



**PERCEPTION OF SOCIAL DETERMINANTS AND RISKS OF SELF MEDICATION AMONG RESIDENTS OF AWKA SOUTH LOCAL GOVERNMENT AREA, ANAMBRA STATE, NIGERIA**

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**Abstract**

*This work examined “Perception of Social Determinants and Risks of Self Medication among Residents of Awka South local government Area, Southeast Nigeria”. The objectives were: To find out how residents of Awka South L.G.A perceive the appropriateness of self- medication; the extent of the occurrence/involvement of residents in the practice of self medication; to find out social factors associated with it; the major illnesses/symptoms for which self-diagnosis and self medication are adopted among residents of Awka South L.G.A as well as risks associated with it in their area; and to ascertain the measures required to control the practice of self-medication in Awka South L.G.A. The population of the study was 116, 208 which is the population of persons aged 18 years and above in Awka South L.G.A. The sample size used for this study was 360. Multi-stage sampling technique comprising cluster and simple random sampling techniques were used to select the sample for the study. The instruments for data collection were the questionnaire and in-depth interview guide. The qualitative data were analyzed using manual content analysis method, whereas the Statistical Package for Social Sciences was used to process quantitative data which were thereafter presented in frequency distribution tables and simple percentages. The hypotheses were tested using chi-square test statistics ( $X^2$ ). The findings showed that residents of Awka South L.G.A considered the use of drugs without prescription as appropriate, although they agreed that there are risks associated with self medication. The majority of the residents saw the risk of drug over dose as a major risk associated with self medication. It was also found that the most common illnesses that self medication was adopted were minor conditions like body pain, headache, fever, cough, menstrual pain and cold while when confronted with moderate or major illness conditions, they seek professional care. The study also found out that people self medicate because of high cost of hospital bills, prolonged hospital registration and treatment procedure, availability and unrestrained access to drugs, poverty, gender issues, and the information people get from family/friends concerning drugs and drug usage. It was also found in the study that the commonest drugs used for self medication was anti malaria drugs. It was recommended that drugs should not be sold over the counter without doctor’s prescription; also free medical treatment options should also be put in place to reduce costs of treatment. It was further recommended that sale of drugs by drug hawkers should be prohibited, while public awareness/enlightenment campaign on dangers of self-medication should be intensified.*

**Keywords:** Perception, social determinants, risks, self care, self- medication

**Introduction**

No meaningful discussion of self- medication may be attained without prior mention of the umbrella subject of self care. This is because self medication is one of the key forms



of self-care. Globally, self care has become a topic of growing interest among researchers and health policy makers owing to a plethora of advantages and disadvantages associated with its practice in the general population. Self-care is a behavioural response of individuals to promote or restore their health. According to Bernal and Silva (2010), modern consumers (patients) wish to take a greater role in the maintenance of their own health and are often competent to manage uncomplicated chronic and recurrent illnesses (not merely short-term symptoms) after proper medical diagnosis and with only occasional professional advice. They are often unwilling to submit to the inconvenience of visiting a doctor for what they rightly feel they can manage for themselves, given adequate information. This is no doubt a quest for self care.

However, other forms of self-care involve deliberately giving patients every opportunity to take responsibility and build confidence in their ability to manage their own health. It is common knowledge that there are not enough doctors and pharmacists in Africa and other developing countries to direct and guide everyone who become ill on the correct use of medications. Drug manufacturers have not helped matters as their chief concern is to promote the sale of their medicines without giving adequate information to the public on such drugs, especially in the local language. This is compounded by high illiteracy level, poverty and inadequate health facilities and personnel. Self care options including self medication thus offers a way out as people begin to sense the positive benefits of multiplying their options in health care (Menard et al, 1993).

Furthermore, international movements supporting the validity of self-care are being witnessed. At the World Health Organization (WHO) regional conference on revitalizing primary health held in Jakarta, Indonesia in August 2008, a new definition of 'Health for All' was proposed as: "A stage of health development whereby everyone has access to quality health care or practices self-care protected by financial security, so that no individual or family experiences catastrophic expenditure that may bring about impoverishment".

One form of self-care is self-medication. The Merriam Webster dictionary (2011) defined self-medication as medication of oneself especially without the advice of a physician. According to Afolabi (2008), self-medication is a form of self care that involves the use of medicinal products by the consumer to treat self-recognized disorder, symptoms, recurrent diseases or minor health problems. Self-medication is the use of any medicine for the treatment of oneself of any ailment without a physician's prescription. Such ailments may be fever, body pains, indigestion, diarrhoea etc. In any case, several people, friends, relatives and even patent medicine sellers (PMS) may advise the sick person on the type of medicine to take as a cure. The medicine may be herb or a conventional drug which may be bought over the counter. The practice constitutes what is called Self-medication. On her part, World Health Organization (1998) defined self-medication as the selection and use of medicines by individuals to treat self recognized illness or symptoms.



Man has used drugs for various purposes from the dawn of history. Herbal and other plant derived remedies have been estimated by the World Health Organization (WHO) to be the most frequently used therapies worldwide (Mississippi Weekly Report 1993). Plant-derived remedies can contain chemicals with potent pharmacologic and toxicological properties. Olatunde (1979) observed that from ancient civilization of South America came cocaine obtained from leaves of *Erythroxyton coca* which was chewed for pleasure and reduction of fatigue. Extracts of cacti and mushroom species, used for religious purposes among Central North American Indians can be used as a hallucinogenic agent. In Africa, Eserine, a component of miotic eyedrops develops from Calabar beans used in fetish practices. According to Olatunde, (1979) Bronchiodilatory effects of *Epedra* develops from *Epedra* plants species in ancient China while *Digitalis*, a potent heart stimulant was developed from purple foxglove, an ingredient of herbal folk medicine in England.

Self medication had also been derived from other sources outside plants. In Southern United States of America, certain foods are used to reduce the excess volume of blood which was believed to cause illnesses; in Latin America, certain foods are used to counteract hot or cold illness and to restore the body equilibrium. In the majority of Xhosa speaking women of South Africa, indigenous healing practices are used for themselves and their babies because of the need to strengthen the womb against sorcery prevent childhood illness and to treat symptoms they perceive that biomedical services would not be able to treat (Abraham, 2002).

Self-medication is practiced around the world, although there has been restriction and effective control in some developed countries. At present, there is a debate about the deregulation of more medicines to over the counter status (Bradley and Blenkinsopp, 1996). The practice has been that specific drugs, like antibiotics, hypertensive drugs among others, must be prescribed by a physician before purchase over the counter in developed countries. This is not the case in Sub-Saharan African countries including Nigeria and Uganda (Okeke, Uzochukwu and Okafor, 2006; Kiyingi and Lauwo, 1993).

Self-medication has very serious consequences or side effects such as drug resistance, wrong drugs taken for wrong ailments, taking expired drugs, taking of wrong dose (Ouma, 2007). The situation could be worst in Nigeria where factors such as inadequate health care services, poverty, illiteracy and unqualified PMS are ever present. In Awka South Local Government Area of Anambra State as in other parts of Nigeria, there are fewer trained physicians, thus only very few people have access to doctors, while many may resort to self-medication. Also costs of conventional drugs are very high for low income group. Furthermore, in Nigeria, there have been remarkable development of the pharmaceutical companies which contribute to the wide spread availability of over-the-counter (OTC) medicine (Hussain and Khanum, 2008). Currently, numerous drugs and drug combination are available and many of them have been released for general use and



are sold directly to the public as OTC drugs. Proprietary drugs which are sold over the counter include pain relievers, cough remedies, anti-allergies, laxatives, vitamins, tonics, antacids and many other (Gaillard, Dellasanta, Loutan and Kayser, 2004).

Despite the growing research interest in self-medication, little information has been available about its major determinants across different communities especially in developing countries like Nigeria. Therefore, it is against the foregoing background that the study examined perception of social determinants and risks associated with self-medication among residents of Awka South L.G.A. of Anambra State, Nigeria.

### **Statement of the Problem**

Self-medication is the act of taking medicines or medical devices especially designed and labeled for use of in the treatment of common health problems without the authority or prescription of a physician (Figuras, Caamano and Gestal-otero, 2000). The practice has become a huge public concern because of the problem of drug misuse and abuse and its attendant medical (drug resistance and hypersensitivity), of social (juvenile delinquency) and psychological (addiction and physical dependence) problems. In addition, lack of knowledge of possible side effects of self-administered medication and possibility of selling potentially dangerous drugs as over the counter in developing countries could have a deleterious effect on the general health of the public.

Self-medication may initially result in reduction of stress but in the long run however, it can cause many serious problems. Symptoms will rebound, resulting in a stronger desire to take more drugs. Poisoning, allergy, habituation, addiction, dependence and resistance can occur. In extreme cases, negative consequences such as depression, suicide attempt, interpersonal problems, legal problems, medical problems and in-patient psychiatric hospitalization can also occur. The attitude of some health professionals toward poly-pharmacy has contributed immensely in terms of exposing the general public to a number of drugs and fueled their subsequent action of abusing such drugs (Okumaraj and Wakai, 2002).

Self-medication is a serious problem in Nigeria. Studies conducted among pregnant women in South Western Nigeria show that as many as 60-90% of the population partakes in one way or the other in self-medication. Many resort to the practice instead of contacting professional health care workers because of long waiting periods in hospitals. Factors that are contributory to self-medication are minor ailments, cost, to save money and time, lack of accessibility, shortage of doctors or a feeling that their ailment is beyond the knowledge of Western trained doctors (Haak, 1988; Major, Vince and Mesko, 2007). According to Phalke, et al (2006) other reasons are urge for self-care, feeling of sympathy towards family members in sickness, lack of health services, poverty, ignorance, misbelieves, extensive advertisement and availability of drugs in drug shops.



Over the years, efforts to tackle self medication in Nigeria through prohibition of drug hawking, public enlightenment and control of types of drugs available over the counter have yielded very limited results. It is against the afore-mentioned problems that the study is focused on finding the perception of social determinants and risks associated with self-medication among residents of Awka South L.G.A. of Anambra State, Nigeria.

### **Research Questions**

The following research questions guided the study:

1. What are views of residents of Awka South LGA about their involvement in taking drugs without doctor's prescription (self-medication) in their area?
2. What are views of residents of Awka South LGA about the appropriateness of taking drugs without doctor's prescription (self-medication) in their area?
3. How do residents of Awka South L.G.A. perceive the risks associated with self medication in their area?
4. What are the major illness/symptoms for which self-diagnosis and self-medication are adopted among residents of Awka South L.G.A.?
5. What are the drugs and medical devices commonly used in self-medication among residents of Awka South L.G.A.?
6. What are the social factors that contribute to the practice of self-medication among residents of Awka South L.G.A.?

### **Study Hypotheses**

1. There is significant relationship between level of educational attainment and the tendency to self-medicate in Awka South L.G.A.
2. Female respondents are more likely to adopt self-medication as an option during ailments than their male counter parts in Awka South L.G.A.
3. Adults who are married are more likely to adopt self-medication as an option than their unmarried counter parts when faced with ailments in Awka South L.G.A.

### **Theoretical Framework: Health Belief Model**

The health belief model was adopted as the theoretical framework for this study. The theory is interested in knowing the views, perception, beliefs and attitude of individuals on a given social issue, for instance, self-medication. The theory was developed in the 1950s by social psychologists Irwin M. Rosenstock, Godfrey M. Hochbaum, S. Stephen Kegeles and Howard Leventhal at the U. S. Public Health Service to better understand the widespread failure of screening for tuberculosis (Carpenter Christopher, 2010). The Health Belief Model assumes that people are largely rational in their thoughts and actions, and will take the best health-supporting action if they:



- Feel that it is possible to address a negative health issues.
- Have a positive expectation that taking the proposed action will be effective in addressing the issue.
- Believe they are able to take the proposed action.

The HBM was spelt out in terms of four constructs representing the perceived threat, and net benefits: perceived susceptibility, perceived severity, perceived benefits and perceived barriers. These concepts were proposed as accounting for people's readiness to Act. "And added concept, cues to action, would activate that readiness and stimulate overt behaviour". A recent addition to HBM is the concept of self-efficacy or one's confidence in the ability to successfully perform an action.

Relating these premises with self-medication, individuals believe they can fall sick or can be diagnosed with ailment of any kind, and having this belief of being sick or actually diagnosed of an ailment, they tend to self-medicate depending on the perceived severity of the ailment. If the ailment is perceived not to be serious, the individual will likely self-medicate with drugs from road side vendors or drugs in the household cabinet. Also, individuals believe that self-care or taking drugs when slightly sick will prevent the situation from being worst; so they resort to taking drugs due to the availability of drugs over the counter and the widespread advertisement on the media telling the generic names of drugs and what the drugs are used for.

In addition, the perceived barriers to utilizing health services like; long queue in hospitals, high cost of health services, shortage of health personal, lower socio-economic status, illiteracy, gender, give room for self-medication. Individuals will prefer to buy drugs at the patent medicine store in order to save cost and time than to waste their time waiting to see a doctor for diagnosis and prescription.

Lastly, past experience of an individual's usage of a particular drug that was successful will boost the self-confidence of that individual to self-medicate when faced with a similar ailment next time. This however, encourages self-medication. In essence, Health Belief Model attempts to predict health-related behaviours by accounting for individual differences in belief and attitudes (although it does not fully account for other factors). The model also adopt the bottom-top approach in studying social reality, and favours the use of qualitative data (also collected in this study) which goes a long way in giving a more valid picture of the problem understudy. Accordingly, the theory has been very useful in explaining the phenomenon of self-medication.



## **Review of Related Literature**

### **Perception of Self-Medication, its Extent of Occurrences and Risks Associated with it across Societies**

Umar et al (2013) studied the perception of people on the occurrence of self-medication in Kano metropolis. They found evidences that 65.0% of the respondents correctly perceived that self-medication could be hazardous. The study further revealed that the respondents' awareness of the health hazards was statistically associated with their gender ( $X^2 = 4.74$ ,  $P < 0.05$ ); marital status, ( $X^2 = 7.91$ ,  $< 0.05$ ), and educational status ( $X^2 = 38.94$ ,  $P < 0.05$ ) but not with their age and occupation. On multivariate analysis using a model that consisted of respondents' gender, marital status, and educational status, only marital status and educational status were significantly associated with the respondents' awareness of health hazards of self-medication. Also, awareness level of 47.9% and 45.2% for self-medication were reported from studies conducted in United States of America (Mainous et al, 2008) and in Nepal (Samuel et al, 2004) respectively.

The risks associated with self-medication were copiously documented by Khyber Pakhunkwa who did his study in Pakistan and Umar et al (2013) who studied Kano metropolis. They categorised risks associated with self-medication into two: physiological and psychological risks. The physiological risks caused by self-medication: stomach problem, skin problem, headache, decongestants, diarrhoea, sore throats, menstrual pain, fatigue, toothache, cough, insomnia and dizziness. On the other hand, psychological risks caused by self-medication include: trauma, stress, strain, and phobia, paranoia, delusions, hallucination, and anxiety, tension, depression rage and aggressiveness.

However, a few studies have also revealed that self-medication does not have risks. For instance, Padiya, (2013) in his study in Ahmedabad, India opined that self-medication has no risks, while Afolabi (2008) documented benefits associated with self-medication. In his study of market women in Lagos, Afolabi (2008) found that 58.0% of the respondents held that self-medication cured their ailments, 32.0% were of the view that it saved time and money, while 7.0% felt they had a feeling of independence to take care of themselves. Other responses accounted for the remaining 3.0%.

**Illnesses and Symptoms for which Self-Medication is Applicable** Studies show that there are major illnesses for which people self-medicate. Pankaj et al (2011) in his study in an urban slum in India found that major symptoms warranting self-medication in the area include headache, fever, respiratory disease, allergies, gastrointestinal disease. These findings are similar to those of Worku and Mariam (2003), and (Afolabi, 2007) in their separate study locations. Furthermore, Padiya (2013) in a study done in Ahmedabad, India got similar results but also stated that people afflicted with chronic illnesses sparingly see a doctor for their ailments, as they learn to cope with using self-medication. Rao, (1997), on his part reported that nearly six million Americans with self-treated arthritis never saw a doctor for their condition even with severe limitation of activity. This was also seen



among migraine sufferers in Kenya where a study by Bosck, Goldstein & Marcus, (1996) revealed that 56% resorted to self-medication though 40% sought medical attention.

According to Gordon, Mosure and Lewis (1993), in patients with sexually transmitted diseases (STD), the prevalence of self-medication might actually be higher than reported. In their study conducted in an STD clinic in the United States of America, they found that while only 14% admitted self-medication with antimicrobial agents, urinary assay was positive for 60% of those using the agents. Failure to tell the truth on the questionnaire might be due to the stigma attached to their ailment.

Malaria is one of the major killers in developing countries, hence anti-malaria drugs regularly used for self-medication especially in Sub-Saharan Africa. A hospital based study in Tanzania by Miyika, Killewo and Kabalima (1995) showed that 72.7% of patients reported having used home kept anti malaria medication for suspected malaria fever. Reubush, Kern, Campbell and Oloo, (1995) also found that up to 60% of the people self-treat malaria using herbal remedies or medication purchased from local shops while only 18% received treatment at the local health centre

**Types of Drugs mostly used for Self-medication** Several medications have reportedly been used for self-medication. According to Haak (1988), the drugs include analgesics, vitamins and oral antibiotics among primary care patients Saeed (1988) also saw self-medication with antibiotics as a common practice especially in Nigeria.

According to Oni, Schumann and Oke (1991), 53% of cases (sick persons) were self-treated with antibiotics while only 40% cases were treated by prescriptions from the clinics.

Furthermore, in a study carried out among adult residents in Kano metropolis, Umar et al (2013) found that drugs commonly consumed for self-medication were anti malarias (42.1%), analgesics (40.6%) and antibiotics (29.4%); cough mixtures/antitussives were also used by (13.3%) of the respondents.

**Social Factors that Contribute to Self-medication** The determinants of self-medication are complex and can differ from one country to another or from one community to another. In a study done in Lahore, Pakistan by Afzal et al (2013), self-medication was found more in people below age 25 years (87%). Another study by Neil and Carlson (2012) also revealed an increased pattern of self-medication practices among the younger age group. However, another study done in Mexico by Angeles (1992), found that self-medication was prevalent among females (61%) as compared to males (29%). This is in line with findings by Adolfo et al (2000) and Carrasco et al (2010) in Spain which showed that self-medication is more prevalent among females.





In addition, Neil and Carlson (2012) also found out that people who were unmarried did self-medication more frequently than their married counterparts. Also, Afzal et al (2013) and Neil and Carlson (2012) found that self-medication occur more among educated persons (96%).

**Sources of Drug Information and the Place where Drugs are obtained** The common places for drug supply, according to Joubert, Sebata and Van Reenan (1984) were: pharmacies, general medicine dealers, hospitals/clinics, traditional sources, private practitioners and other sources like household medicine cabinet containing previous medical prescriptions which may not have been prescribed for the same condition.

In choosing the most appropriate medicine to buy, the study in Kano metropolis by Umar et al (2013) revealed that majority of the respondents obtained their drugs from either the patent medicine stores (62.5%) in town, or from drug stores in the market (19.8%) and drug hawkers (Kafada Chemist), as well as family and friends.

### **Materials and Methods**

The study employed a cross sectional survey design. The study location is Awka South local government area which is one of the 21 local government areas (LGA) in Anambra state, Southeast Nigeria. It has a land area of about 180 sq km and made up of nine (9) communities namely: Amawbia, Awka, Ezinato, Isiagu, Mbaukwu, Nibo, Nise, Okpuno and Umuawulu. The people of Awka South L.G.A. are mainly blacksmiths (iron works industry), craft carving, farmers and business men and women (trading). Major markets in the area include Eke-Awka, Eke Nibo, Afor Mbaukwu among others. The *Imo-Awka* and the *Iwa ji* (new yam) festival are major festivals in the area. Also, the *Imo-Awka* shrine and the *Ezu-NGene* sacred water are sites for tourist attraction in Awka community just to mention a few.

Awka South L.G.A. has a population of 189,049 (National Population Commission, 2006). This population is the population of the study. However, the target population for the study consisted of all adults (male and female) aged 18 years and above resident within the study area. As adults, they are considered capable of articulating issues related to the subject under investigation. This population is 116,208 which is 62% of the total population and is made up of 62,054 males and 54,154 females (NPC, 2006).

The sample size for this study was 360 adults (18 years and above) resident in Awka South. This sample size (large enough and accommodated statistical techniques employed for the data analysis) was statistically determined using fisher's sample size determination method. The formula is given as;



$$n = \frac{Z^2 Pq}{d^2}$$

n = Sample Size

Z = Confidence level (1.96 or 2.0)

P = Population proportion (or its estimate, 62%)

q = Complement of P

d = degree of accuracy (0.05 or 0.02)

$$n = \frac{1.96^2 (.62) (.38)}{0.05^2}$$

$$n = \frac{3.8416 (.62) (.38)}{0.0025}$$

$$n = \frac{0.904704}{0.0025}$$

$$n = 361$$

$$n = 360 \text{ (to the nearest } 10^{\text{th}}\text{)}.$$

The multi stage sampling technique was adopted in the selection of the respondents for this study. First, Awka South Local Government Area which is made up of nine communities was grouped into two clusters on the basis of rural and urban divide. With the use of simple random sampling technique, one community (Amawbia) was selected from the urban cluster while Okpuno community was selected from the rural cluster, making a total of two communities that were selected.

The selected communities were further broken down into their composite villages and one village was thereafter randomly selected from the rural and urban communities respectively. They were Umueze village from Amawbia urban community, and Nodu-Okpuno village from Okppuno rural community. The researchers therefore listed again all the streets/foot paths in the selected village from the rural cluster on a piece of paper and poured them into a tin. Again, with the use of simple random sampling technique, two streets were picked from the tin without replacement. This process was also repeated for the urban cluster and two streets were selected as well. Thus, from Umueze village in Amawbia community, Umueze and Enugwu Agidi streets were selected; while in Nodu-Okpuno village, Somabuneze and Oby-Okoli Avenue were selected. Furthermore, the compounds (houses) on the streets selected from the urban cluster were numbered; this process was also repeated in the rural cluster. Then with the use of simple random sampling technique, 90 compounds/houses were selected from each of the four streets earlier selected for the study (i.e.  $90 \times 4 = 360$ )

One adult aged 18-years and above was selected from each of the compounds/houses, thus making a total of 360 respondents for the study. In other words, 360 respondents were drawn for the questionnaire. However, 8 persons (4 per community) were purposively picked for the in-depth interview.



**Table 1: Summary of Sampling Techniques**

	<b>Communitie s selected</b>	<b>Villages</b>	<b>Road/Street</b>	<b>Compounds/ houses visited</b>	<b>No of Responde nts</b>
Urban (Awka & Amawbia)	Amawbia	Umueze	Umueze Street & Enugwu-agidi St.	90 90	180
Rural	Okpuno	Nodu-Okpuno	Somabuneze Oby Okoli Avenue	90 90	180
<b>Total</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>360</b>	<b>360</b>

Thus, both quantitative and qualitative tools were employed for this study (i.e. questionnaire and the in-depth interview guide). The questionnaire contained both open and close ended items. The in-depth interview was unstructured in order to give the respondents the room to freely express their views on the questions or issues raised.

Responses from the questionnaire were processed using Statistical Package for Social Sciences (SPSS). The data were expressed in frequency distribution tables, cross-tabulations were used to determine relationship between variables and the hypotheses were tested using chi-square test statistics. On the other hand, the IDIs were tape-recorded and transcribed verbatim. Thereafter, manual content analysis was used for its analysis.

### **Findings/Results**

Out of the 360 questionnaires distributed, only 346 were correctly filled and returned which were used for quantitative analysis.



**Personal Data of Respondents**

**Table 2:** Distribution of Respondents by their Socio-Demographic Data

Sex	Frequency	Percentage
Male	156	45.1
Female	190	54.9
<b>Total</b>	<b>346</b>	<b>100</b>
<b>Age of Respondents</b>		
18-27	90	26.0
28-37	32	9.2
38-47	107	30.9
48-57	37	10.7
58 and above	80	23.1
<b>Total</b>	<b>346</b>	<b>100</b>
<b>Marital Status of Respondents</b>		
Single	76	22.0
Married	243	70.2
Divorced	4	1.2
Separated	12	3.5
Widowed	11	3.2
<b>Total</b>	<b>346</b>	<b>100</b>
<b>Educational Qualification</b>		
No formal education	8	2.3
Primary/FSLC	10	2.9
GCE/SSCE/WAEC	52	15.0
HND/BSC	219	63.3
Higher Degree/MSc/PhD	57	16.5
<b>Total</b>	<b>346</b>	<b>100</b>
<b>Religious Affiliation</b>		
Christian	331	95.7
African Traditional Religion	15	4.3
Muslim/Islamic Religion	0	0
<b>Total</b>	<b>346</b>	<b>100</b>
<b>Occupation</b>		
Civil servant	40	11.6
Business man/woman	213	61.6
Student	29	8.4
Farmer	22	5.4
Unemployment	33	9.5
Artisan	9	2.6
<b>Total</b>	<b>346</b>	<b>100</b>
<b>Place of Residence</b>		
Urban	171	42.75
Rural	175	43.75

Table 2 shows that there are more female respondents than males in the study. Majority of the respondents were between the ages of 38-47, with mean age of 42 years. Also, 70.2% of them were married, 22% were single, whereas only 1.2% are divorced. The low number



of divorced respondents may be because divorce is socially reproached in the area. Similarly, majority of the respondents are married because marriage is thing of honour and persons above 18 years with means of livelihood usually get married to enjoy respect from the society. In terms of educational qualification, table 2 also shows that majority of the respondents have obtained HND/BSc. Literacy level is thus high with Christianity as the major religion in the study area.

### **Analysis of Research Questions**

**Research Question 1:** What are views of residents of Awka South LGA about their involvement in taking drugs without doctor's prescription (self-medication) in their area? Findings are presented in tables 3, and 4 below.

**Table 3:** Distribution of respondents' by their views on how often they take drugs without doctor's prescription (frequency of involvement in self-medication)

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
Every time as my treatment option to ill-health situation	99	28.6
Sometimes as treatment option for my minor ailments	133	38.4
Never tried self-medication as a treatment option	95	27.5
Can't say	19	5.5
<b>Total</b>	<b>346</b>	<b>100</b>

Table 3 shows that 28.6% of the respondents take drugs without doctor's prescription every time they encounter ill-health situation, while 38.4% take drugs without doctor's prescription sometimes. This implies that all together, 67% of respondents have ever taken drugs without prescription. This finding aligns with data from the in-depth interview. An IDI respondent stated:

I do it sometimes. Once in a while I just go to the patent medicine shop (drug store) to purchase drugs and treat myself of common illnesses like malaria. (Male 29 years old, Single, Business man)

Also, the illness behavior which residents of Awka South LGA attested to, further buttressed their tendency to self-medicate. Table 4 below shows that rather than visit health centers and hospitals on noticing signs and symptoms of ailment, majority of the respondents usually chose to pluck available herbs for treatment or visit patent medicine stores to buy self prescribed drugs.



**Table 4:** Distribution of respondents by their views on behaviors they adopt in response to ailments

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
Pluck herbs from farm and treat myself	160	19.9
Visit nearby patent medicine store to purchase self prescribed drugs for treatment and or lay complaint to patient drug stores/vendors and take their treatment regimen	74	21.4
Go to public health institutions for diagnosis and treatment	43	12.4
<b>Total</b>	<b>346</b>	<b>100</b>

Data from the in-depth interview revealed similar opinions from the interviewees on the issue. An IDI respondent stated:

Right from when I was a child, I always saw my mother getting herbs and drugs for us from the bush, farms and drug stores to treat us whenever we are sick. I grew with that mentality that anytime I fell sick and it's not a severe issue, I can get myself treated by purchasing drugs over the counter. I have not gone to the hospital before because of headache or muscle pains. Even cough, I rarely go to the hospital. But if the issue gets so severe and resists the drugs I am using, I can now consider visiting the hospital for proper diagnosis and treatment (male, 29, single, business man).

Another IDI respondent stated:

I get myself treated with the herbal mixtures I produce anytime I am sick. They are very safe and effective. I have no business with patent drugs because they are chemicals. They damage the body. Herbs heal all illnesses without side effects. (Male, 49, married, Herbal Medical Practitioner)

Respondents were also asked if they considered self- medication as an appropriate treatment option for both minor and major ailments. The finding in that regard is shown on Table 6 below.

**Research Question 2:** What are views of residents of Awka South LGA about appropriateness of taking drugs without doctor's prescription (self-medication) in their area? Findings are presented in table 5 below.



**Table 5:** Distribution of respondents by their views on whether it is appropriate to take drugs without doctor's prescription

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
Yes, it is appropriate to take drugs without doctor's prescription	229	66.2
No, it is inappropriate (wrong) to take drugs not prescribed by your doctor	94	27.2
Don't know	23	6.6
<b>Total</b>	<b>346</b>	<b>100</b>

Table 5 shows that 66.2% of the respondents constituting the majority were of the opinion that taking drugs without doctor's prescription is appropriate while 27.2% consider it inappropriate.

Nonetheless, data from the in-depth interview differs from this finding. An IDI respondent stated that:

Taking drugs without the prescription of qualified medical personnel is very bad and unreasonable. In doing this, one is at the risk of taking the wrong dosages for drugs and other risks associated there with. So it is such a wrong thing to do. (Male, married, 36, Health Worker).

Another IDI respondent stated that:

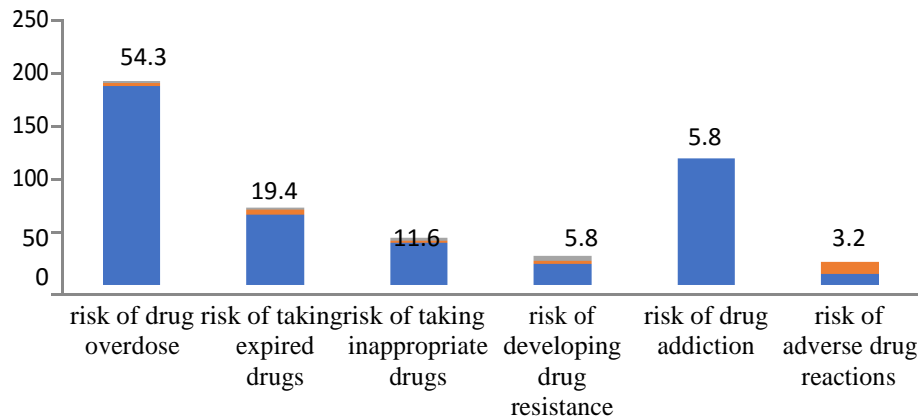
For me, issues associated with the health of an individual should always be left in the hands of medical experts. If one is not an expert the person has no business prescribing drugs because it is dangerous. The person should neither prescribe for himself nor for others for obvious reasons. The major reason is to avoid the risk of drug over dose (Female, Civil Servant, Married, 44 Non- Health workers).

Another health worker was more emphatic about inappropriateness and dangers associated with self-medication. She stated thus:

There is nothing like little or big sickness actually. Every sickness or ailment has the capacity of killing a person if not properly handled. So be it severe, minor or major, I do not recommend self medication to anyone. Whether the sickness is severe or not, self medication is not an option (Female, 30, married, health worker)



**Research Question 3:** How do residents of Awka South LGA perceive risks associated with self-medication in their area? Findings are presented in Figure 1 below.

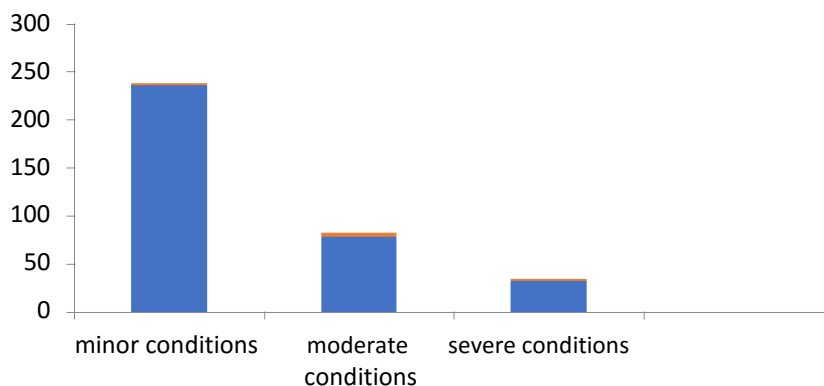


**Figure 1:** Distribution of respondents on the most common risk associated with self medication

Figure 1 shows that majority of the respondents identified risk of drug overdose as the major risk associated with self-medication. This finding is also in line with data gathered from the in-depth interview. An IDI respondent stated:

I tell you straight away that the risks associated with self medication are enormous. This ranges from the risk of drug overdose, to the risk of using the wrong drugs for treatment of ailments. Again, there is the problem of drug resistance. When people constantly use a particular drug over a long period of time, they may develop resistance to that drug especially when they now need it for treatment. (Female, 50, health worker, widow)

**Research Question 4:** What are the major illnesses/symptoms for which self-diagnosis and self- medication are adopted among residents of Awka South LGA? Findings are presented in Figure 2 below







**Figure 2: Distribution of respondents on illnesses they would self-medicate for.**

Figure 2 shows that majority of the respondents identified minor conditions like cough, menstrual pain, cold among others as illnesses they would self medicate for.

**Research Question 5:** What are the drugs and devices most commonly used in self medication among residents of Awka South LGA? Findings are presented in table 6 and figure 3

**Table 6:** Distribution of respondents according to their opinions about drugs that are mostly commonly used without prescription in their community

Responses	Frequency	Percentage
Pain relievers or analgesics	53	15.3
Germ Killers or antibiotics	26	7.5
Malaria drugs or anti-malaria	244	70.5
Blood tonics or multi vitamins	23	6.6
<b>Total</b>	<b>346</b>	<b>100</b>

Table 6 shows that majority of the respondents (70.5%) identified /anti-malaria drugs as the most commonly used for self medication. However, blood tonics and multivitamins are least used for self medication. Data from the in-depth interview supports this finding.

An IDI respondent stated that:

The most common drugs used for self medication includes analgesics, that is pain killer/relievers. Antimicrobial and anti-malaria drug are common too. People also make use of stimulants/sedatives and depressants a lot without prescription by medical personnel. (Female, 50, Widow, health worker)

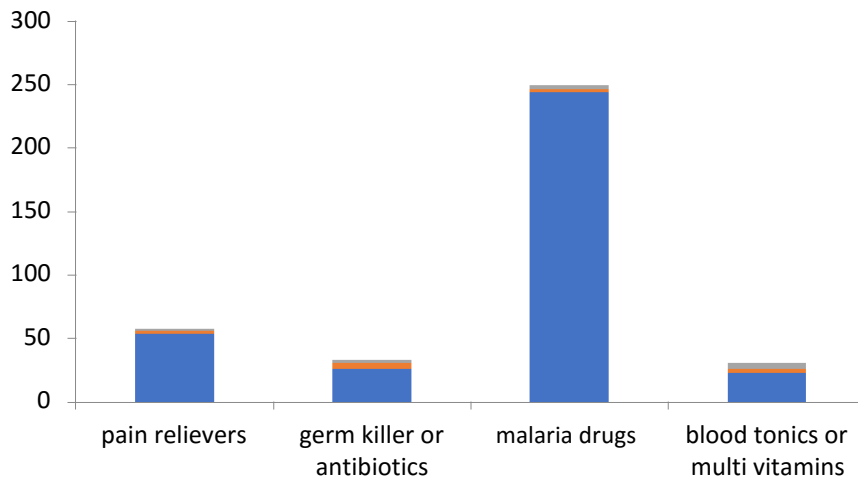
Another IDI respondent stated:

Anti-hypertensive, anti-malarial and anti-spasmodic drugs are the drugs we often see people going over the counter to purchase. Just look around you, the closest chemist shop or pharmacy, you see most people asking for these drugs. It has become the norm actually. (Female, 28, Single, health worker)



Another IDI respondent stated:

I think drugs for malaria are the most common. Anytime I fall sick or anybody around me falls sick, it is usually malaria and it is taken care of by anti- malaria drugs sourced from patent medicine vendors .(Male, 29, Single, Business man)



**Figure 3: Distribution of respondents on their opinions on drugs commonly used without prescription in their community.**

Figure 3 shows that majority of the respondents identified malaria drugs as the kind of drugs commonly used without prescription in their community.

**Research question 6:** What are the social factors that contribute to the practices of self-medication among residents of Awka South LGA? Findings are on tables 7, 8 and 9

**Table 7:** Distribution of respondents according to their views on reasons why they self medicate.

Responses	Frequency	Percentage
Exorbitant/ high cost of hospital bills	98	28.3
Prolonged hospital registration and treatment procedures	74	21.4
The drugs are readily available and accessible around us	74	21.4
I learnt it from family members/friends (everybody does it).	83	24.0
Because it is faster and culturally accepted to try home treatments before going to hospital	45	13.0
My religion forbids me from taking drugs or visiting hospitals I do not self medicate	9	2.6
<b>Total</b>	<b>346</b>	<b>100</b>



Table 7 shows that there are two major reasons accounting for why residents of Awka South LGA self medicate. One is the high cost of hospital bills or treatment charges. The other reason is the availability and easy access to all types of drugs over the counter. Data from the in-depth interview support this finding.

An IDI respondent stated:

Self medication is cheap. Walking into the drug store or pharmacy to get drugs for an ailment is cheaper compared to when you have to go to the hospital. Sometimes the money you spend in buying card from the hospital will be enough to get drugs from the drug stores. Again, accessing drugs is very easy out there. You can walk into any drug store and get drugs without prescription. So it makes self medication easy (male, 29, single, business man)

Another IDI respondent stated:

Apart from the fact that self medication is cheap, it is faster than having to pass through the rigors and protocols of attending conventional hospitals for treatment. Walk into the drug store and within minutes you are walking out with your drugs. But when you walk into the hospitals, protocols and several procedures will hamper prompt service to you. (Female, 44, Herbal medicine practitioner)

Another IDI respondent stated:

We herbal practitioners encourage people to patronize us because our mixtures are cheaper and even easier to access. Again, the culture of our people support using herbs to treat our self always. It is not even self medication; it is about doing the right thing culturally. (Male, 49, married, herbal medical practitioner)

Some of the medical personnel interviewed however shared different opinions. One of them stated; ignorance is the major reason people self medicate. People erroneously think self medication is cheap and that going to hospital is expensive and stressful. But that is not true. In the long run, self medication will manifest its hazards because along the line of self medicating one must have taken drugs for the wrong medication. The ailment might stop or subside with the drugs. But overtime, it becomes deep noted in the body of the person and will now become life threatening. Really



because people do not understand how dangerous self medication can be, they just engage/indulge in it ignorantly. The dangers, the risks far outweigh the benefits. (Female, 30, married, health worker).

**Table 8:** Distribution of Respondents on Gender issues that influence self medication

<b>Respondents</b>	<b>Frequency</b>	<b>Percentage</b>
Woman have more time to visit hospital	91	26.3
Real man can understand and manage health challenges by themselves at home	39	11.3
Maternal and child health issues make it important that woman must regularly require professional care than men.	71	20.5
Don't know	62	17.9
All of the above	41	11.8
None	42	12.1
<b>Total</b>	<b>346</b>	<b>100</b>

Table 8 shows that 26.3% of the respondents were of the opinion that women have more time to visit the hospitals and that is why they self medicate less, 11.3% identified that real men withstand and manage health challenges by themselves at home hence they self medicate more. On the other hand, 20.5% identify maternal and child health issues as the reason why women visit hospitals regularly.

**This finding above was not supported by data from the in-depth interview.**

An IDI respondent stated:

I can't say there is a gender that prefers self medication. Every gender does it. I will even consider the women as the people that self medicate more because they appear to be confronted with more issues that can predispose them to illness ranging from child birth to menstrual cycle they will have to put up with every time. (Female, 28, single, health worker)

Another IDI respondent stated:

There are gender issues associated with self medication. The women are more prone to self medication. Take for instance dysmeneria (menstrual pain). It predisposes young girls to even start self medicating at a very tender age. (Female, 30, health worker).



**Table 9:** Distribution of Respondents on the Social Factors that stimulate people to adopt self medication as a treatment option.

Responses	Frequency	Percentage
Level of income/poverty	125	36.1
Level of Education attainment	58	15.8
Type of employment	44	12.7
Rural residence	37	10.7
Distance location of health institution	39	11.3
Don't know	27	7.8
<b>Total</b>	<b>346</b>	<b>100</b>

Table 9 shows that 36.1% of the respondents identified level of income/poverty as the key social factor that stimulates them to take to self medication. Other factors are as shown on the table. This finding is supported by data from the in-depth interview. An IDI respondent stated:

Economic factor is one reason people self medicate. There are other factors like ignorance and family background. But the economy is the major one. Most people will not self medicate if they had the money to get professional care always (male, 36, health worker)

Another IDI respondent stated:

I think what makes people not to look out for doctors and orthodox people all the time is because they don't have enough money. Check the rich people. They hardly self medicate. (Female, 50 Widow, health worker)

**Test of Hypotheses** Three hypotheses were tested in this study. Details are shown below. **Hypotheses 1:** 'There is a significant relationship between level of educational attainment and the tendency to self medicate in Awka South LGA'. Data in table 10 formed the basis for this hypothesis.

**Table 10:** Relationship Between Level of Education and ahe Tendency to Self Medicate

Level of education		How often do you take drugs without doctor's prescription for various purpose or during aliment			Total
		Every time	Sometimes	Never	
Lower education	50	1	1	18	70
Higher education	49	132	94	1	276
<b>Total</b>	<b>99</b>	<b>133</b>	<b>95</b>	<b>19</b>	<b>346</b>



The computed value of chi-square is 174.501 while the table value of chi-square at 0.05 level of significance with a degree of freedom (df) of 3 is 7.815. Since the computed value of chi-square is greater than the table value, the researcher accepted the alternative hypothesis. It implies that respondents with a lower level of education are more likely to self medicate than those with a higher level of education.

**Hypothesis 2:** ‘Female respondents are more likely to adopt self medication as an option during ailments than their male counterparts in Awka South LGA’. Data on table 11 formed the basis for this hypothesis.

**Table 11:** Relationship between Sex and Response to Illness/Disease Experience.

**Sex of What do you mostly do when you experience illness/disease situation Total respondents**

Gender	Pluck herbs from farm and treat myself	Visit nearby patent medicine store to purchase self prescribed drugs for treatment	Lay complaint to patent drug stores vendors and take their treatment regimen	Go to public health institution for diagnosis and treatment	70
Male	146	3	6	1	156
Female	14	66	68	42	190
<b>Total</b>	<b>160</b>	<b>69</b>	<b>74</b>	<b>43</b>	<b>236</b>

The computed value of chi-square is 25.597 while the table value of chi-square at 0.05 level of significance with a degree of freedom (df) of 3 is 7.815. Since the computed value of chi-square is greater than the table value, the researcher accepted the alternative hypothesis. It implies that female respondents are more likely to self medicate than male respondents.

**Hypothesis 3:** ‘Adults Who Are Married Are More Likely To Adopt Self-Medication As An Option Than Their Unmarried Counter Parts When Faced With Ailments’. Data in table 12 formed the basis for his analysis.



**Table 12:** Relationship between Marital Status and Response to Illness/Disease Experience.

Marital status	What do you mostly do when you experience illness/disease situation				Total
	Pluck herbs from farm and treatment	Visit nearby patent medicine store to purchase self prescribed drugs for treatment.	Lay compliant to potent drug stores/vendors and take their treatment regimen.	Go to public health institutions for diagnosis and treatment	Total
Never married	3	31	32	10	76
Ever married	157	38	42	33	270
<b>Total</b>	<b>160</b>	<b>67</b>	<b>74</b>	<b>43</b>	<b>346</b>

The computed value of chi-square is 78.490 while the table values of chi-square a 0.05 level of significance is 7.815. Since the computed value of chi-square is greater than the table value, the researcher accepted the alternative hypothesis. It implies that adults who are married are more likely to self medicate than adults who are single.

**Discussion of Findings**

Based on the analysis done on responses to the qualitative and quantitative instruments of data collection in the study, the prescription of social determinants and risk of self medication among residents of Awka South local government is evaluated. It was found in the study that residents of Awka south Local Government consider the use of drugs without doctor’s prescription as appropriate. It was found in the study that the risk of drug over dose is the major risk associated with self treatment. Other risks that were identified in the study include the risk of taking expired drugs, risk of taking inappropriate drugs for a particular condition and the risk of developing drug resistance. This finding contradicts that of Umar et al (2003) who found that self medication is perceived as hazardous to individuals. On the risks associated with self medication, (Umar et al 2003) found that self medication is a risky habit. This conforms to the findings of this study on the perception of self medication. It was also found that residents of Awka South LGA only seek professional medical care when they are seriously sick. The most common illness that self medication is adopted for was found to be minor condition like body pain, headache, fever, cough, menstrual pain and cold. When confronted with moderate and/or major conditions, the study found that residents of Awka South LGA become much more willing to seek professional care. This finding aligns with that of Pankaj et al (2011) who found that illnesses like headache, fever, respiratory diseases and allergies are the commonest illnesses people self medicate for. The finding is also in line with that of Worku and Marian (2003) and Afolabi (2007). It was found in the study that malaria/anti-malarial drugs are the commonest drugs used for self medication. Other drugs that are used for self medication as the study identified include pain killers/analgesics, germ killer or antibiotics and blood tonics or multi vitamins. This finding corroborates that of Oni, Schumann and Oke (1991), Bojali and Calva (1994) Afolabi (2009) and Umar et al (2013) who in their separate studies, identified that anti-malaria, analgesics and germ killers are commonly used by people to self-treat themselves when they are ill.



It was also found in the study that the commonest source of drug information and the place where the drugs are easily obtained from are family/friends and patent medicine stores respectively. Information on available drugs is gotten from family members or friends and people go on to purchase these drugs from patent medicine stores. This finding supports that of Jouhat, Sebata and Van Reenam (1984), Kasilo Nhachi and Mutangadura (1991) and Umar et al (2013).

The study found that people self medicate primarily because of high cost of hospital bills. Other reasons for self medication include prolonged hospital registration and treatment procedure, availability and unrestrained accessibility to drugs and the information people get from family/friends concerning drugs and drug usage. Poverty/level of income was found as the most important social factor that stimulates people into self medication. The study also found that females are more likely to self medicate than males. This is in line with the findings of Angeles (1992), Adolfo et al (2010) and Carrasco et al (2010).

The study further found that there are measures that should be put in place to control the practice of self medication. The major measure that was identified in the study to regulate self medication is ensuring that drugs are not sold over the counter without doctor's prescription. Other measures includes free medical treatment to reduce cost, construction of more hospitals to improve easy access to doctors, formulation of laws that prohibit the sale of drugs by drug hawkers, public awareness/enlightenment campaigns, regulating the media agencies on what they advertise, providing every community with a primary health care centre and ensuring availability of drugs in all health centres at cheaper rates. This finding supports that of Umar et al (2013) Afolabi (2008) Meyer (1996) and Ruegg (1986). The findings of the study are in line with the propositions of social action theory and health belief model which were earlier used as the theoretical frame work for the study. These theories are adequate and still maintain their theoretical relevance in the study because the views and perceptions of the respondents were captured on the issues at hand which are self medication. Also the various reasons, attitudes were gotten from the respondents on why they self medicate. This is one of the tenets of social action theory and health belief model they seek to get the perception, attitudes, views and beliefs of the acting individual about a phenomenon or social event.

Three hypotheses were rested in the study. The first hypothesis established that there is a significant relationship between love of education and the tendency to self medicate. The second hypothesis established that female respondents are more likely to self medicate than male respondents while the third established that married adults are more likely to self medicate than unmarried adults.





### **Conclusion**

The study set out to understand the perception of social determinants and risks associated with self medication in Awka South LGA. It was established that self medication is an appropriate behavior in Awka South as the respondents indicated. This underscores the continued patronage of drug stores by residents of the LGA for self prescribed drugs. Malaria as a common ailment in the LGA was identified in the study as the commonest ailment for which people self medicate for. The fact that residents of the LGA willingly visit patent medicine stores anytime they experience symptoms of illness show how deeply the culture of self medication is entrenched. However the study found that poverty is the primary factor that has resulted to the continued practice of self medication. The lack of adequate resources to get proper diagnosis and medical care when one is sick is the reason behind self medication, which residents of Awka South consider cheaper. There should be adequate laws and regulations to reduce the rate at which drugs are sold over the counter. This would take away the many risks associated with self medication.

### **Recommendations**

Based on the findings of this research, the following recommendations are made

1. The sale of drugs over the counter without the prescription of qualified medical personnel should be stopped. This can be done by not just making laws to this effect but by implementing these laws.
2. The poverty rate in the area has been identified as the reason behind the high rate of self medication. Efforts should therefore be made to reduce the cost of medical treatment. Government should provide subsidy to health centres so they can reduce their cost treatment.
3. Hawking of drugs should be criminalized. Appropriate laws should be passed to this effect and implemented accordingly.
4. Public awareness and enlightenment campaigns should be embarked upon by health workers to inform the public on the dangers associated with self medication.
5. The rate at which drugs are advertized on the media or by mobile advertisers should be controlled. This will make it imperative for residents of the LGA to always seek adequate medical care instead of buying drugs they hear about over the media.
6. Drugs should be made available at every point in time in the health centres. This will prevent the bottlenecks that have hitherto affected the health sector thereby discouraging members of the public from seeking proper medical care.



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