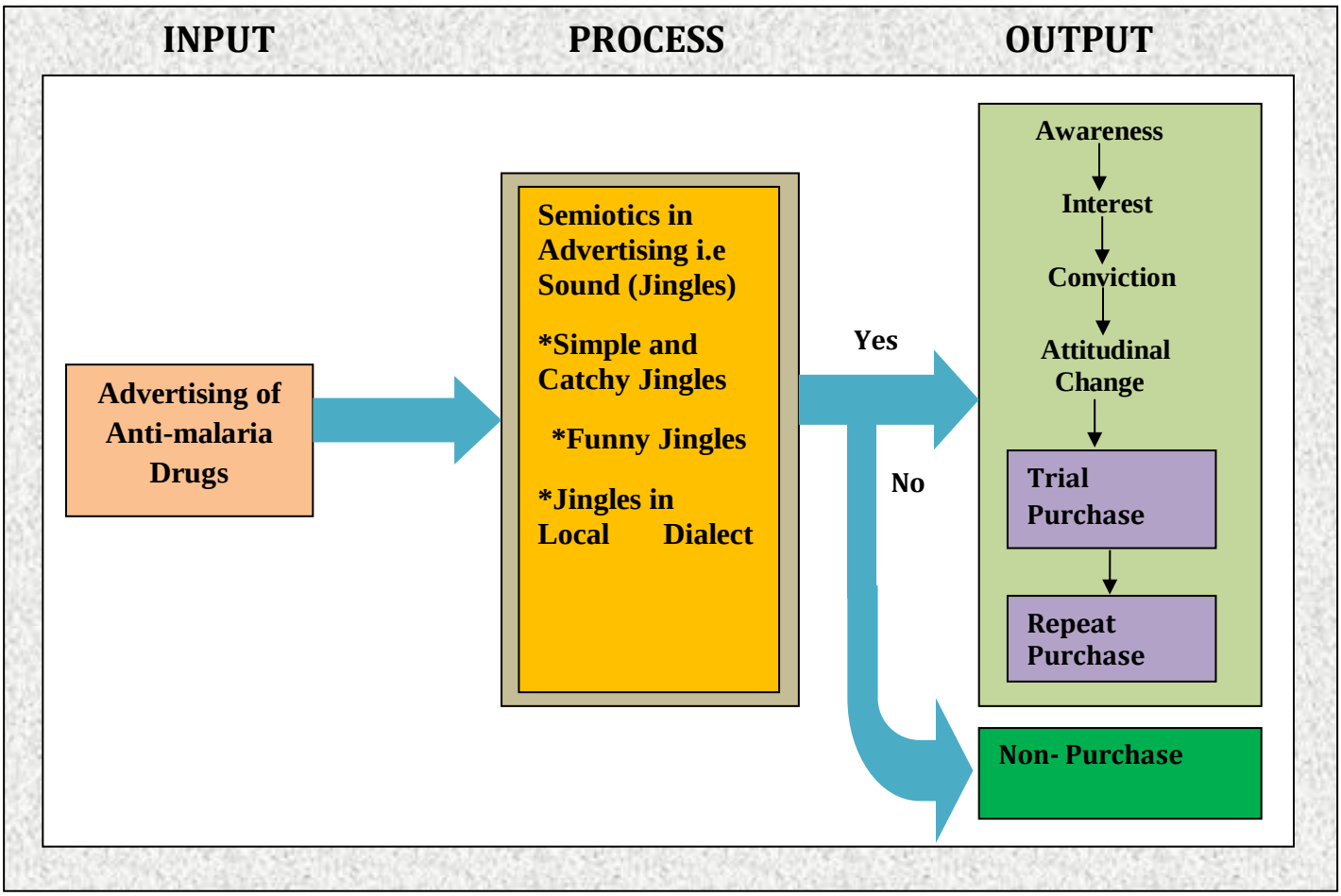
2.9 Deductions from Literature Reviewed

Study carried out by Ng (2011) concluded that music in advertising has a significant effect on consumers' buying behaviour. Also, Bello, Abdulraheem and Imoukhome (2016) posed that

semiotics (Image and malaria Jingles) has a significant impact on the creation of awareness about anti-malaria drugs. Similarly, findings of Hafiz, Mudasar, Nabila, Wasim and Sara (2014) showed that emotional and environmental response factors of advertising have a significant impact on the purchase behavior of Pakistani consumers. In the same vein, Fazal, Tariq, Aminllah and Shabir (2014) found out that advertising has positive and statistically significant effects, while, the factors of rural areas have negative but statistically significant effects on consumers buying behavior. But factors of rural areas are negatively correlated with consumers buying behavior.

A few literatures above reviewed revealed that music in advertising, semiotics in advertising, emotional responses from advertising and advertising have very significant effects on the purchase behaviour of consumers.

2.10 Conceptual Framework of Impact of Advertising on the Rural Dwellers' Buying Behaviour of Anti-Malaria Drugs



Source: Author's Conceptualization (2017)

The above model shows that advertising of anti-malaria drugs is the input and semiotics in advertising which is sound where jingles (ie simple and catchy jingles, funny jingles and jingles in local dialects) emanate is the process. In the model, radio is the medium of advertising being used to advertise anti-malaria drugs. It plays a very significant role in creating necessary/needed awareness, knowledge, interest and conviction that translates to attitudinal change (purchase). As a result, malaria patients and people in malaria prone areas demand the anti-malaria drugs.

Undoubtedly, the prospective buyers give anti-malaria drugs a trial purchase and if the drugs work effectively as advertised, it then translates to repeat purchase. Users of anti-malaria drugs eventually patronize the anti-malaria drugs when they derive necessary benefits from the drugs as claimed by the advertiser.

Meanwhile, a few malaria patients that are absolutely dogmatic to traditional way of treating malaria may not buy the anti-malaria drugs despite the advertising because they believe that their local herbs are more efficacious. Similarly, they do feel that buying anti-malaria drugs is a waste of money and at the same time a mere relief that can not completely cure malaria compared to their local herbs, as shown in the Model above (non-purchase). Even if the government distributes anti-malaria drugs for free, some of these rural dwellers may not collect it because they also believe that every drug must have one side effect or the other.

2.11 Research Gaps in the Literature

Based on the reviewed literature, it is observed that advertising enhances buying behaviour positively. There are a lot of studies conducted by foreign authors focusing on advertising, music in advertising, growth pattern and trend of sales and advertisement expenses, promotion and sales promotion tools. Studies conducted by local authors focused on semiotics in advertising and advertising.

The study conducted by Ng (2011) considered only the students of University Tuntu Abdul Rahman and College Tunke Abdul Rahman and a few working adults which failed to generalize the entire population of Malaysia with wider group of respondents of different ages and places. While this study considered the entire rural dwellers which is broader and wider in scope.

Similarly, the study conducted by Bello etal (2016) on the impact of semiotics on awareness creation of anti-malaria drugs in Kwara State focused majorly on the use of image to create awareness and briefly addressed the contributions of malaria jingles. It also failed to capture other examples of semiotics which are process and text. But this study focused on the use of malaria jingles as well as all other examples of semiotics, which makes it more elaborate.

Samar and Samareen (2015) posited that advertising is very useful in creating awareness but failed to build strong perceptions in the mind of consumers. This study saw jingle as a means of advertising that is capable of creating positive feelings and attitudinal change in the minds of consumers of advertised anti-malaria drugs

Fazal, etal (2014) found that advertising has positive and statistically significant effects, while, the factors of rural areas of Pakistan have negative but statistically significant effects on consumers buying behaviour. But factors of rural areas are negatively correlated with consumers buying behavior. This study was based on impact of advertising via jingles on buying behaviour in Nigeria which saw factors affecting rural areas as a great influence on rural dwellers' buying behaviour.

Finally, there appears to a paucity of related studies on the impact of advertising on the rural dwellers' buying behaviour of selected anti-malaria drugs in Kwara State.

CHAPTER THREE

METHODOLOGY

3.1 Preamble

This section presents the research design, population of the study, sample size and sampling techniques, method of data collection, research instrument as well as the statistical techniques employed for data analysis.

3.2 Research Design

Considering the nature of the research problem and the nature of the research questions, the research was done using an exploratory study approach on the impact of malaria jingles on the buying behaviour of anti-malaria drugs. Primary data were gathered through the use of structured questionnaire. In the study, advertising constitutes the independent variables while buying behaviour constitutes the dependent variables. These two variables (dependent and independent) are stated below:

The buying behaviour variables comprise:

- Awareness
- Interest
- Conviction
- Purchase

Advertising (Jingle) variables

- Simple and catchy jingles

- Funny jingles
- Jingles in local dialect

3.3 Population of the Study

The population of any survey study must be clearly defined so that the elements that are members of the population can be identified.

Therefore, the population comprised rural dwellers in all the sixteen local government areas of Kwara State and cuts across students, farmers, artisans, hunters, teachers (primary and secondary schools) as well as traders. It represents the entire rural dwellers in the state which cut across almost all towns, villages and hamlets in all the local government areas of Kwara State.

3.4 Sample Size and Sampling Technique

The process of selecting a portion of the population to represent the entire population is known as sampling (LoBiondo-Wood & Haber, 1998). Sample size is very fundamental because it gives a desired accuracy which is normally gotten before conducting sampling. The population consists of rural dwellers in Kwara State. A convenience sampling was used to select 400 rural dwellers in the sample frame using Yamane (1967) formula for sample size determination.

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

n = Sample Size

N = Population Size

e = Proportion of the sampling error (Assuming 0.05 significant level)

$$n = \frac{2{,}365{,}353}{1 + 2{,}365{,}353\ (0.05)^2}$$

$$n = 399.93 \approx 400$$

400 rural dwellers were selected in Kwara State. However, 400 copies of questionnaire were distributed in all the sixteen local government areas of Kwara State. The following proportion allocation formula propounded by Kumar (1976) was adopted to determine the sample size of each of the local government areas.

$$n_h = \frac{n \times N_h}{N}$$

Where:

n_h = Sample Size for stratum *h*.

n = Total Sample Size,

N_h = Population size for stratum *h*,

N = Total Population size

The distribution of copies of questionnaire is as shown in the table below.

S/N	Local Govt. Area	Population Figure (Census, 2006)	No. of Respondents (Nh)
1	Asa	124,668	21
2	Baruteen	206,679	35
3	Edu	201,642	34
4	Ekiti	54,399	10
5	Ifelodun	204,975	35
6	Ilorin East	207,462	35
7	Ilorin West	365,221	61
8	Ilorin South	209,251	35
9	Irepodun	147,594	25
10	Isin	59,481	10
11	Kiama	124,015	21
12	Moro	108,715	18
13	Offa	88,975	15
14	Oke-Ero	56,970	10
15	Oyun	94,454	16
16	Pategi	110,852	19
TOTAL		**2,365,353**	**400**

Author's Computation (2017)

The sample size of each stratum is proportionate to the population size of the stratum. Therefore, the highly populated local government areas take higher number of copies of questionnaire than those with low population figure. For instance, rural dwellers in Ilorin West, Ilorin East, Ilorin South and Offa local government areas are located in the villages and hamlets within these local government areas where their population figures are less than one thousand five hundred (1,500) inhabitants.

This is as shown in the table below.

S/N	Local Govt. Area	Rural Areas where samples were taken
1	Asa	Falokun, Budo- Alfa, Pandoro, Budo-Ogun, Gaa-Apa and Owode
2	Baruteen	Budo Abiri, Tunga Tobi, Ruga, Singu, Tunga Audu, Bani, Galo and Bera
3	Edu	Ikange, Ndaeji, Gbako, Lemo, and Sambufu
4	Ekiti	Eruku, Isapa, Obbo Ile, Isale Opin, Araromi Opin and Oke Opin
5	Ifelodun	Oreke Oke, Dabu, Idera, Alabe, Oreke Isale, Yaru, Agunjin, Omiaro, Ganmu and Faomle
6	Ilorin East	Oke-oyi, Lajolo and Oke Ose
7	Ilorin West	Madala
8	Ilorin South	Agbeyangi, Panada, Ibagun, Apado, Jabi, Ita-Alade, Abudu and Budo Ago.

S/N	Local Govt. Area	Rural Areas where samples were taken
9	Irepodun	Samonra, Ilala, Buari, Okeya, Agbamu, Ajegunle and Araromi-Ajase,
10	Isin	Pamo, Oba, Oke-Aba, Alla and Ode Eku
11	Kiama	Bani, Gati, Zanje, Yamani, Woro, Maisaje, Kimodo and Ossa
12	Moro	Lanwa, Adio, Gata, Budo Oke, Budo Ona, Ogala, Eleshin Nla and Pakumo
13	Offa	Igbaweere, Igbi-Idun, Kereaje, Ogbondoroko, Ajegunle, Pandoro, Eleshin-funfun and Ogakunrin
14	Oke-Ero	Erinmope, Idofin-Igbana, Ilofa, Odo-Owa and Idofin-OdoAfo
15	Oyun	Ira, Igosun, Falokun, Ojoku, Owode and Olomi
16	Pategi	Lade, Kpada, Ma-agi, Dengi, Sakpefu, Gberi, Koro, Nimbe and Bide

Author's Computation (2017)

3.4.1 Research Instrument

The research is exploratory in which interview and questionnaire were simultaneously made use of. Personal interview was also conducted (in their various dialects) for the rural dwellers due to the fact that majority of them are non-literates who can neither read nor write.

However, the questionnaire was divided into three sections: A, B and C. Section A will be on bio-data of the respondent, B was on the advertising of anti-malaria drugs and C was on the rural dwellers' buying behaviour of anti-malaria drugs. The questions therein were very sequential, simple and address the germane issues relating to the subject matter.

A pilot test was carried out to test the adequacy and reliability of the questionnaire in the local government areas; this actually helped to determine if the questionnaire can be easily interpreted by the respondents before it was finally administered.

3.4.2 Scoring the Instrument

The questionnaires were mapped with numerical values which were rated on five points Likert Scale where strongly disagree would be coded as '1' disagree coded as '2' undecided coded as '3' agree coded as '4' strongly agree coded as '5' McLeod (2008)

3.4.3 Validity of the Instrument

This is the extent to which an instrument measures what it is supposed to measure and performs as it is designed to perform. It is rare, nearly impossible, that an instrument be 100% valid, so validity is generally measured in degrees. As a process, validation involves collecting and analyzing data to assess the accuracy of an instrument. According to Daramola (2006), internal validity is ensured if an experiment can be creditably claimed that the obtained effects on the dependent variables are caused only by the manipulation of the independent variables.

In ensuring the content validity, the research instrument was given to experts in the conceptual field of marketing where it underwent proper scrutiny before administering on the sampled respondents.

They read and pointed out some errors that needed corrections and those corrections were effected and eventually they are satisfied with the content of the work.

3.4.4 Reliability of the Instrument

An instrument must consistently measure what it is intended to measure. When the quality of reliability is satisfied by an instrument, one can be confident that the transient and situational factors are not interfering. Kothari (2004) stated that reliability of an instrument can be improved by standardising the condition under which the measurement takes place and by carefully designing the directions for measurement with no variation from group to group, using trained personnel's to conduct the research and also by broadening the sample of items used.

Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. It is considered to be a measure of scale reliability. Cronbach's alpha generally increase as the intercorrelations among test items increase, and is thus known as an internal consistency estimate of reliability of test scores. Because intercorrelations among test items are maximized when all items measure the same construct, Cronbach's alpha is widely believed to indirectly indicate the degree to which a set of items measures a single unidimensional latent construct. As a result, alpha is most appropriately used when the items measure different substantive areas within a single construct.

Table 3.1 CRONBACH'S ALPHA RELIABILITY TEST

CROMBACH'S ALPHA	INTERNAL CONSISTENCY
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

A commonly accepted rule for describing internal consistency using Cronbach's alpha is presented in the table above, according to the works of George and Mallery (2003), Kline, (2000), and *DeVellis, (2012). T*hough a greater number of items in the test can artificially inflate the value of alpha *(Cortina, 1993)*, and a sample with a narrow range can deflate it, so this rule should be used with caution.

Table 3.2 **Advertising (Cronbach alpha)**

S/N	**DIMENSIONS**	**NUMBER OF ITEMS**	**CROMBACH'S ALPHA**	**INTERNAL CONSISTENCY**
1.	Advertising	10	0.756	Acceptable
2.	Simulation of Interest	7	0.714	Acceptable
3.	Awareness Creation	5	0.855	Good
4.	Degree of Conviction	5	0.768	Acceptable
5.	Attitudinal Change	11	0.869	Good

The table above shows the Crombach's alpha for each of the dimensions of items used in this study. The result shows that each of the scores for Advertising, Simulation of Interest and Degree of Conviction is greater than 0.7 but less than 0.8, which indicates each of them falls into the Acceptance region of internal consistency. On the other hand, scores for Awareness Creation and Attitudinal Change is greater than 0.8 but less than 0.9, indicating it falls in the Good region of internal consistency. This implies that there is internal consistency among the items grouped for each dimension.

3.5 Data Collection and Administration Procedure

The study made use of primary data, in which copies of structured questionnaires were distributed to rural people in each of the sixteen (16) local government areas of Kwara State based on their population. In order to facilitate the provision of answers to these questionnaires, interpreters of various local languages/dialects were engaged to interpret and tick their responses accordingly; this eased off the problem of language barrier that would have occurred during the process. On the whole, Kwara State has multi-lingual tribes which include; Yoruba, Nupe, Baruba, Fulani and Hausa while English language is universally spoken by the majority.

3.6 Method of Data Analysis

The collected data were analyzed through the use of descriptive statistics. Meanwhile, primary data were collected and analysed on each of the ten anti-malaria drugs using five points Likert Scale ranging from Strongly Disagree coded as 1 to Strongly Agree coded as 5, and regression analysis to test the hypotheses formulated.

Table 3.3: Relationship Matrix of Objectives, Research questions, Hypotheses and Methods of Analysis

S/N	Research Questions	Objectives of the study	Research Hypotheses	Method of Analysis
1	What is the effect of advertising on the awareness of anti-malaria drugs by rural dwellers of Kwara State?	investigate the effect of advertising through the use of semiotics on the degree of awareness of anti-malaria drugs in rural dwellers of Kwara State	Advertising does not have any significant effect awareness of anti-malaria drugs in rural dwellers in Kwara State.	Regression Analysis
2	Does advertising have any impact in stimulating Kwara State's rural dwellers' interest to patronise anti-malaria drug?	determine the impact of advertising on the stimulation of interest in patronising anti- malaria drugs by the rural dwellers in Kwara State;	Advertising does not have any significant impact in stimulating interest to patronise anti-malaria drugs by the rural dwellers in Kwara State.	Regression Analysis
3	Does advertising have any significant effect on the level of conviction of rural dwellers in Kwara State towards buying anti-malaria drugs?	examine the effect of advertising on the degree of conviction towards buying anti-malaria drugs by the rural dwellers in Kwara State; and	Advertising does not have any significant effect on the degree of conviction of rural dwellers of Kwara State towards buying anti-malaria drugs	Regression Analysis

4	What is the effect of advertising on attitudinal change by the rural dwellers towards the purchase of anti-malaria drugs in Kwara State?	determine the effect of advertising on attitudinal change by the rural dwellers towards the purchase of anti-malaria drugs in Kwara State.	Advertising does not have any significant effect on attitudinal change by the rural dwellers towards the purchase of anti-malaria drugs in Kwara State	Regression Analysis

Source: Author's Matrix of the relationship between stated objectives and Analytical Procedures

3.7 Ethical Consideration

The study has been designed to follow laid down ethical standards in social sciences. An ethical clearance to conduct the study has been obtained from the University of Ilorin Ethical Review Committee. Informed consent was obtained from the respondents in the study area. The Research assistants were protected during the study. Stakeholder's workshop was equally conducted in each of the study to feed the community about the outcome of the study. Findings from the study shall be published in both local and international reputable journal outlets.

3.8 MODEL SPECIFICATION

The equation below specifies the effect of simple and catchy adverts, funny jingles, and jingles in local dialects on awareness of anti-malaria drugs in rural areas of Kwara State.

$$AWC_i = \beta_0 + \beta_1 SC_i + \beta_2 FJ_i + \beta_3 LD_i + \mu_i \quad \text{..... (1)}$$

Where:

AWC is Awareness Creation

SC is Simple and Catchy adverts

FJ is Funny Jingles

LD is Jingles in Local Dialects

μ is the stochastic error term

Subscript i indicates the information is collected over individuals

β_0 is the constant term

$\beta_1 - \beta_3$ are the slope coefficients of malaria adverts

2

The equation below specifies the effect of simple and catchy adverts, funny jingles, and jingles in local dialects on the stimulation of interest of anti-malaria drugs among rural dweller of Kwara State.

$$SI_i = \beta_0 + \beta_1 SC_i + \beta_2 FJ_i + \beta_3 LD_i + \mu_i \quad \text{..... (2)}$$

Where:

SI is Simulation of Interest of rural dwellers to patronize anti-malaria drugs

And other variables and parameters are as defined above.

3

The equation below specifies the effect of simple and catchy adverts, funny jingles, and jingles in local dialects on the level of conviction of rural dwellers towards the purchase of anti-malaria drugs in Kwara State

Equation 3 is specified below to verify the hypothesis stated above.

$DC_i = \beta_0 + \beta_1 SC_i + \beta_2 FJ_i + \beta_3 LD_i + \mu_i$ ..... (3)

Where:

DC is Degree of Conviction of rural dwellers towards buying anti-malaria drugs

Other variables and parameters are as defined above.

4

The equation below specifies the impact of simple and catchy adverts, funny jingles, and jingles in local dialects on attitudinal change towards the purchase of anti-malaria drugs by rural dwellers in Kwara State

$AC_i = \beta_0 + \beta_1 SC_i + \beta_2 FJ_i + \beta_3 LD_i + \mu_i$ ..... (4)

Where:

AC is Attitudinal Change by rural dwellers towards purchasing anti-malaria drugs

Other variables and parameters are as defined above.

The SPSS (Statistical Package for Social Sciences), however, was used to carry out the analyses of the collected data. The versatility of the package is the inclusiveness of inferential statistics

such as factor analysis and that enable the drawing of valid conclusions from the sampled statistics to reach generalizable conclusions about the nature of population parameter.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Preamble

This chapter deals with the presentation and analysis of primary data based on information gathered from the respondents who are rural dwellers in Kwara State. It discussed, presented and analysed the data along the following rubrics: Demographic characteristics of respondents, presentation and discussion of results. Under data analysis and presentation, a cursory look at the selected anti-malaria drugs was taken.

However, the selected anti-malaria drugs were Amartem, Laridox, Artesunate, Lonart, Vitadar, Amalar, Artemef, Fansidar, Artemeter and Combisunate that are commonly found in every nook and cranny of Kwara State and patronised by the rural populace.

The description of demographic structure was made to include the respondent's age, gender, local government area, marital status, educational status, and lifestyle. This analysis helped in knowing the extent of influence of demographic structure on buying attitude of anti-malaria drugs by rural dwellers.

4.2 DEMOGRAPHIC DISTRIBUTION

Table 4.1: Cross Tabulation of Demographic Variables and the extent to which Malaria Jingles has changed Respondents' Attitude towards buying Anti-Malaria Drugs.

Demographic Variables		Malaria jingles has surely changed my attitude towards buying anti-malaria drugs.				Total	
		Strongly Disagreed	Disagreed	Indifferent	Agreed	Strongly Agreed	
Gender	Male	19	18	10	91	47	185
	Female	10	7	8	51	73	149
Total		**29**	**25**	**18**	**142**	**120**	**334**
Occupation	Student	22	17	16	65	41	161
	Nurse	4	4	-	9	5	22
	Trader	13	11	11	26	20	81
	Farmer	4	5	8	10	7	34
	Hunter	2	1	2	8	4	17
	Artisan	1	1	-	7	3	12
Total		**46**	**39**	**37**	**125**	**80**	**327**
Marital Status	Single	28	32	16	53	30	159
	Married	21	23	12	63	29	148
	Divorced	2	2	-	5	3	12
	Separated	-	-	2	8	2	12
Total		**51**	**57**	**30**	**129**	**64**	**331**
Education	No Education	8	12	6	35	20	81
	First School Leaving	-	-	2	6	-	8
	SSCE	7	15	11	23	15	73
ND/NCE		11	11	17	47	20	106
	B. Sc/HND	9	10	5	21	9	54
Others		-	-	9	-	-	9
Total		**35**	**48**	**50**	**132**	**64**	**331**

Table 4.1 (Continued)

Age	20-29 years	22	21	16	62	40	161
	30-39 years	6	14	5	32	18	75
	40-49 years	4	15	12	24	15	70
	50-59 years	1	5	-	10	5	21
	60 years & above	-	-	3	-	-	3
Total		**33**	**55**	**36**	**128**	**78**	**330**
Language	Yoruba	27	13	31	95	74	240
Nupe		6	5	-	19	6	36
	Hausa	1	-	-	-	-	1
Baruba/Batunu		8	8	3	23	-	42
	Fulani/Fulfude	-	-	1	7	2	10
	English	-	-	-	4	-	4
Total		**42**	**26**	**35**	**148**	**82**	**333**
Mostly Patronized Drugs	Amartem	8	12	6	35	20	81
Laridox		-	-	2	6	-	8
Vitadar		7	5	1	3	5	21
Amalar		4	11	7	17	15	54
Fansidar		9	-	5	1	9	24
Artesunate		-	-	9	-	-	9
Combisunate		4	2	-	6	3	15
Artemeter		3	5	2	25	15	50
Artemef		-	7	3	5	-	15
Lonart		5	4	3	23	20	55
Total		**40**	**46**	**38**	**121**	**87**	**332**
Season	Rainy	19	18	10	91	47	185
	Dry	10	17	18	41	63	149
Total		**29**	**35**	**28**	**132**	**110**	**334**
Anti-Malaria without Advert	Yes	20	7	8	64	50	149
	No	19	18	10	91	47	185
Total		**39**	**25**	**18**	**155**	**97**	**334**

Source: Author's Computation, 2017.

Table 4.1 presents the results of cross tabulation on demographic variables and the extent to which malaria jingles has changed rural dwellers attitude towards buying anti-malaria drugs.

Analysis of the result shows that a total of 185 of respondents were males, while 149 were females. The result shows that 138 male respondents altogether believe that malaria jingles has surely changed their attitude towards buying anti-malaria drugs. This represents about 74.59 percent of total male respondents. The result shows that 124 female respondents believe that malaria jingles has surely changed their attitude towards buying anti-malaria drugs. This figure represents about 83.2 percent of total female respondents. This indicates that higher proportion of females is influenced by malaria jingles towards buying anti-malaria drugs than that of their male counterparts.

Distribution across occupation reveals that majority of respondents are students, followed by traders. Others include farmers, nurses, and few hunters and artisans. The result shows that 161 respondents are students, 22 respondents are nurses, 81 respondents are traders, 34 respondents are farmers, 17 respondents are hunters, and 12 of the respondents are artisans. The result reveals that 106 students (65.8 percent of total students), 14 nurses (about 63.63 percent of total nurses), 46 traders (about 56.79 percent of total traders), 17 farmers (about 50 percent of total farmers), and 10 artisans (about 83.33 percent of total artisans) believe malaria jingles has surely changed their attitude towards buying anti-malaria drugs. This indicates that artisans are more influenced by malaria jingles, followed by students and nurses. This implies that majority of the respondents who are students and traders having the larger percentage of the respondents. This also means that, students may devote their time in listening to the jingles and possibly inform their parents about it. Also, the traders are likely be the first people to be aware as the jingle is usually played often at the market for better advertisement.

The distribution across marital status shows that a total of 159 respondents are single, while 148 respondents are married. Only 12 respondents each are found to be divorced and separated. The result shows that 53 respondents who are single (about 33.33 percent of total single respondents), 92 married respondents (about 62.16 percent of total married respondents), 8 respondents who are divorced (about 66.66 percent of total divorced respondents), and 10 respondents who are separated (about 83.33 percent of total separated respondents) believe malaria jingles has surely changed their attitude towards buying anti-malaria drugs. These figures were achieved by adding the number of respondents who agreed and strongly agreed that malaria jingles has surely changed their attitude towards buying anti-malaria drugs. Since larger proportion of respondents who are separated believe this statement to be true than the proportion of other counterparts, it indicates that separated people are most influenced by malaria jingles, followed by people who are divorced, then those who are married. People who are single are less influenced by malaria jingles than other counterparts. The result reveals that the influence of malaria jingles becomes more with responsibilities.

The distribution of respondents across educational qualification shows that people with ND/NCE have the highest population among rural dwellers in Kwara State, having a total of 106 out of the total 331. Respondents with no education follow in terms of population as they have a total number of 81 respondents. Respondents with SSCE are 73 while those with BSC/HND are 54. Respondents with first school leaving certificate and those with other qualifications are only 8 and 9 respectively. Respondents with lower level of education seem to be more influenced by malaria jingles than those with higher qualification. The result shows that out of 106 respondents with ND/NCE, 67 respondents (representing 63.20 percent) agreed and strongly agreed that malaria jingles has surely changed their attitude towards buying anti-malaria drugs. The result

also shows that 55 respondents (representing 67.90 percent) of 81 respondents who have no education and 38 respondents (representing 52.05 percent) of 73 respondents who have SSCE agreed and strongly agreed that malaria jingles has surely changed their attitude towards buying anti-malaria drugs. On the other hand, 30 respondents (representing 55.55 percent) of 54 respondents who hold B.Sc/HND and none of those with higher certificates agreed and strongly agreed that malaria jingles has surely changed their attitude towards buying anti-malaria drugs.

The distribution of respondents across age bracket shows that majority of the respondents (a total of 161) are within the age bracket of 20 – 29 years and 102 respondents (about 63.35 percent) of them believe that malaria jingles has surely influenced their attitude towards buying anti-malaria drugs. The result also shows that 75 respondents are within age bracket 30 – 39 years and out of them, 50 respondents (about 66.66 percent) believe that malaria jingles has surely influenced their attitude towards buying anti-malaria drugs. 70 respondents appear within age bracket 40 – 49 years and 39 out of them (about 55.21 percent) believe that malaria jingles has surely influenced their attitude towards buying anti-malaria drugs. 21 respondents were recorded for those within age bracket50 – 59 years and 15 out of them (about 71.42 percent) believe that malaria jingles has surely influenced their attitude towards buying anti-malaria drugs. The result indicates that only 3 respondents are 60 years old and above, and none of them believe that malaria jingles has surely influenced their attitude towards buying anti-malaria drugs.

The distribution across languages spoken reveals that 240 respondents speak Yoruba language, 36 respondents speak Nupe language, 1 respondent speaks Hausa language, 42 respondents speak Baruba/Batunu, 10 respondents speak Fulani/Fulfude and only 4 respondents speak English. Analysis of the result in the table shows that, 169 out of 240 Yoruba respondents (representing about 70.41 percent), 25 out of 36 Nupe respondents (representing about 69.44

percent), 23 out of 42 Baruba respondents (representing about 54.76 percent), 9 out of 10 Fulani respondents (representing 90 percent) and only 4 out 39 respondents who speak (representing about 10.25 percent) agreed and strongly agreed that malaria jingles has surely changed their attitude towards buying anti-malaria drugs.

The distribution across mostly patronized drugs reveals that 81 respondents use Amartem, 8 respondents use Laridox, 21 respondents use Vitadar, 54 respondents use Amalar, 24 respondents use Fansidar, 9 respondents use Artesunate, 15 respondents use Combisunate, 50 respondents use Artemeter, 15 respondents use Artemef and 55 respondents use Lonart. Analysis of the result in the table shows that, 55 respondents out of 81 that use Amartem, 6 respondents out of 8 that use Laridox, 8 out of 21 respondents that use that Vitadar, 32 out 54 respondents that use Amalar, 10 out of 24 respondents that use Fansida, none out of 9 respondents that use Artesunate, 9 out of 15 respondents that use Combisunate, 40 out of 50 that use Artemeter, 5 out of 15 that use Artemef and 43 out of 55 that use Lonart agreed and strongly agreed that malaria jingles has surely changed their attitude towards buying anti-malaria drugs.

Analysis of the result shows that a total of 185 respondents patronize anti-malaria drugs during rainy season while 149 respondents patronize anti-malaria drugs during dry season. The result shows that 138 of the total 185 respondents who patronize anti-malaria drugs during rainy season believe that malaria jingles has surely changed their attitude towards buying anti-malaria drugs. This represents about 74.6 percent of total respondents who patronizes anti-malaria drugs during rainy season. The result shows that 104 of the total respondents who patronize anti-malaria drugs during dry season believe that malaria jingles has surely changed their attitude towards buying anti-malaria drugs. This figure represents about 69.8 percent of total respondents who patronize anti-malaria drugs during dry season. This indicates that higher proportion of respondents who

patronize anti-malaria drugs during rainy season is influenced by malaria jingles towards buying anti-malaria drugs than that of the respondents who patronizes anti-malaria drugs during dry season.

Analysis of the result shows that a total of 149 respondents patronize anti-malaria drugs without malaria jingles while 185 respondents do not patronize anti-malaria drugs without malaria jingles. The result shows that 114 of the total 149 respondents who patronizes anti-malaria drugs without malaria jingles believe that malaria jingles has surely changed their attitude towards buying anti-malaria drugs. This represents about 76.5 percent of total respondents who patronizes anti-malaria drugs without malaria jingles. On the other hand, the result shows that 138 of the total 185 respondents who patronize anti-malaria drugs without malaria jingles believe that malaria jingles has surely changed their attitude towards buying anti-malaria drugs. This figure represents about 74.6 percent of total respondents who patronizes anti-malaria drugs with malaria jingles.

4.3 Principal Components Analysis

Principal components analysis (PCA) is a method of data reduction. The PCA is used to reduce a larger set of variables into a smaller set of artificial variables (called the principal components) which account for most of the variance in the original variables. In this study, obtaining the component scores (which are to be used in regression analysis) is very crucial and looking at the dimensionality of the data. This analysis is similar to exploratory factor analysis. Unlike factor analysis, principal components analysis is not usually used to identify underlying latent variables. The PCA is applied to 27 (q19 – q45) items of awareness creation and buying behaviour and 10 (q9 – q18) items of advertisement (malaria jingles). Part of the process of conducting PCA involves checking to ensure the data can actually be analyzed using PCA. This

is important because it is only appropriate to use PCA if the data passes these tests required for PCA to give a valid result. After ensuring that the data are in ordinal categorical form which PCA can be carried out on, two tests required to be conducted for PCA to be valid are the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett's test of sphericity. These two tests were carried out and their results are presented in this work. To start with, the PCA results applied to the 27 items of awareness creation and buying behaviour are presented first, thereafter those of advertisement (malaria jingles).

Awareness Creation and Buying Behaviour

Table 4.2: KMO and Bartlett's Test for Awareness and Buying Behaviour Items

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.725
Bartlett's Test of Sphericity	Approx. Chi-Square	2727.042
	Df	351
	Sig.	.000

Source: Author's Computation, 2017.

Table 4.2 above presents the KMO measure of sampling adequacy and the Bartlett's test of Sphericity. The KMO measure varies between 0 and 1, and values closer to 1 are better. As a rule of thumb, a value of 0.6 is a suggested minimum. The KMO conducted for awareness creation and buying behaviour shows a value of 0.725 which is high enough to conclude that the data is adequate for PCA. The Bartlett's Test of Sphericity tests the null hypothesis that the correlation matrix of the original variables is an identity matrix. An identity matrix is a matrix in which all of the diagonal elements are 1 and all off diagonal elements are 0. It is pertinent to reject this null hypothesis for PCA to be appropriate. The decision rule is to reject null

hypothesis if the probability value (sig.) is less than the 5% chosen significance level (0.05) and accept it if otherwise. The result shows that the Bartlett's Test of Sphericity has a high Chi-squared value of 2727.042 and a probability value of 0.000. This indicates it is significance, hence, rejecting the null hypothesis that the correlation matrix of the variables is an identity matrix. This implies that PCA can be conducted on the set of items. Taken together, these tests provide a minimum standard which should be passed before a principal components analysis should be conducted.z

Table 4.3: Communalities of Awareness and Buying BehaviourItems

Item	Initial	Extraction
q19	1.000	.573
q20	1.000	.745
q21	1.000	.569
q22	1.000	.425
q23	1.000	.630
q24	1.000	.697
q25	1.000	.686
q26	1.000	.634
q27	1.000	.478
q28	1.000	.495
q29	1.000	.616
q30	1.000	.600
q31	1.000	.566

q32	1.000	.653
q33	1.000	.525
q34	1.000	.633
q35	1.000	.560
q36	1.000	.609
q37	1.000	.641
q38	1.000	.572
q39	1.000	.616
q40	1.000	.499
q41	1.000	.624
q42	1.000	.521
q43	1.000	.659
q44	1.000	.863
q45	1.000	.869

Extraction Method: Principal Component Analysis.

Source: Author's Computation, 2017.

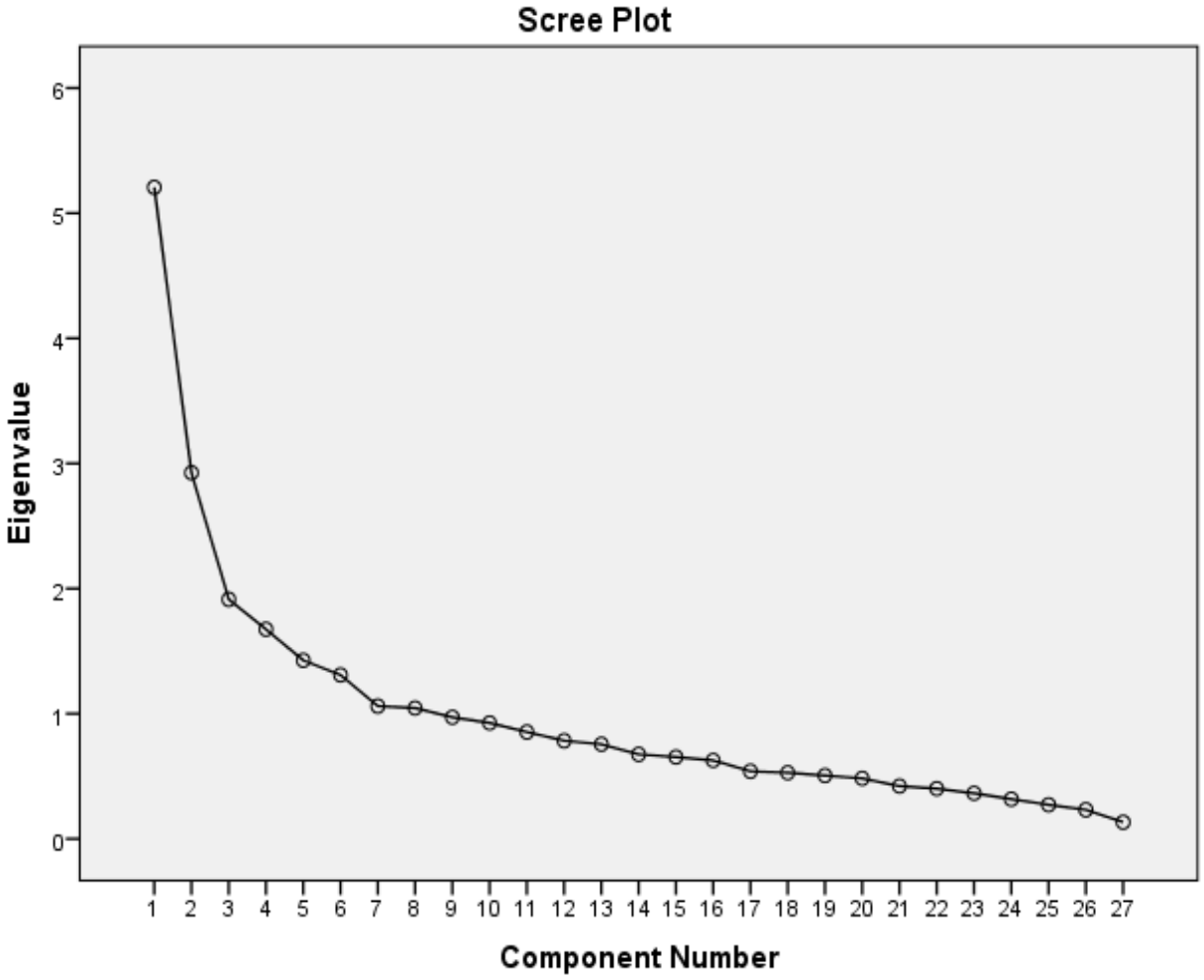
Communality is the proportion of each item's variance that can be explained by the principal components. It is can be defined as the sum of squared factor loadings. The communalities table features the initial and extracted communality for each item. By definition, the initial value of the communality in a principal components analysis is 1. The values in the extraction column indicate the proportion of each item's variance that can be explained by the principal components. Variables with high values are well represented in the common factor space, while

variables with low values are not well represented. In this analysis, there are no low communality values. Each of the extracted communalities is well above 0.4 which is considered the minimum as a rule.

The total variance explained in table 4.4 above shows the initial eigenvalue, extraction sums of squared loading and rotated sums of squared loading for each of the components. The result shows that there are as many components extracted during the principal components analysis as there are items that are put into it. In this analysis, 27 items were used (q19 through q45), so there are 27 components. Eigenvalues are the variances of the principal components. Because the PCA was conducted on the correlation matrix, the items are standardized, which means that the each item has a variance of 1, and the total variance is equal to the number of items used in the analysis, 28. The column for total contains the eigenvalues. The first component will always account for the most variance (and hence have the highest eigenvalue), and the next component will account for as much of the left over variance as it can, and so on. Hence, each successive component will account for less and less variance. The first component is seen to have eigenvalue of 5.207 and the second with eigenvalue of 2.925. Component 3 through component 8 have eigenvalues greater than 1 but less than 2 each. Their values are seen to be decreasing with the next component. Components 9 through 27 have less than 1 eigenvalues each. The next column contains the percent of variance accounted for by each principal component. The result shows that the first component and second components accounted for 19.285% and 10.835% of variance in the original items, respectively. The percent of variance accounted for by each of other components became less and less. The cumulative percent column contains the cumulative percentage of variance accounted for by the current and all preceding principal components. For example, the eighth row shows a value of 61.335%. This means that the first eight components

together account for 61.335% of the total variance. The three columns of the extracted sums of squared loadings exactly reproduce the values given on the same row on the three columns of initial eigenvalues. The number of rows reproduced in the columns of extracted sums of squared loadings is determined by the number of principal components retained, i.e. components whose eigen values are equal or greater than 1. The result shows that eight components are retained, since each of these components has eigen value equal or greater than 1. The three columns of rotated sums of squared loadings show the rotated result of total, percent of variance, and cumulative percent for the eight components retained. It shows that component 1, 2, 3, 4, 5, 6, 7, and 8 explained 11.637%, 10.071%, 8.876%, 7.793%, 7.151%, 6.703%, 4.617%, and 4.486% of total variance, respectively.

Figure 1: Scree Plot for Awareness and Buying Behaviour Items



Source: Author's Computation, 2017.

The Scree Plot above graphs the eigenvalue against the component number. As it can be seen from the values in the three columns of each of the initial eigenvalues and extraction sums of squared loadings in the table immediately above, the first two components have higher eigenvalues. From the third component on, the line is almost flat, meaning that each successive component is accounting for smaller and smaller amounts of the total variance. In general, the interest lies in keeping only those principal components whose eigenvalues are greater than

1. Components with an eigenvalue of less than 1 account for less variance than did the original item (which had a variance of 1), and so are of little use

Table 4.5: Rotated Component Matrix for Awareness and Buying Behaviour Items

	Component							
	1	2	3	4	5	6	7	8
q19			.362	.350		.366		
q20						.334		.773
q21						.647		
q22			.402	.376				
q23						.749		
q24		.786						
q25	.372	.680						
q26		.723						
q27	.516	.371						
q28	.344	.439						.315
q29	.686							
q30	.478	.363		.332				
q31	.686							
q32			.718					.341
q33			.575					
q34			.789					
q35				.657				
q36				.605			-.305	
q37				.716				
q38		-.403	.339				-.422	
q39							.633	
q40			.470			.363		
q41	.498						.549	
q42	.652							
q43	.688							
q44					.924			
q45					.920			

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 10 iterations.

Source: Author's Computation, 2017.

Table 4.5 contains rotated component loadings, which are the correlations between the variable and the component. Because these are correlations, possible values range from -1 to +1. The option that omits any of the correlation values that is 0.3 or less was. This makes the output easier to read by removing the clutter of low correlations that are probably not meaningful. The columns under this heading are the principal components that have been extracted or retained. As it can be seen from the result, eight components were extracted. From the table above, items q31, q42 and q43 load highly on component 1. Since these items addressed issues regarding the frequency of using anti-malaria drugs, component 1 could be called anti-malaria drug patronage. The table shows that items q24, q25, and q26 load highly on component 2. Component 2 could be called simulation of interest in patronizing anti-malaria drugs by the rural dwellers because these items are centred on developing interest in patronizing anti-malaria drugs. Component 3 could be called degree of conviction towards buying anti-malaria drugs since the items with high loads on it (items q32, q33, and q34) are centred on how convicted the rural dwellers are to patronizing anti-malaria drugs. The table also shows that items q35, q36, and q37 load highly on component 4. Since these items are centred on the change in attitude of rural dwellers to patronizing anti-malaria drugs, component 4 could be called attitudinal change. The fifth component is seen to have items q44 and q45 loaded very highly on it. This indicates that component 5 could be called "persuasion to patronize anti-malaria drugs", since the items loaded on it are centred on the encouragement rural dwellers give to others in order to patronize anti-malaria drugs. Items q21 and q23 are seen to load highly on component 6. These two items are centred on creating awareness about anti-malaria, hence, components 6 could be called awareness creation. Component 8 is also seen to have an item (item q20) loading high on it. This item is also centred on creating awareness. Thus, components 6 and 8 could be merged together

as measuring awareness creation. Component 7 is seen to also have two items of attitudinal change (items q139 and q41) loading fairly high on it. Thus, components 4 and 7 could be merged to capture attitudinal change of rural dwellers to patronizing anti-malaria drugs.

Advertising (Malaria Jingles)

Table4. 6: KMO and Bartlett's Test for Advertising (Malaria Jingles)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.738
Bartlett's Test of Sphericity	Approx. Chi-Square	883.894
	Df	45
	Sig.	.000

Source: Author's Computation, 2017.

Table 4.6 above presents the KMO conducted for advertising (malaria jingles). it shows a value of 0.738 which is high enough to conclude that the data is adequate for PCA. The Bartlett's Test of Sphericity that tests the null hypothesis that the correlation matrix of the original variables is an identity matrix has a high Chi-squared value of 883.894 and a probability value of 0.000. This indicates it is significance, hence, rejecting the null hypothesis that the correlation matrix of the variables is an identity matrix. This implies that PCA can be conducted on the set of items. Taken together, these tests provide a minimum standard which should be passed before a principal components analysis should be conducted.

Table 4.7: Communalities of Advertising (Malaria Jingles) Items

	Initial	Extraction
q9	1.000	.766
q10	1.000	.640
q11	1.000	.561
q12	1.000	.298
q13	1.000	.618
q14	1.000	.662
q15	1.000	.577
q16	1.000	.727
q17	1.000	.660
q18	1.000	.617

Extraction Method: Principal Component Analysis.

Source: Author's Computation, 2017.

Table 4.7 above presents the communalities for items of advertising (malaria jingles). The communalities table features the initial and extracted communality for each item. By definition, the initial value of the communality in a principal components analysis is 1. The values in the extraction column indicate the proportion of each item's variance that can be explained by the principal components. Items with high values are well represented in the common factor space, while items with low values are not well represented. In this analysis, item q12 was removed from the generation of the components used in regression analysis because it has a low communality, signifying it is not well explained by the components retained. Each of the other extracted communalities is well above 0.4 which is considered the minimum as a rule of thum

Table 4.8: Total Variance Explained for Advertising (Malaria Jingles)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.350	33.501	33.501	3.350	33.501	33.501	2.276	22.765	22.765
2	1.628	16.278	49.779	1.628	16.278	49.779	2.024	20.238	43.002
3	1.148	11.479	61.258	1.148	11.479	61.258	1.826	18.256	61.258
4	.979	9.791	71.049						
5	.729	7.289	78.338						
6	.527	5.272	83.610						
7	.518	5.180	88.790						
8	.437	4.374	93.163						
9	.368	3.682	96.845						
10	.316	3.155	100.000						

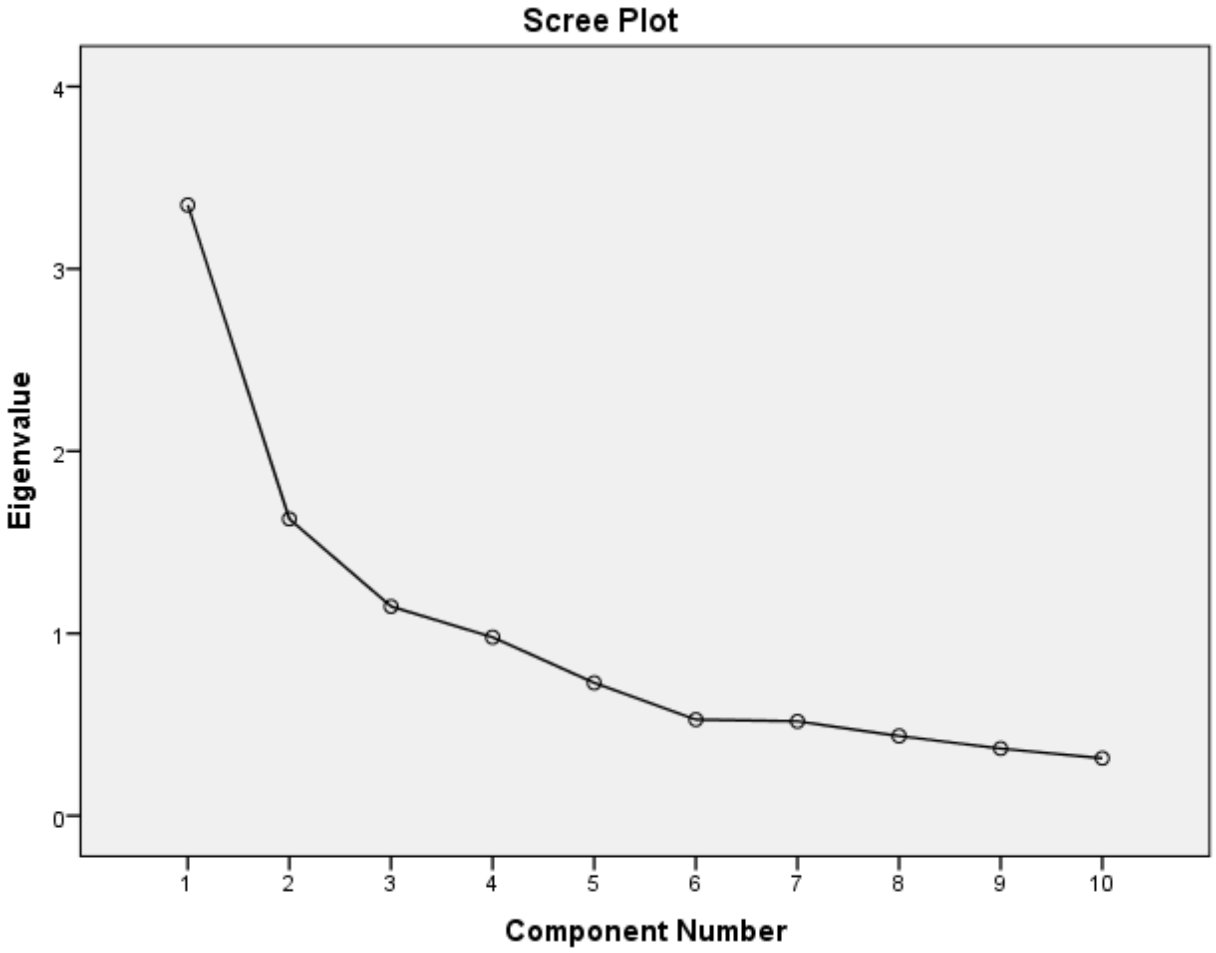
Extraction Method: Principal Component Analysis.

Source: Author's Computation, 2017.

The total variance explained in the table 4.8 presented above shows the initial eigenvalue, extraction sums of squared loading and rotated sums of squared loading for each of the components of advertising. The result shows that there are as many components extracted during the principal components analysis as there are items that are put into it. In this analysis, 10 items were used (q9 through q18), so there are 10 components. Eigen values are the variances of the principal components. Because the PCA was also conducted on the correlation matrix here, the

items are standardized, which means that each item has a variance of 1, and the total variance is equal to the number of items used in the analysis, in this case, 10. The column for total contains the eigen values. The first component is seen to have eigenvalue of 3.350 and the second with eigenvalue of 1.628. Component 3 is seen to have eigenvalue of 1.148. Components 4 through 10 have less than 1 eigenvalues each. The next column contains the percent of variance accounted for by each principal component. The result shows that the first component and second components accounted for 33.501% and 16.278% of variance in the original items, respectively. The percent of variance accounted for by each of other components became less and less. The cumulative percent column contains the cumulative percentage of variance accounted for by the current and all preceding principal components. The third row shows a value of 61.258%. This means that the first three components together account for 61.258% of the total variance. The three columns of the extracted sums of squared loadings exactly reproduce the values given on the same row on the three columns of initial eigenvalues. The number of rows reproduced in the columns of extracted sums of squared loadings is determined by the number of principal components retained, i.e. components whose eigenvalues are equal or greater than 1. The result shows that three components are retained, since each of these components has eigenvalue equal or greater than 1. The three columns of rotated sums of squared loadings show the rotated result of total, percent of variance, and cumulative percent for the three components retained. It shows that component 1, 2, and 3 explained 22.765%, 20.238%, and 18.256% of total variance, respectively.

Figure 2: Scree Plot for Advertising (Malaria Jingles)



Source: Author's Computation, 2017.

The Scree Plot above graphs the eigenvalue against the component number. As it can be seen from the values in the three columns of each of the initial eigenvalues and extraction sums of squared loadings in the table immediately above, the first two components have higher eigenvalues. From the third component on, the line became almost flat, meaning that each successive component is accounting for smaller and smaller amounts of the total variance. In general, the interest lies in keeping only those principal components whose eigenvalues that are

greater than 1. As noted earlier, components with an eigenvalue of less than 1 account for less variance than did the original item, and so are of little use.

Table 4.9: Rotated Component Matrix for Advertising (Malaria Jingles)

	Component		
	1	2	3
q9			.874
q10			.760
q11	.320	.669	
q12		.445	
q13		.768	
q14		.677	-.349
q15	.389	.464	-.459
q16	.852		
q17	.792		
q18	.717		

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Source: Author's Computation, 2017.

Table 4.9 above contains rotated component loadings, which are the correlations between the item and the component. The option that omits any of the correlation values that is 0.3 or less was used here too. This makes the output easier to read by removing the clutter of low

correlations that are probably not meaningful. The columns under this heading are the principal components that have been extracted. As it can be seen from the result, three components were extracted. From the table above, items q16, q17 and q18 load highly on component 1. Since these items addressed issues regarding the catchy and simple nature of malaria jingles to rural dwellers, component 1 could be called simplicity of malaria jingles. The table also shows that items q11, q13, and q14 load highly on component 2. Component 2 could be called malaria jingles with fun because these items are centred on using media such as music, jokes, and radio programmes to advertising anti-malaria drugs. Component 3 could be called the existence of malaria jingles since the items with high loads on it (items q9 and q10) are centred on level at which malaria jingles exist among rural dwellers.

4.4 Test of Hypotheses

Hypothesis 1:

H_{O1}: Advertising does not have any significant effect on awareness of anti-malaria drugs in rural dwellers in Kwara State.

Table 4.10: Model Summary for Awareness Creation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.886[a]	.786	.781	.98409914

a. Predictors: (Constant), simple & catchy jingles, funny jingles, jingles in local dialect

Source: Author's Computation, 2017.

Table 4.10 above presents the model summary of the effect of advertising on awareness of anti-malaria drugs. The table shows R-squared and Adjusted R-squared to be 0.786 and 0.781 respectively. This indicates that advertising (malaria jingles) such as using simple and catchy jingles, funny jingles, and jingles in local dialect explain about 78.6% (and 78.1% after adjusting for loss of degree of freedom) of variation in awareness of anti-malaria drugs. This also implies that the model is in good fit.

Table 4.11: ANOVA for Awareness Creation Model

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	246.770	3	82.257	375.149	.000[b]
	Residual	67.314	307	.219		
	Total	314.084	310			

a. Dependent Variable: awareness creation

b. Predictors: (Constant), simple & catchy jingles, funny jingles, jingles in local dialect

Source: Author's Computation, 2017.

Table 4.11 above presents the analysis of variance (ANOVA) of the model. F-statistic has a value of 375.149 and probability value 0.000 (which is less than all conventional significance levels, i.e. 1%, 5%, and 10%). This indicates the reported F-statistic is significant. Since the decision rule is to reject null hypothesis that advertising do not significantly affect awareness of anti-malaria drugs if F-statistic is significant, this implies that the overall model is significant. In other words, advertising (malaria jingles) significantly affect awareness of anti-malaria drugs among rural dwellers.

Table 4.12: Coefficients of Awareness Creation Model

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.007	.056		-.125	.900
	simple & catchy jingles	.228	.055	.229	4.117	.000
	funny jingles	.217	.056	.217	3.875	.000
	jingles in local dialect	.129	.056	.130	2.303	.001

a. Dependent Variable: awareness creation

Source: Author's Computation, 2017.

Table 4.12 above presents the coefficients of the effect of advertising on awareness of anti-malaria drugs among rural dwellers. The result shows that each of the use of simple and catchy jingles, funny jingles and jingles in local dialect influences awareness of anti-malaria drugs among rural dwellers positively. The probability value (Sig.) shows the significance of each variable. The decision rule is to reject null hypothesis that a variable does not have significant effect on awareness of anti-malaria drugs among rural dwellers if p-value is less than the chosen 5% significance level (0.05). This indicates that the three variables of advertising have significant effects on awareness of anti-malaria drugs among rural dwellers. This is evident from each of their p-values being less than 0.05. The significant positive coefficient value of simple and catchy jingles indicates that an additional unit of simple and catchy jingles increases awareness of anti-malaria drugs among rural dwellers by 0.228 units and vice versa. In the same vein, the significant positive coefficient value of funny jingles indicates that an additional unit of funny jingles increases awareness of anti-malaria drugs among rural dwellers by 0.217 units and

vice versa. Also, the significant positive coefficient value of jingles in local dialect indicates that an additional unit of jingles in local dialect increases awareness of anti-malaria drugs among rural dwellers by 0.129 units and vice versa. The standardized coefficient values show which of the variables of advertising with the most effect on awareness of anti-malaria drugs. The values show that simple and catchy jingles has the most effect on stimulation of interest (with standardized value of 0.229), followed by the effect of funny jingles (with standardized value of 0.217). Jingles in local dialect have the least effect on awareness of ant-malaria drugs among rural dwellers. (with standardized value of 0.130).

Hypothesis 2

H_{O2}: Advertising does not have any significant impact in stimulating interest to patronize anti-malaria drugs by the rural dwellers in Kwara State.

Table 4.13: Model Summary for Stimulation of Interest

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.944[a]	.811	.796	.87221722

a. Predictors: (Constant), simple & catchy jingles, funny jingles, jingles in local dialect

Source: Author's Computation, 2017.

Table 4.13 above presents the model summary of the effect of advertising on stimulation of interest of rural dwellers to patronizing anti-malaria drugs. The table shows R-squared and Adjusted R-squared to be 0.811 and 0.796 respectively. This indicates that advertising (malaria jingles) such as using simple and catchy jingles, funny jingles, and jingles in local dialect explain about 81.1% (and 79.6% after adjusting for loss of degree of freedom) of variation in stimulation

of interest of rural dwellers to patronizing anti-malaria drugs. This implies that the model is in good fit.

Table 4.14: ANOVA for Stimulation of Interest Model

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	274.762	3	91.587	837.972	.000[b]
	Residual	33.554	307	.109		
	Total	308.317	310			

a. Dependent Variable: stimulation of interest

b. Predictors: (Constant), simple & catchy jingles, funny jingles, jingles in local dialect

Source: Author's Computation, 2017.

Table 4.14 above presents the analysis of variance (ANOVA) of the model. F-statistic has a value of 837.972 and probability value 0.000 (which is less than all conventional significance levels, i.e. 1%, 5%, and 10%). This indicates that the reported F-statistic is significant. Since the decision rule is to reject null hypothesis that advertising do not significantly affect stimulation of interest of rural dwellers to patronizing anti-malaria drugs if F-statistic is significant, this implies that the overall model is significant. In other words, advertising (malaria jingles) significantly affect stimulation of interest of rural dwellers to patronizing anti-malaria drugs

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Table 4.15: Coefficients of Stimulation of Interest Model

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.001	.049		.015	.988
	simple & catchy jingles	.279	.049	.282	5.681	.000
	funny jingles	.375	.050	.375	7.544	.000
	jingles in local dialect	.148	.049	.149	2.993	.003

a. Dependent Variable: stimulation of interest

Source: Author's Computation, 2017.

Table 4.15 above presents the coefficients of the effect of advertising on stimulation of interest of rural dwellers towards patronizing anti-malaria drugs. The result shows that the use of simple and catchy jingles, funny jingles, and jingles in local dialect influence stimulation of interest towards patronizing anti-malaria drugs positively. The probability value (Sig.) shows the significance of each variable. The decision rule is to reject null hypothesis that a variable does not have significant effect on stimulation of interest towards patronizing anti-malaria drugs if p-value is less than the chosen 5% significance level (0.05). This indicates that each of the three variables of advertising have significant effect on stimulation of interest towards patronizing anti-malaria drugs. This is evident from each of their p-values which are less than the chosen significance level. The significant positive coefficient value of simple and catchy jingles indicates that an additional unit of simple and catchy jingles increases stimulation of interest of rural dwellers towards patronizing anti-malaria drugs by 0.279 units and vice versa. The significant positive value of funny jingles indicates that an additional unit of funny jingles

increases stimulation of interest of rural dwellers towards patronizing anti-malaria drugs by 0.375 units and vice versa. The significant positive coefficient value of jingles in local dialect indicates that an additional unit of jingles in local dialect increases stimulation of interest of rural dwellers towards patronizing anti-malaria drugs by 0.148 units and vice versa. The standardized coefficient values show which of the variables of advertising with the most effect on stimulation of interest towards patronizing anti-malaria drugs. The values show that funny jingles has the most effect on stimulation of interest (with standardized value of 0.375), followed by the effect of simple and catchy jingles (with standardized value of 0.282). Jingles in local dialect have the least effect on stimulation of interest towards patronizing ant-malaria drugs.

Hypothesis 3

H_{O3}: Advertising does not have any significant effect on the degree of conviction of rural dwellers of Kwara State towards buying anti-malaria drugs.

Table 4.16: Model Summary for Degree of Conviction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.753[a]	.566	.554	.95190112

a. Predictors: (Constant), simple & catchy jingles, funny jingles, jingles in local dialect

Source: Author's Computation, 2017.

Table 4.16 above presents the model summary of the effect of advertising on the degree of conviction of rural dwellers towards buying anti-malaria drugs. The table shows R-squared and Adjusted R-squared to be 0.566 and 0.554 respectively. This indicates that advertising (malaria jingles) such as using simple and catchy jingles, funny jingles, and jingles in local dialect explain

about 56.6% (and 55.4% after adjusting for loss of degree of freedom) of variation in the degree of conviction of rural dwellers towards buying anti-malaria drugs. This implies that the model is in good fit

Table 4.17: ANOVA for Degree of Conviction Model

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	167.347	3	55.782	133.605	.000[b]
	Residual	128.178	307	.417		
	Total	295.525	310			

a. Dependent Variable: degree of conviction

b. Predictors: (Constant), simple & catchy jingles, funny jingles, jingles in local dialect

Source: Author's Computation, 2017.

Table 4.17 above presents the analysis of variance (ANOVA) of the model. F-statistic has a value of 133.605 and probability value 0.000 (which is less than the chosen 5% significance levels). This indicates the reported F-statistic is significant. Since the decision rule is to reject null hypothesis that advertising does not significantly affect the degree of conviction of rural dwellers towards buying anti-malaria drugs if F-statistic is significant, this implies that the overall model is significant. In other words, advertising (malaria jingles) significantly affect the degree of conviction of rural dwellers towards buying anti-malaria drugs.

Table 4.18: Coefficients of Degree of Conviction Model

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.017	.054		.309	.757
	simple & catchy jingles	.181	.054	.187	3.373	.001
	funny jingles	.103	.054	.105	1.900	.058
	jingles in local dialect	.110	.054	.113	2.036	.043

a. Dependent Variable: degree of conviction

Source: Author's Computation, 2017.

Table 4.18 above presents the coefficients of the effect of advertising on the degree of conviction of rural dwellers towards buying anti-malaria drugs. The result shows that the use of simple and catchy jingles, funny jingles and jingles in local dialect influence the degree of conviction positively. The probability value (Sig.) shows the significance of each variable. The decision rule is to reject null hypothesis that a variable does not have significant effect on the degree of conviction of rural dwellers towards buying anti-malaria drugs if p-value is less than the chosen 5% significance level (0.05). This indicates that simple and catchy jingles and jingles in local dialect have significant effect on the degree of conviction towards buying anti-malaria drugs at the chosen significance level. This is evident from each of their p-values which are less than the chosen significance level. On the other hand, a funny jingle is seen not having a significant effect on the degree of conviction towards buying anti-malaria drugs at 5% significance level. The significant positive coefficient value of simple and catchy advert indicates that an additional unit of simple and catchy jingles increase the degree of conviction of rural dwellers towards buying

anti-malaria drugs by 0.181 units and vice versa. The significant positive value of jingles in local dialect indicates that an additional unit of jingles in local dialect increases the degree of conviction of rural dwellers towards buying anti-malaria drugs by 0.110 units and vice versa. The standardized coefficient values show which of the variables of advertising with the most effect on the degree of conviction towards buying anti-malaria drugs. The values show that simple and catchy jingles has the most effect on the degree of conviction (with standardized value of 0.187), followed by the effect of jingles in local dialect (with standardized value of 0.113).

Hypothesis 4

H_{O4}: Advertising does not have any significant effect on attitudinal change by the rural dwellers towards the purchase of anti-malaria drugs in Kwara State.

Table 4.19: Model Summary for Attitudinal Change

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.831[a]	.690	.68.7	.97683407

a. Predictors: (Constant), simple & catchy jingles, funny jingles, jingles in local dialect

Source: Author's Computation, 2017.

Table 4.19 above presents the model summary of the effect of advertising on attitudinal change of rural dwellers towards purchasing anti-malaria drugs. The table shows R-squared and Adjusted R-squared to be 0.690 and 0.687 respectively. This indicates that advertising (malaria jingles) such as using simple and catchy jingles, funny jingles, and jingles in local dialect explain about 69% (and 68.7% after adjusting for loss of degree of freedom) of variation in attitudinal

change of rural dwellers towards purchasing anti-malaria drugs. This implies that the model is in good fit.

Table 4.20:ANOVA for Attitudinal Change Model

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	207.306	3	69.102	228.256	.000[b]
	Residual	92.941	307	.303		
	Total	300.247	310			

a. Dependent Variable: attitudinal change

b. Predictors: (Constant), simple & catchy jingles, funny jingles, jingles in local dialect

Source: Author's Computation, 2017.

Table 4.20 above presents the analysis of variance (ANOVA) of the above model. F-statistic has a value of 228.256 and probability value 0.000 (which is less than the chosen 5% significance levels). This indicates the reported F-statistic is significant. Since the decision rule is to reject null hypothesis that advertising does not significantly affect attitudinal change of rural dwellers towards purchasing anti-malaria drugs if F-statistic is significant and accept it if otherwise, this implies that the overall model is significant. In other words, advertising (malaria jingles) significantly affect attitudinal change of rural dwellers towards purchasing anti-malaria drugs.

Table 4.21: Coefficients of Attitudinal Change Model

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.025	.055		.449	.654
	simple & catchy jingles	.115	.055	.117	2.091	.035
	funny jingles	.120	.056	.122	2.158	.032
	jingles in local dialect	-.010	.055	-.010	-.182	.856

a. Dependent Variable: attitudinal change

Source: Author's Computation, 2017.

Table 4.21 above presents the coefficients of the effect of advertising on attitudinal change of rural dwellers towards purchasing anti-malaria drugs. The result shows that the use of jingles in local dialect influence attitudinal change negatively whiles the use of simple and catchy jingles and funny jingles influence attitudinal change positively. The probability value (Sig.) shows the significance of each variable. The decision rule is to reject null hypothesis that a variable does not have significant effect on attitudinal change of rural dwellers towards purchasing anti-malaria drugs if p-value is less than the chosen 5% significance level (0.05). This indicates that simple and catchy jingles and funny jingles have significant effect on attitudinal change towards purchasing anti-malaria drugs. This is evident from their p-values being less than the chosen significance level. On the other hand, a jingle in local dialect is seen not having significant effect on attitudinal change towards purchasing anti-malaria drugs. The significant positive coefficient value of simple and catchy jingles indicates that an additional unit of simple and catchy adverts increases attitudinal change of rural dwellers towards purchasing anti-malaria drugs by 0.115

units and vice versa. The significant positive coefficient value of funny jingles indicates that an additional unit of funny jingles increases attitudinal change of rural dwellers towards purchasing anti-malaria drugs by 0.120 units and vice versa. The standardized coefficient values show which of the variables of advertising with the most effect on stimulation of interest towards patronizing anti-malaria drugs. The values show that funny jingles has the most effect on attitudinal change (with standardized value of 0.122), followed by the effect of simple and catchy jingles (with standardized value of 0.117).

Effect of Advertising on Anti-Malaria Drugs Patronage

Table 4.22: Model Summary for Anti-Malaria Drugs Patronage

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.979[a]	.959	.947	.83200824

a. Predictors: (Constant), simple & catchy jingles, funny jingles, jingles in local dialect

Source: Author's Computation, 2017.

Table 4.22 above presents the model summary of the effect of advertising on anti-malaria drugs patronage among rural dwellers. The table shows R-squared and Adjusted R-squared to be 0.959 and 0.947 respectively. This indicates that advertising (malaria jingles) such as using simple and catchy jingles, funny jingles, and jingles in local dialect explain about 95.9% (and 94.7% after adjusting for loss of degree of freedom) of variation in anti-malaria drugs patronage among rural dwellers. This implies that the model is in good fit.

Table 4.23: ANOVA for Anti-Malaria Drugs Patronage

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	295.251	3	98.417	2413.839	.000[b]
	Residual	12.517	307	.041		
	Total	307.768	310			

a. Dependent Variable: anti-malaria drugs patronage

b. Predictors: (Constant), simple & catchy jingles, funny jingles, jingles in local dialect

Source: Author's Computation, 2017.

Table 4.23 above presents the analysis of variance (ANOVA) of the above model. F-statistic has a high value of 2413.866 and probability value 0.000 (which is less than the chosen 5% significance level). This indicates the reported F-statistic is highly significant. Since the decision rule is to reject null hypothesis that advertising does not significantly affect anti-malaria patronage among rural dwellers if F-statistic is significant and accept it if otherwise, this implies that the overall model is significant. In other words, advertising (malaria jingles) significantly affect anti-malaria drugs patronage among rural dwellers.

Table 4.24: Coefficients of Anti-Malaria Drugs Patronage Model

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.014	.047		.302	.763
	simple & catchy jingles	.445	.047	.450	9.491	.000
	funny jingles	.234	.047	.233	4.923	.000
	jingles in local dialect	.227	.047	.228	4.803	.000

a. Dependent Variable: anti-malaria drugs patronage

Source: Author's Computation, 2017.

Table 4.24 above presents the coefficients of the effect of advertising on anti-malaria drugs patronage among rural dwellers. The result shows that the use of simple and catchy jingles, funny jingles, and jingles in local dialect influence anti-malaria drugs patronage positively. The probability value (Sig.) shows the significance of each variable. The decision rule is to reject null hypothesis that a variable does not have significant effect on anti-malaria drugs patronage among rural dwellers if p-value is less than the chosen 5% significance level (0.05). This indicates that all three variables have significant effects on anti-malaria drugs patronage among rural dwellers. This is evident from each of their p-values which are less than the chosen significance level. The significant positive coefficient value of simple and catchy adverts indicates that an additional unit of simple and catchy jingles increases anti-malaria drugs patronage among rural dwellers by 0.445 units and vice versa. Also, the significant positive coefficient value of funny jingles indicates that an additional unit of funny jingles increases anti-malaria drugs patronage among rural dwellers by 0.234 units and vice versa. Similarly, the significant positive coefficient value

of jingles in local dialect indicates that an additional unit of jingles in local dialect increases anti-malaria drugs patronage among rural dwellers by 0.227 units and vice versa. The standardized coefficient values show which of the variables of advertising has the most effect on anti-malaria drugs patronage. The values show that simple and catchy jingles has the most effect on anti-malaria drugs (with standardized value of 0.450), followed by the effect of funny jingles (with standardized value of 0.233), then the effect of jingles in local dialect (with standardized value of 0.228).

Effect of Advertising on the Willingness to Persuade Others to Patronizing Anti-Malaria Drugs

Table 4.25: Model Summary for Persuasion

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.821[a]	.674	.663	.98959073

a. Predictors: (Constant), simple & catchy jingles, funny jingles, jingles in local dialect

Source: Author's Computation, 2017.

Table 4.25 above presents the model summary of the effect of advertising on the willingness to persuade others to patronize anti-malaria drugs. The table shows R-squared and Adjusted R-squared to be 0.674 and 0.663 respectively. This indicates that advertising (malaria jingles) such as using simple and catchy jingles, funny jingles, and jingles in local dialect explain only about 67.4% (and 66.3% after adjusting for loss of degree of freedom) of variation in the willingness to persuade others to patronize anti-malaria drugs. This implies that the model is in good fit.

Table 4.26: ANOVA for Persuasion Model

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	208.220	3	69.407	211.719	.000[b]
	Residual	100.642	307	.328		
	Total	308.862	310			

a. Dependent Variable: persuasion

b. Predictors: (Constant), simple & catchy jingles, funny jingles, jingles in local dialect

Source: Author's Computation, 2017.

Table 4.26 above presents the analysis of variance (ANOVA) of the above model. F-statistic has a value of 211.719 and probability value 0.000 (which is less than the chosen 5% significance level). This indicates the reported F-statistic is significant. Since the decision rule is to reject null hypothesis that advertising does not significantly affect the willingness to persuade others to patronize anti-malaria drugs if F-statistic is significant and accept it if otherwise, this implies that the overall model is significant. In other words, advertising (malaria jingles) significantly affect the willingness to persuade others to patronize anti-malaria drugs.

Table 4.27: Coefficients of Persuasion Model

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.001	.056		-.026	.979
	simple & catchy jingles	.160	.056	.161	2.861	.005
	funny jingles	.120	.056	.121	2.143	.026
	jingles in local dialect	.016	.056	.016	.278	.781

a. Dependent Variable: persuasion

Source: Author's Computation, 2017.

Table 4.27 above presents the coefficients of the effect of advertising on the willingness to persuade others to patronize anti-malaria drugs. The result shows that the use all three variables of advertising influence the willingness to persuade others to patronize anti-malaria drugs positively. The probability value (Sig.) shows the significance of each variable. The decision rule is to reject null hypothesis that a variable does not have significant effect on the willingness to persuade others to patronize anti-malaria drugs if p-value is less than the chosen 5% significance level (0.05). This indicates that only the use of simple and catchy adverts and funny jingles significantly affect the willingness to persuade others to patronize anti-malaria drugs. A Jingle in local dialect does not have significant effects on the willingness to persuade others to patronize anti-malaria drugs. This is evident from the probability values of simple and catchy jingles and funny jingles being less that 5% significance level and the p-value of jingles in local dialect being greater than 5% significance level. The significant positive coefficient value of simple and catchy adverts indicates that an additional unit of simple and catchy jingles increases the

willingness to persuade others to patronize anti-malaria drugs by 0.160 units and vice versa. The significant positive coefficient value of funny jingles indicates that an additional unit of funny jingles increases the willingness to persuade others to patronize anti-malaria drugs by 0.120 units and vice versa. The standardized coefficient values show which of the variables of advertising has the most effect on anti-malaria drugs patronage. The values show that simple and catchy adverts has the most effect on anti-malaria drugs (with standardized value of 0.161), followed by the effect of funny jingles (with standardized value of 0.121).

4.5 Discussions of Findings

This section comprises of four research questions in the study and presents answers to them accordingly. The first research question dealt with examining the effect of advertising (malaria jingles) on the awareness of anti-malaria drugs by rural dwellers in Kwara State. The ultimate intention was to determine the extent to which malaria jingles affect the awareness creation among rural dwellers in Kwara State. The results of the hypothesis tested showed that there is a strong relationship between the set of the dependent variables and respective independent variables with the value of R= 0.786. The above is in line with finding of Bello, Abdulraheem and Imouokhome (2016) that semiotics (image and sound/jingles) has a significant impact on the creation of awareness of anti-malaria drugs among rural dwellers in selected local government areas of Kwara State.

The second research question was to determine the impact of advertising in stimulating Kwara State rural dwellers' interest to patronize anti-malaria drugs. According to the research, jingles have a very significant impact on stimulating Kwara State rural dwellers' interest in patronising anti-malaria drugs. This is evident from the fact that R- square value is 0.811 and independent variables are significant at less than (<) 0.500

The third research questions was to test whether advertising (jingles) has any significant effect on the level of conviction of rural dwellers in Kwara State towards buying anti-malaria drugs or not. The third hypothesis tested indicated that jingles, apart from a funny jingle, has a significant effect on the level of conviction of rural dwellers in Kwara State towards buying anti-malaria drugs because it has a coefficient of R square to be 0.566 with P values less than 0.500

The fourth research question was to investigate the effect of advertising on attitudinal change by the rural dwellers towards the purchase of anti-malaria drugs in Kwara State. Based on the findings, advertising (jingles) has a significant effect on attitudinal change of rural dwellers towards purchasing anti-malaria drugs in Kwara State. This is so because its coefficient of R-square is 0.690 and every other independent variable is significant apart from jingles in local dialects that a P-value higher than 0.500. The finding is in tandem with findings of Pui (2011) on the effectiveness of music in advertising towards consumers' buying behaviour which indicated that music has a significant effect on consumers' buying behaviour.

CHAPTER FI VE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Preamble

This chapter is divided into three sections, namely: the summary, conclusions and recommendations. The summary encapsulates the findings in the course of the research work while the conclusions are inferences drawn from the findings while recommendations are researcher's thinking and suggestions, a fall-out of the research findings.

5.2 Summary of Findings

1. The research work examined the effect of advertising through the use of semiotics on the degree of awareness of anti-malaria drugs in rural dwellers of Kwara State. Based on findings, malaria jingles has a very significant effect on awareness creation of anti-malaria among rural dwellers in Kwara State. Simple and catchy jingles, funny jingles and jingles in local dialects account for a larger percentage (78.6%) variation in awareness of anti-malaria drugs and the analysis of variance (ANOVA) of the model. F-statistic has a value of 227.951 with the probability value 0.000 which is less than 5% level of significance.

2. The second research question was to determine the impact of advertising on the stimulation of interest in patronizing anti- malaria drugs by the rural dwellers in Kwara State. The findings indicated that advertising (malaria jingles) has a significant impact on the creation of interest to patronize anti-malaria drugs by rural dwellers in Kwara State. The simple and catchy jingles, funny jingles, and jingles in local dialect explain about 81.1% of variation in stimulation of

interest of rural dwellers to patronizing anti-malaria drugs which implies that the model is in good fit. F-statistic has a value of 837.972 and probability value 0.000 which is also less than all conventional significance levels, i.e. 1%, 5%, and 10%.

3. The third research question was to examine the effect of advertising on the degree of conviction towards buying anti-malaria drugs by the rural dwellers in Kwara State. Findings from data analysed showed advertising has a significant effect on the degree of conviction towards buying anti-malaria drugs by rural dwellers in Kwara State. Only a funny jingle does not have a significant effect the degree of conviction. R-squared and Adjusted R-squared are 0.566 and 0.554 respectively indicating that advertising (malaria jingles) such as using simple and catchy jingles, funny jingles, and jingles in local dialect explain about 56.6% of variation in the degree of conviction of rural dwellers towards buying anti-malaria drugs. Also the F-statistic has a value of 133.605 and probability value 0.000 is less than the chosen 5% significance levels.

4. The fourth research question to determine the effect of advertising (jingles) on attitudinal change by the rural dwellers towards the purchase of anti-malaria drugs in Kwara State. Malaria jingles has a significant effect on attitudinal change by rural dwellers towards the purchase of anti-malaria drugs in Kwara State which is line with the findings from the data analysed. R-squared and Adjusted R-squared are 0.690 and 0.687 This indicating that advertising (malaria jingles) such as using simple and catchy jingles, funny jingles, and jingles in local dialect explain about 69% of variation in attitudinal change of rural dwellers towards purchasing anti-malaria drugs. F-statistic has a value of 228.256 and probability value 0.000 which is less than the chosen 5% significance levels. But jingles in local dialect is seen not have to significant effect on attitudinal change towards purchasing anti-malaria drugs with 0.856 which is higher than 5% level of significant level.

5.3 Conclusions

At this stage of the research, it is required to draw up some inferences that would serve as valid deductions based on research findings.

The findings of this study serve as reinforcement of earlier researches on advertising (malaria jingles) and buying behaviour of rural dwellers in Kwara State. The study has been able to emphasize the cogent variables of advertising/malaria jingles (simple and catchy jingles, funny jingles as well as jingles in local dialects) that can contribute to the buying behaviour of anti-malaria drugs of rural dwellers in Kwara State. This helps the company producing anti-malaria drugs capture more sales for their products thereby achieving sales objective and consequently making profits.

It is discernible to note from the findings that malaria jingles and buying behaviour are Siamese twins, therefore advertising via malaria jingles is very essential for companies producing anti-malaria drugs to be able to achieve its goals as well as Kwara State government to eradicate malaria attack. It is very obvious that the advertising variables are relevant which need to be taken seriously and applied in such a way that their purpose can be achieved.

The findings therefore show that all the advising variables are very important and should be given the required efforts to aid the buying behaviour of rural dwellers in Kwara State.

5.4 Recommendations

i. Based on research findings from the data analysis, advertising of anti-malaria drugs via malaria jingles is very important as it brings about increased awareness and enhanced patronage for anti-malaria drugs. Therefore, Kwara State government and companies producing anti-malaria drugs

should vigorously sustain the use of malaria jingles as a means of creating awareness among the people in order to eradicate malaria in Kwara State.

ii. Efforts should be geared more than ever before towards ensuring malaria jingles (simple and catchy jingles, funny jingles as well as jingles in local dialects) are taken very seriously since it is found to have positively enhanced stimulation of interest in patronizing anti-malaria drugs among the rural dwellers in Kwara State. Both the companies producing anti-malaria drugs as well as Kwara State government should also see advertising anti-malaria drugs via malaria jingles as a useful tool for achieving great success in ensuring that malaria attack is reduced to the bearest minimum.

iii. Evidence from the research findings show that only a funny jingle does not have a significant effect on the degree of conviction towards buying anti-malaria drugs by rural dwellers in Kwara State. There is a strong need for the composers of malaria jingles to work on jokes and other forms of funny things capable of attracting and convincing rural dwellers towards buying anti-malaria drugs. But simple and catch jingles as well as malaria jingles in local dialects that have a significant effect on the degree of conviction towards buying anti-malaria drugs should be retained.

iv. There is a serious need for composers of malaria jingles to also work on jingles in local dialects in order to make them more appealing and melodious so as to be able to have a positive effect to change the rural dwellers attitudes towards purchasing anti-malaria drugs in Kwara State. Simple and catchy jingles and funny jingles should be sustained.

Finally, from the above recommendations, advertising of anti-malaria drugs via malaria jingles should be encouraged as it enhances the buying behaviour of anti-malaria drugs among rural dwellers in Kwara State.

5.5 Contributions to Knowledge

This research work has contributed immensely to the body of knowledge most especially the health sector in the area of advertising of anti-malaria drugs via the use of malaria jingles to eradicate malaria from the society.

Various researches on advertising, word-wide, have been on health-related issues but no serious efforts have been made to conduct research into malaria jingles on rural dwellers' buying behaviour. This research work therefore serves as an eye-opener for researchers to have a critical look at the possibility of jingles to stimulate purchases.

It is therefore suggested that future researchers should endeavour to conduct studies that will research more into advertising through the use of Semiotics i.e. sound (jingles), image, process and text in the area of health for the common good of the public.

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APPENDIX

Department of Business Administration,

Faculty of Management Sciences,

University of Ilorin,

P. M. B 1515,

Ilorin,

Kwara State.

20th February, 2017

Dear Sir/Ma,

I am a Ph.D. student in the Department of Business Administration, Faculty of Management Sciences, University of Ilorin, Ilorin. I am conducting a research on "Impact of Advertising on Rural Dwellers' Buying Behaviour of Selected Anti-malaria Drugs in Kwara State". And for the purpose of this study, I would like to seek for your responses on the following questions.

All information supplied would be exclusively used for the purpose of the research and shall be treated with all confidentiality.

Thanks for your anticipated favourable response.

Yours faithfully,

BELLO, Kamal Asola

98/66MC139

PERSONAL DATA (PART I)

Kindly tick ☐ in the appropriate response as it is applicable to you, please.

(1) Gender: Male ☐ Female ☐

2. Occupation: Student ☐ Nurse ☐ Trader ☐ Farmer ☐

Hunter ☐ Artisan ☐

3. Local Government Area: Ilorin West ☐ Ifelodun ☐ Ilorin South ☐

Ilorin East ☐ Irepodun ☐ Offa ☐ Isin ☐

Ekiti ☐ Kiama ☐ Edu ☐ Patigi ☐ Moro ☐

Baruteen ☐ Asa ☐ Edu ☐ Oke ero ☐

4. Age: 20 - 29years ☐ 30 - 39years ☐ 40 - 49years ☐

50 - 59years ☐ 61 years and above ☐

5. Marital status: Single ☐ Married ☐ Divorced ☐

Separated ☐

6. Educational Status: SSCE/WEAC ☐ OND/NCE ☐ B.Sc/HND ☐

No qualification ☐

7. Lifestyle: Nonchalant ☐ Primitive ☐ Dogmatic ☐

Proactive ☐

8. Languge (s) spoken: Yoruba ☐ Nupe ☐ Hausa ☐

Baruba/Batunu ☐ Fulani/Fulfude ☐ English ☐ Others ☐

PART II

SELECTED ANTI-MALARIA DRUGS

1. As a result of malaria jingles, which anti-malaria drug do you patronise most: Amartem ☐

   Laridox ☐ Vitadar ☐ Amalar ☐ Fansidar ☐ Artesunate ☐

   Combisunate ☐ Artemeter ☐ Artemef ☐ Lonart ☐

2. Which session do you buy anti-malaria more: Rain session ☐ Dry session ☐
3. Do you also like patronizing anti-malaria drugs that are not advertised via malaria jingles:

   Yes ☐ No ☐ Not really ☐

JINGLES ON ANTIMALARIA QUESTIONNAIRE

Kindly respond to all the items in this part by ticking the column that best represents your observation.

5: Strongly Agree; 4: Agree; 3: Indifference; 2: Disagree; 1: Strongly Disagree

Impact of Advertising (Anti-malaria Jingles) on Buying Behaviour

S/N	Statement	Strongly Agreed	Agreed	Indifferent	Disagreed	Strongly Disagreed
1	I do remember malaria jingles each time I have fever.					

2	Malaria jingles has surely changed my attitude towards buying anti-malaria drugs.					
3	I as a rural dweller, I enjoy listening to malaria jingles.					
4	I really understand malaria jingles better in my local dialect.					
5	Music and jokes embedded in malaria jingles make me to remember it always.					
6	I listen to radio because of malaria jingles.					
7	Malaria jingles is more unique, educative and interesting than types of jingles					
8	Absence of malaria jingles would surely have had a negatively affect and					

	drastically reduced the patronage of anti-malaria drugs					
9	Malaria jingles is very simple, small, easy to understand, even to a lay man					
10	Malaria jingles is catchy and has very powerful effect on my emotions					

PART III

Impact of malaria jingles on stimulation of interest

S/N	Statement	Strongly Agreed	Agreed	Indifferent	Disagreed	Strongly Disagreed
1	I begin to develop interest gradually in buying anti-malaria drugs when I listened to malaria jingles					
3	I prefer to patronise those anti-malaria drugs advertised through malaria jingles than those that are not advertised					
4	I always get anti-malaria drugs at any pharmaceutical store in my vicinity any time I have malaria					
5	Malaria jingles has really gingered my interest in using anti-malaria medicines whenever I have malaria					
6	If not for malaria jingles I used to listen to, it would have been very difficult for me to be convinced that anti-malaria drugs is preferable to using local herbal					

	medicines when I have malaria					
7	I developed interest in buying anti-malaria drugs due to melodious malaria jingles I frequently listen to on radio					

Impact of malaria jingle on awareness creation

S/N	Statement	Strongly Agreed	Agreed	Indifferent	Disagreed	Strongly Disagreed
1	If not for anti-malaria jingles, I would not have known or be well informed about anti-malaria drugs					
2	Malaria jingles has really increased my level of awareness about anti-malaria drugs					
3	Other forms of advertising have not been able to create awareness about anti-malaria drugs compared to malaria jingles					
4	Anti-malaria drug awareness created by malaria jingles is so embedded in my memory that I can not easily forget it					
5	Having being aware about anti-malaria drugs through malaria jingles, my impression about malaria treatment has drastically changed from using local					

	herbs to anti-malaria drugs					

Impact of malaria jingles on the degree of conviction

S/N	Statement	Strongly Agreed	Agreed	Indifferent	Disagreed	Strongly Disagreed
1	As a result of jingles, I always try to convince my people to patronize anti-malaria drugs each time they have malaria					
2	Malaria jingles convinced me that anti-malaria drugs is a first aid of treating malaria before one visits an hospital for further treatment					
3	I am personally and absolutely convinced through malaria jingles that anti-malaria self medication is not good for health at all					
4	It would have been difficult for me to get convinced if not for malaria jingles that anti-malaria drugs is a reliable and real panacea for treating malaria					
5	I am personally convinced that anti-malaria drugs do not have much negative side effect as people thought					

Impact of malaria jingles on attitudinal change

S/N	Statement	Strongly Agreed	Agreed	Indifferent	Disagreed	Strongly Disagreed
1	It's impossible for me to use anti-malaria local herbs after realising the efficacy of modern anti-malaria drugs through malaria jingles.					
2	My level of conviction has drastically changed towards buying anti-malaria drugs after listening to malaria jingles					
3	As a result of malaria jingles, I am now convinced beyond every reasonable doubt that anti-malaria drug is a cure for malaria					
	I buy anti-malaria drugs each time I have malaria since I have discarded the idea of using local herbal medicines to cure malaria					
5	I found anti-malaria drugs more effective than herbal malaria medicine because whenever I have malaria and use it I, feel better					
6	I do advise anybody that has malaria to buy and use anti-malaria drugs instead of herbal medicines					
7	I buy and keep anti-malaria drugs because I know that malaria attack us more often					

8	Free distribution of anti-malaria drugs by the government is seldom so I buy when I have malaria					
9	I buy anti-malaria drugs often at least two times within a month					
10	I do encourage my family members to buy and use anti-malaria drugs whenever they have malaria					

APPENDIX 1

Principal-Components Analysis – Awareness and Buying Behaviour

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.725
Bartlett's Test of Sphericity	Approx. Chi-Square	2727.042
	Df	351
	Sig.	.000

Communalities

Item	Initial	Extraction
q19	1.000	.573
q20	1.000	.745
q21	1.000	.569
q22	1.000	.425
q23	1.000	.630
q24	1.000	.697
q25	1.000	.686
q26	1.000	.634
q27	1.000	.478
q28	1.000	.495
q29	1.000	.616

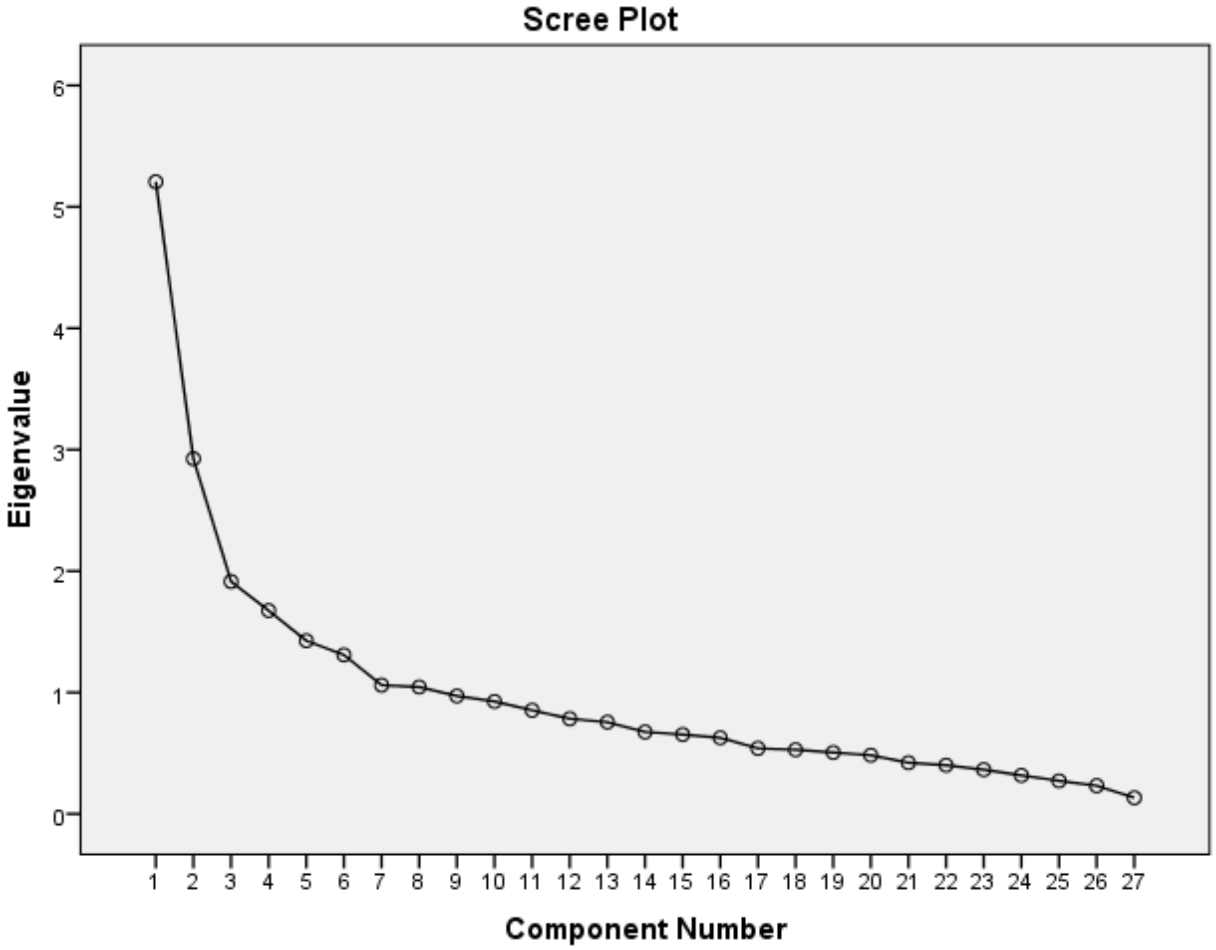
q30	1.000	.600
q31	1.000	.566
q32	1.000	.653
q33	1.000	.525
q34	1.000	.633
q35	1.000	.560
q36	1.000	.609
q37	1.000	.641
q38	1.000	.572
q39	1.000	.616
q40	1.000	.499
q41	1.000	.624
q42	1.000	.521
q43	1.000	.659
q44	1.000	.863
q45	1.000	.869

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.207	19.285	19.285	5.207	19.285	19.285	3.142	11.637	11.637
2	2.925	10.835	30.120	2.925	10.835	30.120	2.719	10.071	21.708
3	1.914	7.088	37.208	1.914	7.088	37.208	2.397	8.876	30.584
4	1.674	6.201	43.408	1.674	6.201	43.408	2.104	7.793	38.378
5	1.426	5.283	48.691	1.426	5.283	48.691	1.931	7.151	45.529
6	1.309	4.848	53.540	1.309	4.848	53.540	1.810	6.703	52.232
7	1.060	3.926	57.466	1.060	3.926	57.466	1.247	4.617	56.849
8	1.045	3.869	61.335	1.045	3.869	61.335	1.211	4.486	61.335
9	.971	3.598	64.933						
10	.926	3.429	68.362						
11	.853	3.161	71.523						
12	.784	2.903	74.426						
13	.755	2.797	77.223						
14	.675	2.500	79.723						
15	.653	2.420	82.143						
16	.626	2.319	84.462						
17	.539	1.998	86.460						
18	.528	1.956	88.415						
19	.506	1.873	90.289						
20	.483	1.789	92.077						
21	.421	1.559	93.636						
22	.401	1.486	95.122						
23	.364	1.347	96.469						
24	.317	1.172	97.641						
25	.272	1.008	98.649						
26	.232	.859	99.508						
27	.133	.492	100.000						

Extraction Method: Principal Component Analysis.


Scree Plot
Eigenvalue
0
1
2
3
4
5
6
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
Component Number

Component Matrix[a]

	Component							
	1	2	3	4	5	6	7	8
q19	-.374	.403		.345				
q20		.313				.553		.489
q21	-.391	.395					-.316	
q22	-.335	.382						
q23	-.376					.529	-.304	
q24	.625				-.358			
q25	.561	.365			-.304			
q26	.637				-.409			
q27	.549	.305						
q28	.585							
q29	.507	.348						
q30	.495	.305		.391				
q31	.546	.317			.334			
q32		.495		-.420				
q33	-.368	.512						
q34		.438		-.427				
q35	-.378			.563				
q36	-.436			.367		-.316		
Sq37	-.384	.363					.479	

q38	-.456					-.352		.315
q39					.406	.426		
q40	-.356	.343		-.309			-.368	
q41	.543				.342			-.316
q42	.366	.468						
q43	.639		.408					
q44		.314	-.803					
q45		.367	-.768		.340			

Extraction Method: Principal Component Analysis.

a. 8 components extracted.

Rotated Component Matrix[a]

	Component							
	1	2	3	4	5	6	7	8
q19			.362	.350		.366		
q20						.334		.773
q21						.647		
q22			.402	.376				
q23						.749		
q24		.786						
q25	.372	.680						
q26		.723						
q27	.516	.371						
q28	.344	.439						.315
q29	.686							
q30	.478	.363		.332				
q31	.686							
q32			.718					.341
q33			.575					
q34			.789					
q35				.657				
q36				.605			-.305	
q37				.716				
q38		-.403	.339				-.422	

q39							.633	
q40			.470			.363		
q41	.498						.549	
q42	.652							
q43	.688							
q44					.924			
q45					.920			

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 10 iterations.

Component Transformation Matrix

Component	1	2	3	4	5	6	7	8
1	.586	.568	-.324	-.332	.071	-.318	.088	-.063
2	.496	.208	.598	.382	.295	.318	.008	.138
3	.377	-.104	-.115	.317	-.850	.106	.002	-.004
4	-.193	.375	-.521	.566	.188	.305	-.157	-.277
5	.363	-.613	-.360	.236	.361	-.107	.407	-.026
6	-.135	.182	-.192	-.208	-.068	.536	.577	.494
7	-.270	.258	.134	.465	-.074	-.621	.399	.276
8	.088	-.088	-.262	.085	.100	-.099	-.556	.762

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Malaria Jingles

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.738
Bartlett's Test of Sphericity	Approx. Chi-Square	883.894
	Df	45
	Sig.	.000

Communalities

	Initial	Extraction
q9	1.000	.766
q10	1.000	.640
q11	1.000	.561
q12	1.000	.298
q13	1.000	.618
q14	1.000	.662
q15	1.000	.577
q16	1.000	.727
q17	1.000	.660
q18	1.000	.617

Extraction Method:

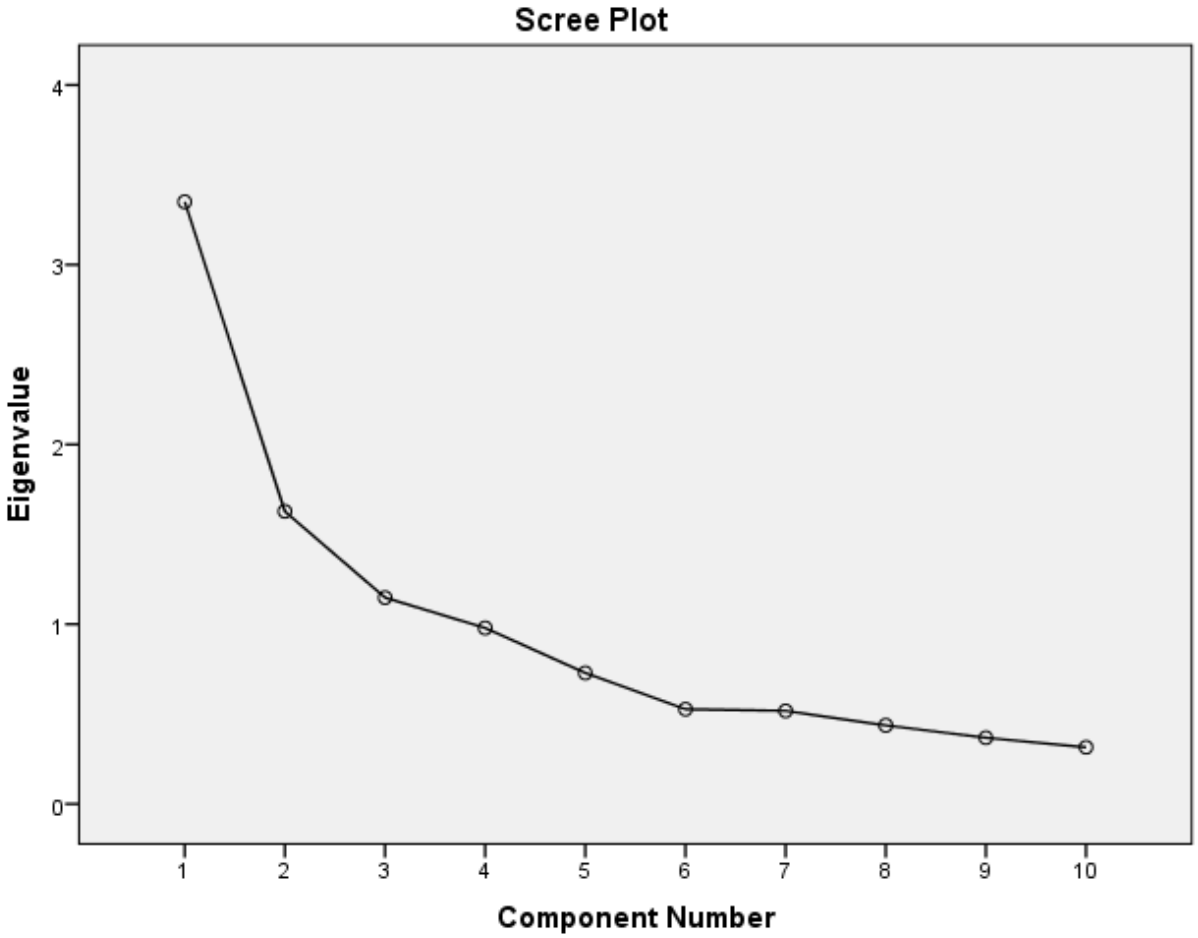
Principal Component

Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.350	33.501	33.501	3.350	33.501	33.501	2.276	22.765	22.765
2	1.628	16.278	49.779	1.628	16.278	49.779	2.024	20.238	43.002
3	1.148	11.479	61.258	1.148	11.479	61.258	1.826	18.256	61.258
4	.979	9.791	71.049						
5	.729	7.289	78.338						
6	.527	5.272	83.610						
7	.518	5.180	88.790						
8	.437	4.374	93.163						
9	.368	3.682	96.845						
10	.316	3.155	100.000						

Extraction Method: Principal Component Analysis.


Scree Plot
Eigenvalue
0
1
2
3
4
1
2
3
4
5
6
7
8
9
10
Component Number

Component Matrix[a]

	Component		
	1	2	3
q9	-.348	.701	.390
q10	-.410	.681	
q11	.652		
q12		.496	
q13	.326	.558	-.447
q14	.732		-.342
q15	.728		
q16	.628		.576
q17	.693		.424
q18	.735		

Extraction Method: Principal

Component Analysis.

a. 3 components extracted.

Rotated Component Matrix[a]

	Component		
	1	2	3
q9			.874
q10			.760
q11	.320	.669	
q12		.445	
q13		.768	
q14		.677	-.349
q15	.389	.464	-.459
q16	.852		
q17	.792		
q18	.717		

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Component Transformation Matrix

Component	1	2	3
1	.716	.572	-.400
2	.007	.567	.824
3	.698	-.592	.402

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Regression Analysis

Awareness Creation

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.886[a]	.786	.781	.98409914

a. Predictors: (Constant), simple & catchy jingles, funny jingles, jingles in local dialect

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	246.770	3	82.257	375.149	.000[b]
	Residual	67.314	307	.219		
	Total	314.084	310			

a. Dependent Variable: awareness creation

b. Predictors: (Constant), simple & catchy jingles, funny jingles, jingles in local dialect

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.007	.056		-.125	.900
	simple & catchy jingles	.228	.055	.229	4.117	.000
	funny jingles	.217	.056	.217	3.875	.000
	jingles in local dialect	.129	.056	.130	2.303	.001

a. Dependent Variable: awareness creation

Stimulation of Interest

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.944[a]	.811	.796	.87221722

a. Predictors: (Constant), simple & catchy jingles, funny jingles, jingles in local dialect

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	274.762	3	91.587	837.972	.000[b]
	Residual	33.554	307	.109		
	Total	308.317	310			

a. Dependent Variable: stimulation of interest

b. Predictors: (Constant), simple & catchy jingles, funny jingles, jingles in local dialect

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.001	.049		.015	.988
	simple & catchy jingles	.279	.049	.282	5.681	.000
	funny jingles	.375	.050	.375	7.544	.000
	jingles in local dialect	.148	.049	.149	2.993	.003

a. Dependent Variable: stimulation of interest

Degree of Conviction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.753[a]	.566	.554	.95190112

a. Predictors: (Constant), simple & catchy jingles, funny jingles, jingles in local dialect

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	167.347	3	55.782	133.605	.000[b]
	Residual	128.178	307	.417		
	Total	295.525	310			

a. Dependent Variable: degree of conviction

b. Predictors: (Constant), simple & catchy jingles, funny jingles, jingles in local dialect

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.017	.054		.309	.757
	simple & catchy jingles	.181	.054	.187	3.373	.001
	funny jingles	.103	.054	.105	1.900	.058
	jingles in local dialect	.110	.054	.113	2.036	.043

a. Dependent Variable: degree of conviction

Attitudinal Change

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.831[a]	.690	.68.7	.97683407

a. Predictors: (Constant), simple & catchy jingles, funny jingles, jingles in local dialect

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	207.306	3	69.102	228.256	.000[b]
	Residual	92.941	307	.303		
	Total	300.247	310			

a. Dependent Variable: attitudinal change

b. Predictors: (Constant), simple & catchy jingles, funny jingles, jingles in local dialect

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.025	.055		.449	.654
	simple & catchy jingles	.115	.055	.117	2.091	.035
	funny jingles	.120	.056	.122	2.158	.032
	jingles in local dialect	-.010	.055	-.010	-.182	.856

a. Dependent Variable: attitudinal change

Anti-Malaria Drugs Patronage

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.979[a]	.959	.947	.83200824

a. Predictors: (Constant), simple & catchy jingles, funny jingles, jingles in local dialect

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	295.251	3	98.417	2413.839	.000[b]
	Residual	12.517	307	.041		
	Total	307.768	310			

a. Dependent Variable: anti-malaria drugs patronage

b. Predictors: (Constant), simple & catchy advert, funny jingles, jingles in local dialect

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.014	.047		.302	.763
	simple & catchy jingles	.445	.047	.450	9.491	.000
	funny jingles	.234	.047	.233	4.923	.000
	jingles in local dialect	.227	.047	.228	4.803	.000

a. Dependent Variable: anti-malaria drugs patronage

Persuasion

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.821[a]	.674	.663	.98959073

a. Predictors: (Constant), simple & catchy jingles, funny jingles, jingles in local dialect

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	208.220	3	69.407	211.719	.000[b]
	Residual	100.642	307	.328		
	Total	308.862	310			

a. Dependent Variable: persuasion

b. Predictors: (Constant), simple & catchy jingles, funny jingles, jingles in local dialect

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.001	.056		-.026	.979
	simple & catchy jingles	.160	.056	.161	2.861	.005
	funny jingles	.120	.056	.121	2.143	.026
	jingles in local dialect	.016	.056	.016	.278	.781

a. Dependent Variable: persuasion