Self Medication in Rural Africa: The Nigerian Experience
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Citation

Abstract
Self medication in rural Africa has reached a crisis state, as people take anything, and even potentially toxic substances as remedies. Thus, this study investigated the self medication profile of the rural people of Cross River and Akwa Ibom States of Southeastern Nigeria. Five hundred and fifty two out of seven hundred and thirty six persons which were randomly selected served with structured questionnaires, were interviewed. The study revealed that 99.4% relied on self medication, while 0.6% consulted physicians. A wide range of substances such as herbs, antibiotics, ash, kerosene, petrol, etc, are used as remedies, and no specific drugs are used for specific ailments, depicting a confusing state of folk medicine in rural Africa. Herbs (10.8%) and antibiotics (9.1%) can be used for the treatment of any of the identified sixteen ailments in the communities. The intervention of government to reduce poverty and provide adequate healthcare and education is recommended.

INTRODUCTION
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, diarrhea, 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 a herb or a conventional drug which may be bought over the counter. This practice constitutes what is called self medication.

Self medication is practiced around the world, although there has been restriction and effective control in some developed countries. At present there is debate on the deregulation of more medicines to over the counter status (Bradley and Blenkinsopp, 1996). The practice has been that, specific drugs, e.g., antibiotics, hypertensive drugs, etc., 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 et al, 2006; Kiyingi and Lauwo, 1993). Self medication has very serious consequences such as side effects, drug resistance, wrong drugs taken for wrong ailments, taking expired drugs, taking of wrong doses (Ouma, 2007) etc. The situation is worse in Sub-Saharan Africa where factors such as inadequate health care, poverty, illiteracy and unqualified PMS are ever present, besides bizarre official policies on self medication and drug abuse.

There is a peculiarity in the self medication profile of Sub-Saharan African countries. There are fewer trained physicians, thus, only very few people have access to doctors, and resort to self medication. Secondly, cost of conventional drugs is very high for the low income group. Thirdly, traditional herbal medicines whose dosages are not known constitute almost 50 percent of the drugs used for treatment; and very often, the users of the traditional herbs have no names for most ailments. For instance, malaria and typhoid fever are simply called “fever”. Another very serious aspect is that very many people in Sub-saharan Africa take “anything”, even potentially toxic materials like kerosene with sugar, petrol, etc., as drugs. These help to compound the consequences of self medication in rural Africa.

In this study, therefore, the aim was to investigate the self medication habit of the rural people of Cross River and Akwa Ibom States, Southeastern Nigeria, including prevalent ailments and the types of drugs used for the treatment of such ailments; and how the drugs are used, with a view to recommending means of controlling self medication in Nigeria.

MATERIALS AND METHODS
THE STUDY DESIGN
The study was carried out in four Local Government Areas (L.G.As.) of Cross River and Akwa Ibom States of Nigeria.
The L.G.As were Biase, Akamkpa and Odokpani in Cross River State, and Eket in Akwa Ibom State. One community from each of the L.G.As was selected for the study. These were Akpet Central (Biase), Uyanga (Akamkpa), Asen-Ufot (Odokpani) and Ibeno (Eket). All these communities were among others which were earlier identified for the purpose of this study on the basis of their rural setting with estimated populations of less than 2800 and a distance of more than 30km from urban or semi-urban centers. The communities lacked basic health facilities, and sometimes with only one health care centre in a community. One or two medicine stores and medicine hawkers were seen in some of the communities. A few of the operators of the medicine stores displayed their patent medicine licenses on the walls of the stores. Almost all the patent medicine sellers (PMS) appeared to have had little education and none had any professional training in the medical field. The health care centers in the communities were government-owned with relatively cheap but usually with mismanaged services, while others were privately owned with expensive and inadequate services. There were several spots where people relax and drink local gin mixed with herbs for the cure of several ailments such as malaria, body pains, yellow fever, diarrhoea, etc. Herbal homes were not publicly located.

**SAMPLING DESIGN AND SELECTION PROCEDURE OF STUDIED COMMUNITIES**

Structured questionnaires were used for this study. Having first identified the communities (five for each L.G.A.) that fulfilled the rural conditions earlier stated, one community from each L.G.A. was selected through the use of a random number table (Bailey, 1981).

**METHOD OF DATA COLLECTION**

For the purposes of reliability, confidence and co-operation by the members and heads of communities, official letters from the Cross River University of Technology were given to the community heads, introducing the research team before data were collected. A total of 736 questionnaires were distributed (184 for each L.G.A.) to people aged 18 years and above. The questionnaires contained questions that would enable the research team to evaluate the medication habit of the people relating to consulting a physician or resorting to other means of treatment in times of sickness, the type of remedy taken, and for what ailment. Also, their perceptions, practices and beliefs and their socio-economic status were sought from the Nigerian federal office of statistics FOS (FOS, 1999).

**DATA ANALYSES**

The data obtained from respondents were analyzed using SPSS (Statistical Package for Social Scientists) Ver. 12.0.1 for windows, which revealed the medicines used for self medication and the percentages of respondents who usually met doctors, or who used particular medicines for various ailments. The data were further developed to reveal a general medication habit of the communities, ailments and drugs used for self medication and classification of the drugs used for self medication.

**RESULTS**

Table 1 shows sixteen common ailments identified in the four rural communities studied, and the treatment habit of the members of the communities. In this study, treatment habit refers to consulting a medical doctor or resorting to self medication when one falls sick. Out of a total of 736 persons who were served with questionnaires, 552, representing 75% responded. Only 0.6% said they often consulted the doctor, while 99.4% were always resorting to self medication.

A comprehensive list of the various drugs used by the community members for treatment of the corresponding ailments is presented in Table 2. In this study, the word, “drugs” are implied since the under listed substances are what the respondents use for the treatment of the associated ailments, while the corresponding figures to the drugs represent the percent number of respondents who apply each drug for corresponding ailment. Accordingly, Table 2 shows the most widely applied drug for each of the ailments beginning from medicated ointments (54%) for the treatment of whitlow.

As shown in Table 3, the drugs were classified into six groups in relation to the types of ailment and the cumulative percent number of respondents who use each group of drugs. The aim was to determine the group mostly used by the communities for self medication. The table shows that drugs under the group “unorthodox” (18.4%) were mostly used across board, but not for wounds and cuts. Antibiotics group ranked 5th (9.1%), indicating that even herbs (10.8%) were more used than antibiotics. However, herbs and antibiotics could be applied as remedies for any of the sixteen ailments. Table 3 also gave a mean percent number of respondents to be 75%, being the percentage of respondents out of 736 persons served with questionnaires.
Table 1: Treatment of ailments in the Communities.

<table>
<thead>
<tr>
<th>Types of ailments</th>
<th>Through Doctor (%)</th>
<th>Through Self Medication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sprains and strains</td>
<td>0.5</td>
<td>99.5</td>
</tr>
<tr>
<td>Colds</td>
<td>0.6</td>
<td>99.4</td>
</tr>
<tr>
<td>Conjunctivitis</td>
<td>0.3</td>
<td>99.7</td>
</tr>
<tr>
<td>Headaches</td>
<td>0.4</td>
<td>99.6</td>
</tr>
<tr>
<td>Toothache</td>
<td>0.9</td>
<td>99.1</td>
</tr>
<tr>
<td>Earache</td>
<td>0.5</td>
<td>99.5</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>0.7</td>
<td>99.3</td>
</tr>
<tr>
<td>Body ache</td>
<td>0.5</td>
<td>99.5</td>
</tr>
<tr>
<td>Wounds and cuts</td>
<td>0.4</td>
<td>99.6</td>
</tr>
<tr>
<td>Scars and ulcers</td>
<td>0.5</td>
<td>99.5</td>
</tr>
<tr>
<td>Burns</td>
<td>0.5</td>
<td>99.5</td>
</tr>
<tr>
<td>Common cold</td>
<td>0.4</td>
<td>99.6</td>
</tr>
<tr>
<td>Ringworms</td>
<td>0.7</td>
<td>99.6</td>
</tr>
<tr>
<td>Whitlow</td>
<td>1.4</td>
<td>98.6</td>
</tr>
</tbody>
</table>

Mean total: 0.6 | 99.4

Figure 2

Table 2: Ailments and drugs used for self medication

Figure 3

Figure 4
**DISCUSSION**

It was observed in this study, that the people of the rural communities of Southeastern Nigeria (99.4%) rely on self medication for their health care need. The minute proportions (0.6%) that report to physicians in times of sickness are privileged, because almost all persons in each community do not have access to physicians as a result of poverty and illiteracy. The areas under study are forest communities whose members (58.9%) are subsistence farmers with the highest poverty level (annual income less than $300), while 49.4% of them have no formal education (FOS, 1999; Eja, 2006). Besides, each community has a medical centre without a resident doctor. A few nurses manage the centers which are inadequately equipped. The tendency is to resort to folk remedies. Although folk remedy is universal it is known to be cultural among black communities worldwide (Smitherman et al, 2005). Self medication habit observed in this study is similar among the black communities especially among the lower socioeconomic groups in the United States of America (Smitherman et al, 2005). In a village in Papua New Guinea, principally a black community, 153 out of 176 (i.e., about 87%) of drugs used for self medication were orally-used drugs in the home (Kiyingi and Lauwo, 1993), which is an indication of high level of self medication similar to the observation made in this study. Folk medicine has been defined as consisting of alternative practices and therapies in the popular and folk sectors of healthcare that are used by members of a cultural minority group (Smitherman et al, 2005). However, this study was carried out in a black cultural majority group in Africa, indicating that, apart from folk medicine being inherited from forefathers, socioeconomic factors and cultural acceptability of whatever thing the people of Southeastern Nigeria use for treatment play an important role in their self medication habit.

In the rural communities of Southeastern Nigeria under study, there is a wide range of substances which used as folk remedies. Characteristically, there appears to be no specific drugs for specific ailments. Some substances used for the treatment of one ailment also feature in the treatment of other ailments (Table 2), depicting a confusing state of folk medicine in Africa. This could have arisen from the fact that, in Africa, folk medicine, values and perception are passed from generation to generation without modification through research. The folk remedies of the studied communities show a mixture of traditional substances such as herbs, lime, honey, palm kernel oil, etc., and modern industrial products such as medicated ointment, alum, antibiotics, etc. The industrial products have featured more prominently as remedies for most of the ailments. For instance, spots / pimples, eczema and diarrhoea, are respectively mostly treated with medicated ointments (54.9%), medicated ointment (38.8%) and antibiotics (23.9%). These industrial products, in addition to analgesic, eardrop, aspirin, etc., are over-the-counter (OTC) remedies. Some substances like kerosene used as remedies for sore throat...
(35.1%) and petrol for the treatment of whitlow (17.8%), are known to be health hazards (Mabie and Wunderink, 2003; Reed and Conradie, 1997; Bebarta and Dewitt, 2004). These add to the confusion associated with folk medicine in Africa.

It appears that the folk medicine profile of black communities in other parts of the world does not differ remarkably from that of the communities of rural Southeastern Nigeria. For instance, in some black communities in the United States of America, folk remedies such as herbs, food products, household items, cod liver oil, castor oil, etc., that are recommended by members of the lay community, are used in health care sectors (Smitherman et al, 2005). In the communities under study, substances like cold water, hot water and ashes, which appear to possess no medicinal values, are used as remedies, just as cold bath is believed to treat fever in some black communities in the United States (Smitherman et al, 2005). The confusing picture of folk medicine observed in this study also appears to prevail among the minority blacks in Southern Appalachia where sassafras tea, papaya juice, peppermint candy, chopped red pepper and onion, etc., are traditional remedies for ulcer; and liquor and honey, honey and lemon tea, lemon juice, etc., are remedies for cold, while cold bath is a remedy for fever (Crowder, 2001). This indicates that black folk medicine is a sociocultural practice inherited from the first black community on earth.

Based on the confusing picture of folk medicine revealed in this study, an attempt was made to classify the drugs accepted by respondents as remedies into six groups (Table 3). Herbal medicines and antibiotics have the widest applications as they are used as remedies for all the sixteen common illnesses identified in this study. 10.8% and 9.1% of respondents use herbal medicines and antibiotics respectively, for self medication. This indicates that herbal remedies are still most widely used in rural Africa. Another group of medicines consists of substances in the forms of solutions and/o pastes such as kerosene, petrol, alcohol, salt and sugar solution, tooth paste, glycerine, mentholatum, etc. Although 16.4% of respondents use medicines in this group, they were applied as remedies in only 93.75% of the common illnesses. The high level of use results from the types of illness which require remedies in the form of solution/paste. Examples of such ailments are eczema, conjunctivitis, stomachache earache, sore throat and wounds and cuts. The group, ointment, is the least widely used, although 16.2% of respondents accept using the group. The high percentage of respondents is from the fact that 58%, 19.6% and 21.8% of respondents apply ointment to spots/pimples, eczema, common cold and ringworm, respectively. The group, oils/sprays, consists of remedies such as castor oil, palm oil, palm kernel oil, olive oil, etc. These are used for treating both adults and infants. Even when this group has the least percent respondents (4.1%), it is used as a remedy for about 93.75% of the illnesses identified in this study. Remedies in this group, e.g., cod liver oil, castor oil and Senna spp. are widely used among blacks in America because they believe that these remedies are laxatives that can help them purge out impurities from the body through urine, the stool or the skin (Snow, 1983). The group classified as unorthodox (18.4% respondents), for the purpose of this study, consists of remedies which do not fall into any of the other groups. They are anything like ash, dusting powder, charcoal, black carbon, office pin, crayfish and salt, cold water, etc. The efficacy of some is not established even in folk medicine practice, although in a study among a black community in U.S.A., 43.3% respondents confirmed using cold water and alcohol to treat fever (Smitherman et al, 2005). However no relationship between the use of cold water to treat fever and the age or education of the caregiver has been observed (Smitherman et al, 2005). Some of the respondents confirmed that this form of treatment was handed over to them by their mothers, indicating a cultural practice.

Several factors were observed to influence self medication (or folk medication as long as it has a cultural base) in the study area. The people of the rural communities have little or no access to modern medical care. There is an uneven distribution and inadequate health facilities especially in primary health care (CR-SEEDS, 2005). Cross River State economic empowerment and development strategy, Cross River State, Nigeria. Those who still struggle to have adequate health care fail because of mismanagement of existing health centres. Essential drugs are never available in the rural communities. This does not agree with one of the findings of Uzochukwu and others (Uzochukwu et al, 2002). That an average of 35.4 essential drugs was available in the rural communities. That might apply to urban communities. Another factor is high level poverty. Sick ones in the communities have little or no access to modern medical care. There is an uneven distribution and inadequate health facilities especially in primary care. That an average of 35.4 essential drugs was available in the rural communities. That might apply to urban communities. Another factor is high level poverty. Sick ones in the communities have little or no access to modern medical care.
Lauwo, 1993; Ouma, 2007). Cultural system of medication is still adhered to in the rural areas as observed in this study. For instance, herbs are still strongly used for the treatment of various ailments. Although the cultural values of the communities were not fully investigated in this study, some respondents said that the herbs were used by their forefathers. Thus, they trust and rely on the herbs as remedies.

As a solution to the self medication problem of rural Africa, government must raise the level of health care in rural communities to the existing levels in urban centers through adequate budgetary provision for about 15 to 20 years. Secondly, they should be a conscious and honest effort by government to carry out poverty alleviation programmes in the rural areas. This can naturally remove barriers to accessibility to healthcare services (Ensor and Cooper, 2004), and eventually weaken the traditional folk medication with anything that has no medical value. Thirdly, effective education programme of the rural communities will help determine their health utilization (Ensor and Cooper, 2004) and the dangers of self medication. It has been observed in Tanzania that, with improved education and literacy, patients not only looks for the best health provider, but also the best facility for a particular ailment (Leonard et al, 2002). Fourthly, provision of infrastructure such as roads, will ease movement to medical centres. Finally, African academics should be encouraged to carry out research on the phytochemical properties of local herbs with a view to standardizing the dosages of such herbs. This is because the local herbs are likely to become an important factor in the healthcare system of African countries in the near future.

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