DRUGS STORED AT HOME FOR SELF-CARE AMONG ADULTS IN IBADAN SOUTH WEST LOCAL GOVERNMENT AREA OF OYO STATE, NIGERIA: IMPLICATIONS FOR DRUG USE EDUCATION

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ABSTRACT

Self – care is a set of actions taken by an individual to promote or protect his/her health or to aid recovery when ill. These actions often involve the use of drugs which are either unprescribed or leftovers from the ones earlier prescribed. However, the types of drugs commonly stored at home as well as factors that promote this phenomenon are unclear. The study aimed at determining the different types of drugs stored at home, factors influencing practice and the perceptions of dangers associated with this practice among male and female adults in Ibadan South – West Local Government Area of Oyo State, Nigeria.

The study was a descriptive cross – sectional survey. A multistage sampling technique was used for the selection of the respondents from randomly selected households. Data was collected using a pretested semi – structured questionnaire and an observational checklist on a sample of 408 respondents.

Result showed that a higher proportion of the respondents were female 275 (67.4%), married 268 (66.7%) and 71 (18.6%) had post – primary education with a mean age of 35.1years (SD ± 13 .52). A variety of drugs were stored at home by respondents for self – care. They include Septrin (23.0%), Flagyl (15.1%), Vitamin B-complex (9.0%), Paracetamol (8.6%) and Novalgin (6.5%). Most the drugs were purchased from Chemists 230 (65.9%), followed by Patent Medicine Shop 166 (46.4%), Government

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hospitals 63 (20.1%), Private hospitals 51 (15.2%) and itinerant drug peddlers 47 (14.0%).

Major health problems for which these drugs were used include headache 186 (67.6%), fever 180 (62.5%), pains 167 (57.0%) and stomachache 55 (27.9%). Most of these drugs were reportedly used without medical supervision or the doctor's prescription. The major factors found to promote drug storage at home were convenience 296 (86.3%), time 73 (29.3%), distance 65 (24.9%) and cost 41(15.8%). Furthermore, 308 (75.5%) of the respondents agreed that it is always good to keep to keep drugs at home, citing reasons such as emergency situations (33.9%), convenience (26.0%) and prevention of illness (11.5%). However, drug storage practice were not influenced by age (p = 0.476), education (p = 0.164) and sex (p = 0.117). Furthermore, twelve (3.1%) and 9(2.3%) of the respondents respectively agreed that all drugs that change in colour and which had expired should be used and not discarded, whole 68 (17.3%) and 42 (10.3%) of the respondents were undecided.

In conclusion, the study had shown that many adults store various types of drugs at home and used them for various ailments without medical supervision or doctors' prescription. Furthermore, positive attitudinal disposition towards drug storage at home was recorded. Education of the public on the dangers inherent in storing and using unprescribed drugs at home is strongly recommended.

Key words: Drug stored at home, Self-care, Adults, Drug use, Education

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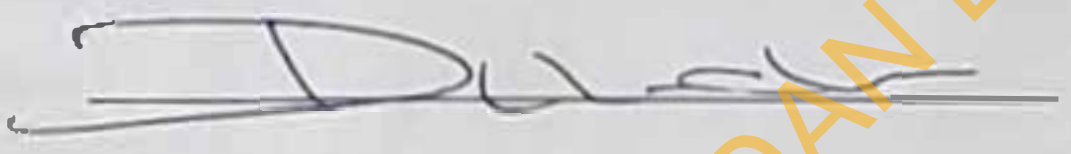
CERTIFICATION

I certify that this study was carried out by OLASOJI OLATOUN in the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Ibadan, Nigeria



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CHAPTER ONE

INTRODUCTION

Background

Self - Care is defined as those things that individuals do to deal with minor illness and injuries at home. This include preventing, detecting and treating illness and diseases (Carlson, 2003). According to the World Health Organization (WHO), self-care is what people do for themselves to establish and maintain health, prevent and deal with illness. Self - care is a broad concept encompassing hygiene (general and personal), nutrition (type and quality of food eaten), lifestyle (sporting activities, leisure etc), environmental factors (living condition, social habits, etc), socio-economic factors (income level, cultural beliefs) and self - medication (WHO, 1995).

The importance of self - care lies in the empowerment of the people with the potential benefits for protection of one's own health and that of the family (Jacobs, 1998).

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In the United States of America it was noted that over 80% of health problems are treated at home, while 70% of all visits to doctors for new problem have been termed unnecessary (Carlson, 2003). In Nigeria it was found that even in the urban city of Ibadan, more than 80% of the section of the city used self - care (Adeniyi and Ramakrishna, 1985) Self - care is practised by as much as 80% of people in industrialised countries while in poorer developing countries, it is regarded as a normal part of life (Brieger, 1986). It is therefore a universal practice (Adeniyi and Ramakrishna, 1985).

Self - medication can be defined as obtaining and consuming one (or more) drugs without the advice of a physician either for diagnosis, prescription of surveillance of the treatment (Monstatic, Bagheri, Geraud and Lapeyre-mestre, 1997). Also self - medication is explained as the process of administering by oneself any chemical substance which is considered to be a drug or not but excluding natural foods and water with a view to producing some changes in one's physical and mental well being (Adi 1975, Oshiname, 1992).

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Self - medication is a desirable health seeking practice provided there is adequate and correct guidance and direction to avoid misuse, abuse and other hazards that characterise uninformed medication (Olatunde 1995, WHO 1988).

In Nigeria the provision of drugs is the sole responsibility of the pharmacist but the patent medicine vendors are complimentary to the pharmacist especially in the rural areas in line with the concept of rural pharmacy of Pharmaceutical Society of Nigeria. They engage in trading or selling of all sorts of pharmaceutical products including over the counter drugs (OTC), prescription drugs like antibiotics and controlled drugs. (Nigerian Journal of Pharmacy, 2002). The releasing of prescription drugs to over - the counter (OTC) has been a trend in many western countries (Sihvo, Hemminki and Ahonen, 1999). In Britain the sales of over the counter medicines are now equivalent to a third of the National Health Service bill; government throughout the world see self medication as a way of shifting some of the cost of healthcare onto consumers (Blehkinsopp and Bradley, 1996).

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Self medication with OTC drugs was found to be highly prevalent in Zimbabwe (Raynal, 1985). According to a study by Snow, Peshu, Forster, Mwenesi and Marsh (1992) it was found that 97% of mothers in Kenya treated their children with over the - counter (OTC) drugs from retail outlets; while in Togo, 83% of mothers used similar treatment procedures.

In the United States the health care system has made it possible for patient to treat numerous ailment with the use of over the counter medications (Jacobs, 1998). In France self - medication account for around 5 to 10 percent of drug sales (Maison, Guillemot, Vauzelle - Kervedan, Balkau, Thibult and Eschwege, 1998). However, there is still paucity of data on community level as self - medication state in Nigeria, while information on the types of drugs used at home for self - medication is hardly available.

Statement of the Problem

Drugs are stored at home for self - care due to various reasons like convenience, cost, distance, time, prevention of illness and emergency use. The use, misuse and abuse of these medications have

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resulted in perceived side - effects. In Nigeria it has been suggested that 60% - 70% of fake, substandard, adulterated and counterfeit drugs are perpetuated by the patient medicine vendors while other sources accounts for the remaining 30 - 40%. The reported consequence of these situations include therapeutic failure, death due to kidney failure and liver failure resulting from the consumption of expired drugs (Nigerian Journal of Pharmacy 2002).

In the United States of America, a research conducted on the use of switched prescription drugs to over the - counter drugs indicated that many consumers viewed the switching from prescription drugs to over the counter status as being more effective and are using these products in a manner inconsistent with their labelling (Schulke, 1998). According to National Agency for Food Drugs Administration and Control (NAFDAC) the lack of effective control of the drug distribution network in the Nigeria has made it easy to distribute fake - drugs once they enter the market. The various

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illegal drug markets are reported to be in Lagos, Aba, Onisha, Kano and Ibadan (UNICEF, 2001).

Drugs side - effect is one of the problems encountered with drugs stored at home. A study conducted by (Monstrastruc, et al 1998) in France noted that the side - effects of drugs taken by self - medication are quite frequent. They include neurological (32%: mainly headache, vertigo, agitation etc) dermatological (18% mainly allergy) hepatic (10%) and digestive (7% mainly diarrhoea). There were 10 cases of anaphylactic shock and/or Quincke oedema. The drugs most frequently involved were analgesics and non-steroidal anti-inflammatory drugs (147 cases), neuropsychotropic drugs (7 cases), dermatological drugs (6 cases) or Otorhinolaryngological drugs 6 cases). "Serious" side - effects occurred in 40% of the cases including 3 deaths, "Severe" side effects were observed in 77% of the reports.

According to study by Marsh, (1999) most early treatment for fever occur through self medication with drugs bought from shop. Most times, antimalarial drugs are usually taken at sub-optimal doses

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or an incomplete course of medication (Demming, 1989). Lack of information to community members on the dangers of over - the counter drug use has led to widespread ineffective treatment of fever, increased risk of drug toxicity and accelerated drug resistance (Marsh, 1999). Accidental poisonings have resulted from storage of home drugs, which are not used completely during the intended period (Hussar, 1990). In addition, stock - piled medications have been used to commit suicide. Some individuals even use medication that has been prescribed for relatives or friends. Drug non - compliance is another problem encountered with drug stored at home. It is manifested by errors of dosage, omission of doses, errors in time of administration of the drug and premature discontinuation of the drug (Hussar, 1990). The last two frequently occur with antibiotics in situations where they are inappropriately administered with meals (food affect absorption of some antibiotics) or stop the medication because they feel better. Many reports indicate that at least one - third of all patient fail to comply with instructions (Hussar, 1990)

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Justification of the Study

Several research works have been done all over the world and even in Nigeria on self care and not drug stored at home for self care.

The World Health Organisation noted that most health problems earlier detected are usually managed at home (WHO, 1995). There is therefore need to store drugs at home for self care. The management of illness at home usually facilitates individuals to seek information from experts (Doctors, Pharmacists, Nurses) about their health status in order to help them make appropriate decision in the management of illness (Blehkinsopp, et al 1996). The justification of this study lies in the need to document self medication practices, knowledge and perception among adults in Ibadan South West Local Government Area of Oyo State. In addition, the study has potential for yielding information on drug abuse and drug side effects among adults.

The findings of the study would be invaluable in guiding formulation of policies on drug use education in Oyo State.

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Research Questions

Based on the problem statement and justification the following questions would be answered by this research.

1. What are the reasons why adults store drugs at home for self-care?
2. What are the different aliments for which these drugs are used?
3. What types of drugs are used for these ailments?
4. Do adults seek health care services or workers advice before buying and storing these drugs for self-care?
5. What are the factors promoting drug storage at home?
6. What are the socio- demographic characteristics that influence self- medication?
7. What are the adult perception about the dangers associated with self-medication?

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Objectives of the Study

The broad objective of the study is to determine the different types of drugs stored and used at home for self-care in Ibadan, South West Local Government Area of Oyo State.

The specific objectives are to:

1. Determine different types of drugs stored and used at home for self-care.

2. Document the reasons for drug storage at home

3. Document the sources of drugs stored at home

4. Identify adult perceptions about the dangers associated with drugs stored and used at home for self-care.

5. Document drug side - effect in respect of usage of drugs stored at home

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CHAPTER TWO

LITERATURE REVIEW

DRUGS

Drugs are preparations of vegetable, animal or mineral origin/or any admixture these of which is used for internal or external application to the human body in the treatment of disease (Pharm Law Cap 535,1990). In Nigeria today there are two broad categories of drugs: those prepared and dispensed in accordance with traditional cultural practices and those produced and distributed under the auspices of western or allopathic medical sciences. Among the latter are again two broad categories of drugs those described as prescription drugs and those termed patent or proprietary medicine (Pharm. Law Cap 535, 1990).

Prescription drugs are under full control of the medical and pharmacy professional and these include drugs whose general widespread or frequent use of by population could pose harm. They include those containing opiate derivatives, antibiotics, valium,

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ephedrine, phenobarbitone and others to which part 1, 2 and 3 of the first schedule of the pharmacy law apply. These drug could be termed poisonous, additive or dangerous if used indiscriminately. Pharmacy Law in Nigeria and most countries dictate that these medicines may be prescribed only by a physician and dispensed by a trained pharmacist. Pharmacist are granted license "A" which empowers them to market both prescription and non-prescription drugs as spelt out in the pharmacy law (Pharm - Law Cap. 525 1990). Even with the above restrictions, there are still many medicinal preparations available for purchasing by the general public that do not require some degree of professional or legal surveillance. These are patent and/or proprietary medicine. This means any medicine held out by advertisement label or otherwise in writing as efficacious for the prevention, cure or relief of any malady, ailment, infirmity or disorder affecting human beings and

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(a) Which is sold under a trade name or trade mark to the use of which any person has or claims or purports to have any exclusive right or.

(b) Of which any person has or claims or purports to have the exclusive right of manufacture or for the making of which any person has or claims or purports to have any secret process or protection by letters patent (Pharm Law Cap 535 1990).

Sources of Drugs

In Nigeria, there are four major sources of drugs name'y community pharmacies/chemists, hospital pharmacies, patent medicine vendors, and itinerant drug peddlers.

Community Pharmacies

Community pharmacy practice is one of the two arms of pharmacy practice which comes in contact with the public most, the other being hospital pharmacy practice (Akerele, 1990). Community Pharmacies or Chemists are drug procurement outlets that are:

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- Owned by individuals or corporate bodies or organizations.
- Established for profit making venture and duely registered by the government agencies involved in drug regulation and control.
- Manned by trained and registered pharmacist.
- Allowed by law to stock and dispense "Prescription only medicines" (POM) and controlled drugs.
- Retail or wholesale outlets.
- Prescription from both the government hospital and private clinics are serviced.
- Established to serve the community in which they are located by providing pharmaceutical care to the public.
- The services rendered to the community include dispensing, retail and wholesale of medicines and other pharmaceutical products also provision of drug information and counselling of the patients.

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Community pharmacy practice in Nigeria partially fits into the total pharmacy care model, which is the delivery of a comprehensive range of services that result in the maximum possible contribution to the nations population within the limits of the health care delivery structure (Holland and Nimmo, 1999). Total Pharmacy Care (TPC) combines five existing practice model, drug information, self - care, clinical pharmacy, pharmaceutical care and distribution. Pharmaceutical Care (PC) is defined very simply as the process of finding and solving / or avoiding drug therapy problems and some of the services include suggestion of drug and or non - drug therapy as needed, referring the patient to another health - care provider, patient education and provision of disease state management service (Mc Donugh, 1998).

Hospital Pharmacies

Hospital pharmacy is another arm of pharmacy practice, which comes in contact with the public most (Akerele, 1990). It is also perhaps the oldest pharmacy practice (Eniojukan, 1997). Hospital

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pharmacies are established in government hospital, private hospital and clinics. They are:

- Manned by trained and registered pharmaceutical personnels.
- Allowed to stock all sorts of drugs and poisons.
- Opened for normal services and emergency services.
- The prescriptions of the hospital alone are serviced in the pharmacy.
- The services rendered to the hospital include, dispensing of drugs and other pharmaceutical products.
- Provision of ward supplies, which include provision of drugs and other pharmaceutical products.
- Provision of drug information and counselling to the patients.

In the hospital the pharmacist has a shared responsibility as a member of the health - care team. He/she must apply his/her

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knowledge in the ways that contribute positively to people's health care and ultimately to the welfare of the society (Jaiyesimi, 1992). The outpatients contribute over seventy percent of the total patient load (Jaiyesimi, 1992). Patient education and counselling especially at the point of handing over prescribed drugs must therefore be part of the services rendered in a secondary or tertiary hospital. The patient must be advised on proper methods of using, handling and storing drugs (Obadeyi, 1988, Jaiyesimi, 1992, Oguntana 1956).

Patent Medicine Vendors

In Nigeria a definition of Patent Medicine Vendors can be implied from Pharmacy Law as a person duly licensed by a state Ministry of Health to sell patent and proprietary medicine (Pharmacy Law Cap 535, 1990). Law requires that patent medicine sellers be licensed and there are provisions for grades of licenses. The licenses are of the categories B and C. While some have the licence C alone, some other have B and C. License B permits sale of medicines and selected 'poisons' such as disinfectants (Deltol, Izal, lysol) while

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license C allows sellers to market only proprietary or patent medicines. These medicines are pre-packaged preparations. Patent and proprietary medicines are also known as over - the - counter (OTC) drugs. They include analgesics, antacids, antidiarrhoea, laxatives, cough medication, cold medication, throat reliefs, vitamin complex, vitamins and minerals, others are smoking cessation products, dermatological products, mouth rinses, disinfectants, fungicides and tonics (OTC DIVISION). These medicines are pre-packaged preparations, sold under trade names and considered relatively safe for use by the general public (e.g. cough mixtures and some pain relievers) salcylicacid, paracetamol, chloroquine and cough syrups (Pharmacy Law Cap 535, 1990).

According to a study by vanderGeest in Cameroun 1987 which distinguishes five functional categories of patent medicine vendors in southern cameroun:

- General Shop keepers who also sell patent medicine.

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- Traders in the periodic markets who sell medicines along with other merchandise.

- Drug peddlers who go from village to village.

- Merchants who specialize in the sale of medicines.

- Health workers who sell the medicines obtained from their institutions (VanderGeest, 1987).

Furthermore a study conducted by Oshiname and Brieger, (1992), in Igbo-ora, Nigeria showed that both primary and secondary school leavers are among licensed Patient Medicine Vendors. Some learned the work as apprentices, while others had worked in the formal health sector as pharmacy technicians, clerks and aids (Abiola, Adeyinka, Alhassan, Famuyide, Nwaorgu, Olojohungbe and Uche, 1983). Most Patient Medicine Vendors have shop in towns, often located near markets or busy intersections many sell small provisions like tinned milk and detergent powder, but the main commodity in their shops is medicine. Just as many learned the trade through

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apprenticeship, many also left their shops in the hands of their own apprentices especially since they often engage in farming and other businesses. (Akinde, Efliong, Obiejosie, Ogun, Oloye and Temiye, 1982)

Itinerant Drug Peddlers

Itinerant drug peddlers are mainly market men and women, street traders and hawkers who generally have access and sell potent drugs and poisons openly. According to a study by Brieger, Ramakrishna, Akpovi and Adeniyi (1988) in Ibarapa, Oyo State of Nigeria, medicine peddlers on motorcycle were found to provide the bulk of western health care to remote hamlets. They also set up shops at periodic farm markets where quantities sold relate more to ability to pay than to any medical regimen. In Nigeria, they have drug markets in virtually all parts of Nigeria. These markets which are non recognized and registered are manned by itinerant drug traders, they import stock, distribute and sometimes manufacture and package all sorts of drugs (Nigeria Journal of Pharmacy, 2000). In a study

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conducted by Waddington, (1989) in Ghana due to the high cost of drugs in government facilities patients would self - medicate at local shops and market sellers since they could obtain small amounts of drugs there which were cheaper than the charges in health services. In Senegal most households choose to self - medicate with drugs bought from market sellers since the average prescription from a dispensary cost 5,200 CFAF and from a private doctor as much as 1400 CFAF but most household received less that 30,000 CFAF per month (Fassin, 1986). In a related study conducted in Congo by (Talam, Samba and Meyen, 1995) drugs are supplied private drug store (67.9%) and street vendors (19.1%).

Drug Abuse

Drug abuse as been defined as the consumption of a drug apart from medical need or in unnecessary quantities (Gilles, 1991). The harmful consequences of abuse include not only dependence but traffic accident and antisocial behaviour. Drug dependence is always psychological and can in addition be physical. Psychological

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dependence is a condition in which a drug produce a feeling of satisfaction and in which there is a psychic need for periodic or continuous administration of the drug to give pleasure or to avoid discomfort. Physical dependence is a state that manifests itself by intense physical disturbances when the administration of the drug is suspended (Gilles, 1991). Drugs causing dependence are: opiates cocaine, barbiturates, gluthetimide, methaqualone, benzodiazepines - (valium, nitrazepam, lithium), hallucinogenic, drugs - (mescaline, amphetamine, cannabis, d-lysergic acid diethylamide (LSD), petrol and other solvents), alcohol, nicotine, caffeine and kolanuts, (Gilles et al 1991). Amphetamines, cocaine, opium, morphine, heroin have negative health consequences when abused Dusek and Girdano (1989) and Moronkola (1991) reported that amphetamine causes stroke heart failure, hyper-sexuality, malnutrition, unconsciousness, chest pains, unstable emotional status, paranoia and acute psychotic reaction, aggressiveness or violence. The prolonged use of cocaine or even large quantities may lead to confusion, anxiety and paranoid delusions. Narcotic analgesics such as opium and it's derivatives

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morphine, heroin codeine which are under strict medical supervision are used to treat acute pain and cough (Nwankwo 1988, Moronkola, 1991). The side effects of narcotics include drowsiness, nausea, vomiting, convulsion, shallow breathing and even death (Macauley 1991).

According to a study conducted on the self - medication hypothesis of substance use disorders, it was found that individuals discover the specific actions or effects of each class of drug relieve or change a range of painful affect states. Substance of abuse help such individuals to relieve painful effects or to experience or control emotion when they are upset or confusing. Self - medication factors occur in a context of self- regulation vulnerabilities primarily difficulties in regulating effects, self - esteem relationships and self - care. Persons with substance use disorder suffer in the extreme with their feeling, either being overwhelmed with painful affects or seeming not to feel their emotions at all (Khantzian, 1997). Drug abuse has been thought to cause depression or serve as a form of self -

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medication for depression. A study for evaluation of comorbid drug dependence was done in the USA by Abraham and Fava, (1999) on three hundred and seventy - five patients with major depressive disorder which were selected from the psychiatric outpatient department of a metropolitan teaching hospital and grouped between homogeneous classes of drug dependence including alcohol, cannabis, cocaine, amphetamine, LSD, hypnosedative, opiate and polysubstance use. The study was aimed at determining the percentage of depressed patient with each specific type of drug abuse, their age at onset of depression and onset of specific drug abuse and the mean number of lifetime depressive episodes for each patient. It was found that alcohol dependence followed the onset of first - life depression by 4.7years (P=. 02 two tailed). Among polydrug dependent patients, each drug abused followed the onset of depression, except for LSD, which coincided, with the onset of depression. Among polydrug users, cocaine dependence occurred 6.8 years after the first major depressive episode (P=.007) and alcohol dependence occurred 6.8 years after the onset of depression (P=.007), opiate and sedative users

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had the least number of lifetime depressive episodes (P=3.7) and LSD and cocaine users had the greatest number (P=12.2).

Drug abuse of alcohol, opiates and benzodiazepines are among drug substances of addiction, which health care givers suffer at a rate similar or perhaps higher than that of the general population according to available studies done in the United State. Anaesthesiologists tend to have the highest incidence of addiction. Among the risk factors identified are self - medication, stress at work and easy access to drugs (Yagucz and Corbalan, 1999).

In Nigeria one of the consequences of increased exposure to western influence has been the spread of drug use among young people over the last two decades. There is now a buoyant consumer market for home-grown cannabis, and a smaller market for heroin and cocaine within the country (Klein, 2001). Furthermore in a study to determine the frequency and pattern of drug abuse among college students of Eruwa, it was found that drugs commonly used and or abused are non - narcotic analgesics or antipyretics (particularly

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aspirin), chloroquine, coffee, cough mixtures and kolanuts. Valuim, tobacco and hallucinogens were also among the drugs commonly abused, though at relatively lower level (Abo, Fajana, Odusina, Ogunyemi and Onyamaon. 1982). In another related study to determine the prevalence of a wide range of risk - taking behaviour among high - school students in Cape Peninsula, South Africa, on a sample of 7,340 students from 16 schools in the three major education departments. Cannabis was the illicit drug most widely used; 7.5% had smoked cannabis, and 2.4% had done so in the previous 7days. A small subgroup (11.6%) of students had smoked cannabis and methaqualone (Mandrax) together. Reported lifetime use of injectable drugs was 0.5% and 10.9% had sniffed solvents, 2.6% having done so in the previous 7days (Flisher, Kiervogel, Chalton, Leger and Robertson, 1993).

Illness Behaviour

Illness behaviour consists of those actions people take when they feel unwell in order to determine the nature of their sickness and to seek

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help. Several factors are involved including illness recognition, awareness of sources of help, medication knowledge types and dosages and skills in administering the medication in the correct dosage (Tanner and Vlassoff, 1998, Brieger, 1998).

In most cases, the early management of illness usually begins at home. A study conducted by Snow et al (1992) on the treatment of childhood malaria in Kenya showed that 97% of Kenya mothers treated their children for malaria with over the counter drugs. It is only when illness has failed to respond to several days of treatment with drugs that the mother may visit a health facility. According to Nyamongo (1992) patients are more likely to start treatment at home as they wait for a time during which they observe their progress.

The World Health Organisation (WHO) noted that most health problems could be much earlier and better managed at home (WHO 1983). Several studies have shown that illness recognition determines treatment response for example, in the rural areas of Ibarapa Central Local Government Area (LGA) of Oyo State, Nigeria, people view

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malaria and febrile convulsion as completely separate conditions, with the former being caused by heat and the sun and the latter by cold, malaria is perceived as a less serious condition, while convulsion prompt an immediate treatment response, often with dangerous herbal concoctions (Ramakrishna, Brieger and Adeniyi, 1989). A study by Rayna et al (1995) has shown that the majority of early treatments for childhood fever are given at home.

According to a study conducted by Brieger, Adekunle and Adesope (1996) on the illness behaviour in guinea worm disease in Oyo State, Nigeria, treatment is primarily home remedy. Only 3% of cases are seen at clinic. Oil especially palm oil is expected to soothe the pain and itching experienced at the site of the ulcer. Strong smelling herbs are ground and mixed with the oil to cause the worm to come out sooner. Local treatment usually consists of two components oil and herb.

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Home Drug Use Behaviour

As described in chapter one, self medication is defined as obtaining and consuming one (or more drugs without the advice of a physician either for diagnosis, prescription or surveillance of the treatment (Monstastruc, et al 1997). Studies on home drug use behaviour across Africa have shown that in Kenya, the most early treatment for fever occur through self-medication with shop - bought drugs. Lack of information to community members on over the counter drug use has led to widespread ineffective, treatment of fever increased risk of drug toxicity and accelerating drug resistance (Marsh, 1999). A cross - sectional study in Congo was carried out involving 390 children under five years who had suffered fever. Chloroquine is the most used drug at home (66%) and amodiaquine (31.5%) in health centres.

A study conducted in Ethiopia, in which 434 sick people were interviewed among the Moslem Oromo in East Ethiopia, the majority of these (59%) used traditional home medicines, 2.5% went to

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traditional healers, 10% visited a modern health centre and 6% went to drug vendors, traders who sell both traditional and modern medicines (Buschken, et al undated). Furthermore in a study conducted in Burkina-Faso, the self - care of minor aliments provided by family members decreased their utilization pattern of health facilities. People therefore decided not to attend modern health facilities and traditional healers in order to seek for care since they can manage most ailments in their homes (Develay, et al 1996).

Studies on home drug use behaviour across Asia have shown that in Vietnam a household study on drug use, persons were selected at random from nine provinces. The results showed that self - medication is common especially n the northern provinces and that drug sellers play an important role in drug use particularly in the southern provinces. The study determined that among the drug used irrationally are antibiotics and corticosteroids and concluded that drug market management, advertisement and health education may be the main influence on drug use in the community (Tap and Thuc, 1996).

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Furthermore a survey conducted in peninsular, Malaysia indicates a market tendency among the general population to treat minor aliment by self-medication with over the counter drugs and/or traditional medicines. The use of over - the – counter drugs appears to be favoured for skin conditions, general health - care aches and pains and problems affecting the eyes, ear, mouth, gastrointestinal tract and respiratory tract (Mohammed, 1996).

A survey conducted in Hong-Kong, on five hundred and sixty - three university students on the practice of self – medication, which was found to be very prevalent (94.0%) found the most commonly used items included remedies for cough, cold, antipyretics. Topical preparation and Chinese herbal medicines were also frequently consumed. Self - medication items were mostly obtained from medicine cabinets and pharmacy shop (not necessarily staffed by a registered pharmacist) and they also relied heavily on family members and illness experience. This study shows that the concept of self medication is well established among these university students as they

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recognised that minor illness could be cared for without seeing a doctor (Lee and Luk, 1995).

In a study done in Brazil, South America as regards self-medication and determination of it's prevalence in the population. 69.9% used medicines and of those 76.1% were self - medicated. Headache (28.8%) was the main complaint among the self - medicated group. Acetylsalicylic acid was the most frequently used medicines (25.4%). As regards the drug utilized, 51.2% of the use's had received a recommendation from a third party and 51.7% used old prescriptions given in previous consultations (Vilarino, Soares, Silveira, Rodel, Bortals and Lemos, 1998). Furthermore in another study conducted in Brazil, to characterize self - medication practices by analyzing drugs sought by consumers in pharmacies without a physicians prescription. The drugs most requested were analgesics (17.3%), nasal decongestants (7.0%) antirrheumatic-anti-inflammatory drugs (5.6%) and systemic anti - infective drugs (5.6%). (Arrais, Coelho, Batista, Carvalho, Righi and Arnau, 1997).

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In a study conducted in Mexico, on the pattern of antibiotics use in a periurban community in which individuals were interviewed, 425 (5%) said they had used one antimicrobal in the preceding two weeks and antibiotics were in the majority (29%) of the drugs. The main perceived reasons for the drug use were acute respiratory tract ailments and gastroenteritis. Interviewees reported that antibiotics therapy was given in 27% of respiratory diseases and in 37% of all diarrhoea episodes. The drugs most commonly reported were penicillins, erythromycin, metronidazole, neomycin, cotrimoxaxole and tetracyclines. Approximately two thirds of individuals using an antibiotics said they had used it less than 5 days and 72% of the purchase were for insufficient quantities of drugs. This study shows that antibiotics are frequently misused (Calva and Bojalil, 1996).

In a study conducted in New - York, United States of America, on 300 women on the use of complementary and alternative medicine More than half the sample (150) had used a complementary and alternative medicine treatment or remedy and 40% had visited a

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complementary and alternative medicine practitioner. Among users half had used only one of complementary and alternative medicine remedies.

- Medicinal tea, homeopathic remedies, herbs and vitamins.
- Yoga meditation, spiritual practices and
- Manual therapies including chiropractic, massage and acupressure.

Approximately one third had used two and 16% used all three. The category of complementary and alternative medicine used most often were medicinal tea (herbs) vitamins, the practitioners visited most frequently were chiropractors (18%) and nutritionist (17%) and approximately one third of all treatments used were rated " very effective" by users (Factor et al 2001). A case report was made of an European (German) who had severe anaemia after ingestion of several ayurvedic drugs, obtained during a trip to India. Laboratory findings showed high blood lead concentrations, an increased urinary lead concentration and an increase urinary excretion of delta

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aminolaevulinic acid. Also, slightly increased concentration of arsenic and silver were found. It should be noted that self- medication worth drugs from uncontrolled sources increases the risk of drug induced poisoning (Spriewald, Rascu, Schaller, Angerer kalden Harrer, 1999).

Studies on home drug use in Nigeria, showed that a study conducted in Igbo-Ora, Oyo State of Nigeria, to determine the medicine people keep at home involving 294 families, drugs implicated included chloroquine used by (78.6%), panadol, paracetamol, phensic, aspirin, multivite and phenergan. Some of the drugs abused, misused or stored at home were noted to have been purchased from the patent medicine sellers or itinerant medicine peddlers by the aforementioned researchers. Some of these drugs claimed to have been obtained from the patent medicine sellers are beyond the legal limits of the patent medicine vendor's licence awarded them. These were ampicillin, valium, hallucinogen, phenergan and diethylcarbainazine citrate which are outside the scope

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of operation dictated by the Pharmacy Law Oshiname, et al (1991). In a study to determine the management of diarrhoea by mothers in Enugu State, Nigeria. The home drugs used were mainly antimicrobial, antimalarial, antacid, analgesic and some local herbal preparation (21%). The results of the study showed the evidence of unnecessary use of drugs and ignorance about their potential adverse effects. Ene-obong et al (2000).

Furthermore in a study conducted in Idere, Oyo State of Nigeria using total tablets recorded on receipts between 1986 and 1993 the grand totals revealed that aspirin (38%) and paracetamol (28%) were most often requested. The low demand for chloroquine (4.5%) may not be unconnected with community perceptions that this drug does not really remove malaria from the body like indigenous preparation. The high large amount of analgesics consumed in Idere showed that the people predominantly farmers suffered from muscular aches and pains (Ramakrishina, 1989). Furthermore in a study conducted to describe drug prescribing practices in Lagos State health facilities,

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Lagos, Nigeria. The average no of drugs ±. SEM prescribed in the hospital (prospective) was 3.5 ± 024 whereas for the retrospective it was 3.6 ± 0.12. The average number of drug prescribed in the health centre / prospective was 4.0 ± 0.22 whereas for the retrospective it was 4.2 ± 0.28. The implication of this study shows that prescribers in health centre tended to use more drugs and more antibiotics than hospital prescribers (Abiose, et al 1994).

In a similar study carried out at Ayete, apart from analgesics and antimalarials usually stored at home other drugs found to be community kept at home for self-care were ampicillin and diethylcarbamazine citrate. The result of the study showed that the people used antibiotics and diethylcarbamazine citrate to treat infections (Bricger, et al 1986, Oshiname, 1991).

Factors Influencing Home Drug Use

There are many factors influencing home drug use in our community, based on the literature review, these factors were inaccessibility to health care facility, lack of health personnels,

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unavailability of drugs at government health facilities, convenience of drug procurement at chemists and patent medicine shop drugs, introduction of users fees, poverty associated with low- socio-economic status and cultural beliefs.

Inaccessibility to health - care facility is a factor influencing home drug use. The Federal Ministry of Health (FMOH) also stated that only (10%) of Nigeria's villages are currently provided with health facilities (Abel Smith, et al 1989) and the vast majority of Nigerian live in rural areas far from the "functioning" health establishment (Federal Office of statistics, 1991). Furthermore many of the rural population and some urban dwellers rely on traditional medical practice for health care. Traditional medical practice is also observed in slums and the deprived areas of urban centres (Nigerian Journal of pharmacy, 2000).

Furthermore according to a study conducted by Omotade, Kayode, Oladepo, Dare and Adeyemo, (1994) on the perception and local management pattern of diarrhoea diseases in South - West

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Nigeria, 22% of diarrhoea cases were on the no treatment group but if complications occur at night or on a weekend, the possibility of securing a means of transport or the affordability becomes very important even at the least of times when industrial/political crisis does not occur.

In Ghana, only (60%) the total population and (45%) of the rural population have access to clinic or hospital based health service, which have influenced home drug use Grant, (1990). A study conducted in Bangladesh noted that the government healthcare system remains a very minor source of health care for rural households. The availability of registered physician is scarce in rural areas and the majority of people have to depend on pharmacy salespersons, quacks and herbal or spiritual healers. In addition, there are also unqualified village 'Doctors' who do not own a pharmacy shop but provide written prescription and in addition self-medication is common (Roy, 1997).

Furthermore a study conducted to evaluate the pattern of self medication in Latin American countries, consumers were interviewed,

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from pharmacies in 11 study areas in six countries. They had purchased 10,569 pharmaceutical products. Analgesic (16.8%) were the leading group of drugs, followed by antibiotics (7.4%), anti-inflammatory and anti rheumatic products (5.9%) and vitamins (5.1%). Consumers interviewed purchased relatively high number of cardiovascular drugs 494 (5%) and drugs that act on the central nervous system 256 (2.4%). Only 34% of dispensed drugs had an approved over the counter status, less restrictive criteria suggest that 24% should have been dispensed on medical prescription. The relatively high proportion of drugs dispensed without medical prescription that nevertheless need medical follow-up is probably attributable to difficult access to medical-care (Anonymous).

Lack of health personnels is another factor influencing home drug use in Nigeria. According to the Pharmacists Council of Nigeria it is estimated that there are 8,500 registered pharmacist in the country and about another 3,500 practising abroad. This makes a total of 12,000 pharmacist with a ratio of 1 pharmacist to 1,000 people. This

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is below the World Health Organization recommendation (Nigerian Journal of Pharmacy 2002). According to data provided by the National Health Information System in Nigeria, it is estimated that there are 14,000 Nigerian doctors practising within the country while over 28,000 Nigerian doctors abroad, this amount to 12 doctors per 100,000 population, a ratio far lower than any other region of the world (UNICEF, 2001). As a result of many factors, which are specialization and maldistribution of resources, there continues to be shortages of health personnel in spite of increases in the number of different health professional trained (Abel Smith, et al 1989).

Low wages and salaries, poor conditions of services and minimal opportunities for staff development, largely account for the low level of motivation and staff attrition in the public health sector. A large number of skilled personnel have left the country in the past two decades. Nigerian pharmacists, doctors, radiologists, dentists, nurses and other qualified medical personnels (UNICEF, 2001).

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There are shortages of physician in Ghana there were 9625 people per physician. The average doctor in a rural health centre see 60 - 80 outpatients per day, in addition to inpatient and operating room responsibilities (Osei, 1989)

Unavailability of drugs at government health facilities is a factor influencing home drug use. Drugs are used in curing diseases, relieving symptoms and alleviating suffering which makes them indispensable for good health- care (Essential Drug List, 1996). The selection of essential drugs to meet the health needs of the population provides a rational basis not only for procurement at the national level but also for establishment and meeting of drug requirement at different levels within the health- care system. Nigeria having accepted the Alma Ata declaration of "Health for All" by the 2000 and beyond, making health care accessible to the entire population has become a major concern of government and primary health care is the key to attaining it (Essential Drug List, 1996). In September 1987 in Bamako Mali African health ministers adopted what has become

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known as the Bamako Initiative. The aim of the project is essentially to provide drugs as aids. By the implementation of drug charges at the primary level this hoped that operational cost and in time whole community health programme may be funded (Akin 1987, UNICEF 2001). In keeping with primary health care emphasis on community participating, one approach to providing drugs is the drug revolving fund managed by community members and their volunteer community health workers. The essential drugs are often routed through relatively inefficient government structures before reaching the community health workers in the community thus creating problems of regular supplies and timely distribution as noted in Idere, area of Oyo State, Nigeria (Brieger, Oshiname and Ganiyu, 1994). Unfortunately the general picture for government health services has been chronic drug shortages (Engmann 1983, Vogel, 1989). One nation-wide study of a small sample of LGA - Level PHC facilities in each of the six geo political zones found that while 89% of he local government stores had essential drugs only 42% has them continually. In other words, over half experienced the "Out of Stock syndrome".

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Numerous factors have contributed to the short comings in supplies of essential drugs. Exaggerated dependency on donors carried inherent risk of unsustainability (UNICEF, 2001).

Convenience of drug procurement at chemist and patent medicine shop is another factor influencing home drug use. In a study conducted in Zimbabwe reasons people gave for patronizing the stores include the lack of queues, the convenient late opening hours of the stores, a suspicion against free things including drugs, their dislike of being asked questions or being physically examined and the generally more friendly and helpful attitude of the shopkeepers (Raymal, 1985). In Nigerian, favourable opening hours, shorter waiting times, the ability to negotiate payments of fees in instalment or in kind and the prompt availability of drugs have made private medial care the providers of care (UNICEF, 2001).

People with malaria self medicate usually because it is convenient, in a study conducted by Mukubalo, (1992) in two remote area in Northern Zambia on home management of malaria found that

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convenience was an important factor, one reason people cited for keeping chloroquine at home was to avoid the long queues at the health centre and to avoid making a journey to the clinic at night. Furthe more in another related study conducted by Snow, et al (1992) on the treatment of malaria in Kenya, mothers typically have to face long queues at clinics before being attended to by a medical auxiliary who will usually give presumptive treatment for febrile episodes with chloro juine, an antipyretic and sometimes antibiotics.

Effectiveness in terms of reduced waiting time, access to doctors upon arrival for has also found to influence utilization of public health facilities (Adajuyigbe, 1980). Furthermore, a study carried out in Trinidad and Tobago in which approximately 74% of the interviewees numbering 1451 mentioned that the greatest need for improvement were perceived to be in pharmacists and doctors' services with particular references to waiting time with the doctors (Singh Haqq, Mustapha, 1999).

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A study conducted to identify factors responsible for poor utilization of PHC services in a rural community in Nigeria, one of the major factors adduced is the wasting of patients' time at the health facilities (Katung, 2001). In Nigeria, government health facilities often do not maintain clinic hours that are convenient for the population even when drugs are available. According to a study by (Abokede, et al 1983) the available public health care institutions open daily only in the morning and afternoon from Monday to Friday when most people in the Igboora who predominantly farmers and traders are either away on their farms or in their trading stores. Moreover these public health institutions have regimented practices requiring patients to pass through several time consuming procedures before being attended to or treated, it has been pointed out that this is one of the reasons why people under-utilize the only formal public health institutions that offers both primary and secondary health care services.

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A study conducted by Osei (1989) in Ghana, since the chemist shop provided an inexpensive medical service than clinics medical for treatment they were involved in the majority of drug sales. According to Foster (1991) people with malaria self – medicate because it is more convenient than seeking care from formal health services.

Distance of health facilities is another factor influencing home drug use, (Adajuyigbe, 1980) majority of consumers take consideration distance of health facilities to their houses or place of work before choosing which health facilities to be patronizing Shannon, et al (1969) noted that health facilities that are far from home are not likely to be considered. Proximity of health facility to consumers home encouraged patronage. Weiss, et al (1970) in his study noted that patronage of medical establishment is affected by distance since consumers usually patronize health facilities that are nearer to their homes. In study done in Ethiopia on the management of Malaria illness, those further than one hour's walk from the nearest health care

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facility initiated treatment later than those with less than one hour's walk (Dercssa, et al 2003).

In a study conducted in Kenya 53% of the people in the area brought anti-malarials from shops. The reasons given were that other sources were too far, the shops were open in emergencies, the hospital or dispensary had no drugs, and they had good past experience with the shops (Mburu, et al 1987).

The introduction of user fees in the public health sectors is another factor influencing home drug use. Budget cuts in the health sector due to public finance and foreign exchange crisis of the 1980's aggravated the unfavourable economic trends in many developing countries. Policy makers following the suggestions of the World Bank experts introduced user fees (Mariko, 2003). User's fee is defined as means of generating sufficient reliable resources for continued and improved provision of health care for the growing population (Leighton, 1995).

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User fee is a component of public health financing (Fabricant, Kamara and Mill, 1999). User fees for health care were permitted in all nations as a means of using private funds to improve the quality and availability of government health services. Critics counter that user fees are detrimental to household budgets and will cause poor people to make less use of quality health - care (Fabricant, et al 1999). In Kenya, Guinea, Tanzania, Ecuador and Indonesia the introduction of user fees have reduced the access of the poor to health service utilization since they could not afford the cost of user fee (Newbrander, et al 2001). A study conducted in Nigeria found that when the cost of a prescription was less than ₦10, it was filled in 83% of cases. But when the cost exceeded ₦20, the rate of filling dropped to 21% (Isenalumbe, et al 1988).

A study conducted in Zambia on the effect of the introduction of user fees for curative care in clinics and hospital showed that a charge of four Kwacha (US$10) for a patient reduced the visit of health consumers to hospital to about half because they could not

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afford the financial implication of the increase in user fees (Bennett and Musamto, 1990).

The acceleration in the wholesale price of drugs vander Geest, (1992), had led to a reduction in the number purchases of drugs at Idere. Aspirin more that doubled in price between 1985 (₦9.50) per 1000 tablets and 1989 (₦27.20) per 1000 tablets. By 1993, aspirin was selling at ₦80.00 per 1000 on 800% increase in eight years. In Nigeria, a study conducted by (Katung, 2001) identified as one of the factors affecting poor utilization of primary health care services in a rural community included high cost of drugs and other services charges and easy access to traditional healers. In Senegal, it was discovered that the average prescription from a dispensary cost 5,200 CFAF or nearly US$20 and from a private doctor as much as 14,000 CFAF or nearly 60US$60 but most households received less than 30,000 CFAF per month. As a result most households choose to self-medicate with drugs brought from market sellers (Fassin, 1986).

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In Ghana due to the high cost of drugs in government facilities patients would self - medicate at local shops and market sellers since they could obtain small amount of drugs that which are cheaper than charges in government health service (Waddington, et al 1980).

Poverty is another factor influencing home drug use. In Nigeria, being a developing country, the level of income is generally low, which bears a significant implication on the ability of majority of Nigerian to pay for health their needs (Mbanifoh, et al 1996). Poverty in Nigeria is a multi-faceted condition. It has many dimensions among them illiteracy, ignorance, poor health as well as low levels of household income (UNICEF, 2001).

Nigeria is one of the 25 poorest countries in the world. The Nigerian human development report describes, Nigeria as a rich country with a poor population. In the same report 48.5% of the Nigeria's total population is said to live below the poverty line while about two thirds these lived in extreme poverty as at the end of 1997. (Nigerian human development report, 1998). The poor health of the

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citizenry has been further exacerbated by the rural urban drifts that puts excessive pressures on fragile structures existing in the urban settlements and results in the degradation of the environment.

The consequences of which are aggravation of urban blight and squalor resulting in the majority under sub-human conditions in slums and squatter settlements without employment and any visible legitimate means of livelihood. While the majority of Nigerian live in abject poverty, with increasing poverty, health care service have become inaccessible to many Nigerians (Nigeria Journal of Pharmacy, 2002).

Poor health services utilization is usually associated with lower socio-economic status patients of lower socio-economic status are more likely to start to treat themselves at home as they wait for a time during which they observe their progress this allow them to minimize expenditure incurred as a result of sickness and the anticipated cost of treatment (Nyamongo, 2002).

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As series of surveys done in china prior to 1989 have demonstrated a slight decrease in the percentage of people who did not seek care when ill and cited economic difficulty as the main reason for not seeking needed care (Yu, 1992). A survey in rural Indonesia found that only (17%) of illness treatment contacts were made at government health services. Nearly half (45%) were with the informal sector, 88% of which were village medicine shops, the cheapest source of care (Berman, et al 1987, Osbinanic, et al 1992).

In a study conducted in Accra, Ghana on two adjacent communities of differing socio - economic level on the home management of malaria. The proportion of caregivers who purchased drugs without prescription or used left - over drugs to treat clinical malaria in the children was higher in the poorer community (82% v. 53%) and a child from the poorer community was less likely to have been taken to a clinic or hospital to be treated for malaria than a child from the better - off community (27% v. 42%). Treatment of malaria in young children is likely to be less effective in the poorer

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community, where a lack of economic access to health services was demonstrated (Biritwum, et al 2000). Furthermore in a study conducted in Bangladash, it was noted that rural people sometimes do not buy all the drugs that are prescribed for them partly because of financial constraint. In addition, self-medication is common (Roy,1997).

Cultural beliefs is another factor influencing drug use in a study conducted in Tanzania, on the case management of malaria, most mothers (86.6%) would take anti-pyretic measures first when a chi'd had fever and subsequently the majority (92.9%) would seek care at a modern health facility. About 50% of the mother would give traditional treatments for childhood convulsions and wait till fits cease before the next action. A high proportion of the mother (75%) held the belief that an injection in a child with high fever would precipitate convulsion or death (Tarimo, Lwihula, Minjas and Bygbjerg, 2000).

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Conceptual Frame Work

Theories and models are very important tools in health education because they provide strategies for understanding individual's behaviour and those factors that influence such behaviour, thus enabling programmes to be developed. Hence, it provide basis for planning appropriate intervention. A combination of models and theories is recommended since no single theory can capture all the aspects of behaviour (Igun, 1998). Thus, there is strength in using more than one (Tanner and Cockerham, 1983). In this study two models or themes are adopted to provide clearer basis for better understanding of human behaviour and identification of various factors that could enable or restrain a behaviour from occurring. In view of this fact which is self medication among adults which is the prime interest of this study, a theoretical framework is needed to help understand this behaviour regarding self - medication the various variables of interest and how they are linked so that appropriate study interventions would be developed. In this study two theories were used the Social Learning Theory and Theory of Reasoned Action.

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Social Learning Theory

The exponents of social learning theory are Bandura (1977) and Rotten (1954). The theory stresses the triadic relationship among "person", "behaviour" and "environment" through a reciprocal determinism (or reciprocal causality) process. The environment to a great extent determines the behaviour but the individual used his cognitive ability to interpret both the environment and his behaviour to come up with favourable outcome. SLT, emphases that through the process of self - efficacy assessment, the person judges his/her own level of skill and responds to the questions "can I do it? And he w well"? "Will it produce a produce a positive health outcome? If the answers to these questions are yes, then the behaviour is likely to occur as seen in figure one.

In the application of this theory to this study observational learning may include the use of drugs/self-medication by friends, relatives and neighbours who had positive health outcome. The self-

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efficacy could describe the confidence to use correct dosage regimen of drugs with the belief that if it will cure illness.

Such demographic characteristics such as age, religious beliefs and economic status, will influence self-medication practices. The outcome expectation is that of positive health outcome. This influences their behaviour, which is continued self-medication.

Theory of Reasoned Action

Theory of Reasoned Action (TRA) is known as the Theory of planned behaviour. The theory posits that human behaviour is predicted on an individual's intention to perform that behaviour (Ajzen and Fishbein, 1980). Furthermore, intention is assumed to be a function of two determinants.

1. Attitude towards the specific behaviour for example, being able to treat oneself or cure illness with the use of drugs. This have some personal evaluative component of the perceived benefits.

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2. The individual's perception of the social pressure put on her by referent individuals to perform or not to perform that behaviour, this is often referred to as the subjective "norm" concerning that specific behaviour.

The relative weights of both components can be used to predict the outcome of a specific behaviour. The theory assumes that human beings are rational actors and as such, should make adequate evaluations so as to take appropriate actions. Furthermore, the subjective norm such as the role of family, friends and colleagues and whether the behaviour attracts rewards or sanctions will be evaluated. The degree of support from significant others can determine whether the individual will self-medicate when ill. Discouragement may lead the individual to visit the health centre or hospital for medical treatment. On the other hand, if self-medication is the accepted norm in the society and significant others practice with positive health outcome based on past illness experiences.

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Others will be encouraged to self-medicate. There are certain characteristics of the individual that will influence his attitude to self-medicate or not. The identified factors include demographic variables such as age, sex, religion, socio-economic status and educational level.

Self - medication is not influenced by gender. Self - medication does not require a high educational level. The religious affiliation has great influence on the attitude towards self - medication practices. If the religion been practised allows the use of drugs, the individual will have a positive attitude towards self-medication but if on the other hand, the religion he belongs to is against the use of drugs, the individual is likely to have a negative attitude and not self-medicate. The theory emphasis the influence of key referents and the individual himself/herself has his/her own personal attitude and views which he needs to balance with the opinion of key referent like friends, spouse and other family members. Favourable

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demographic variables will lead to high intention to adopt the recommended action which in this case is self-medication or continued drug use.

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FIGURE 1

SOCIAL LEARNING THEORY ON SELF - MEDICATION

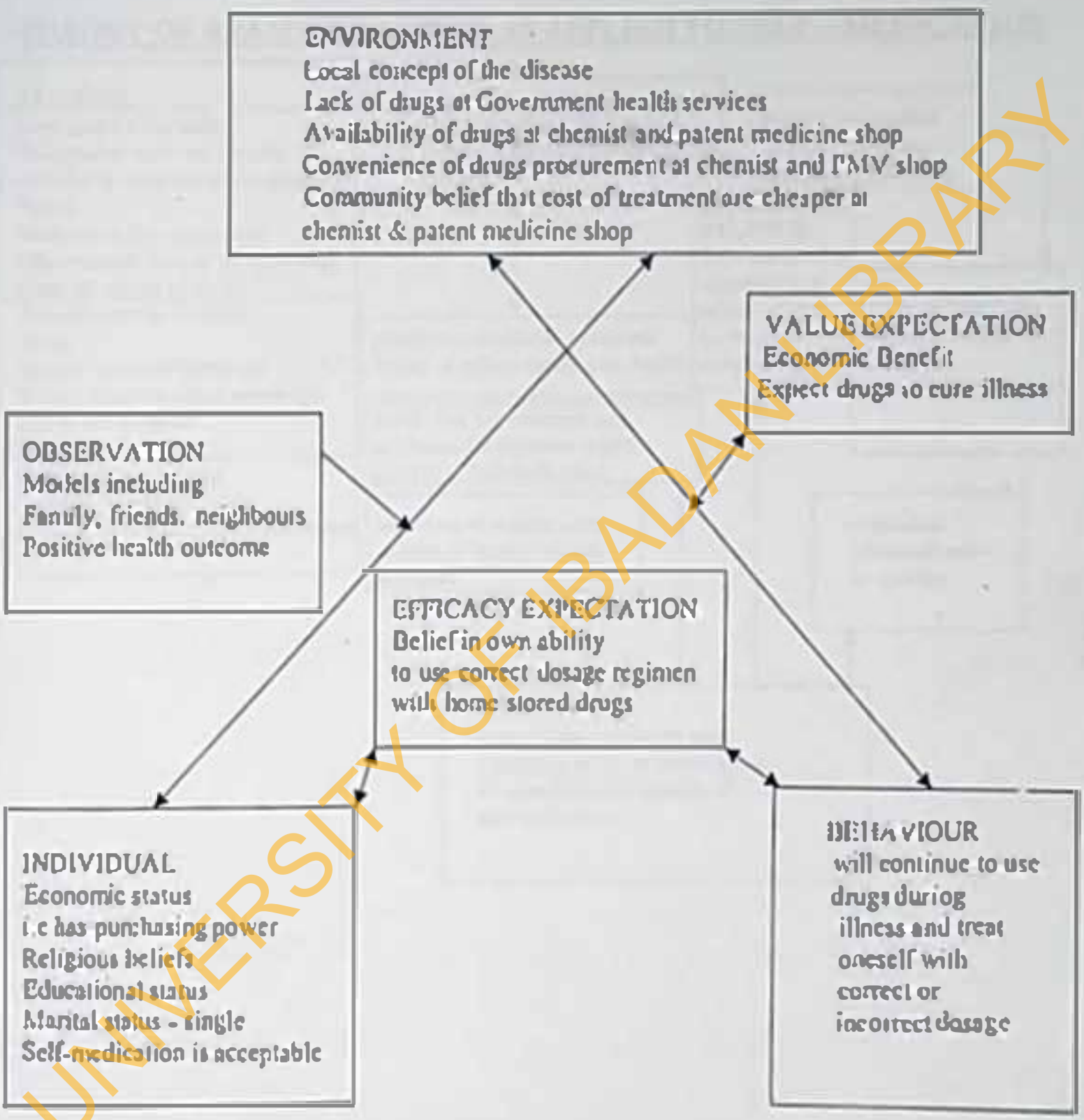

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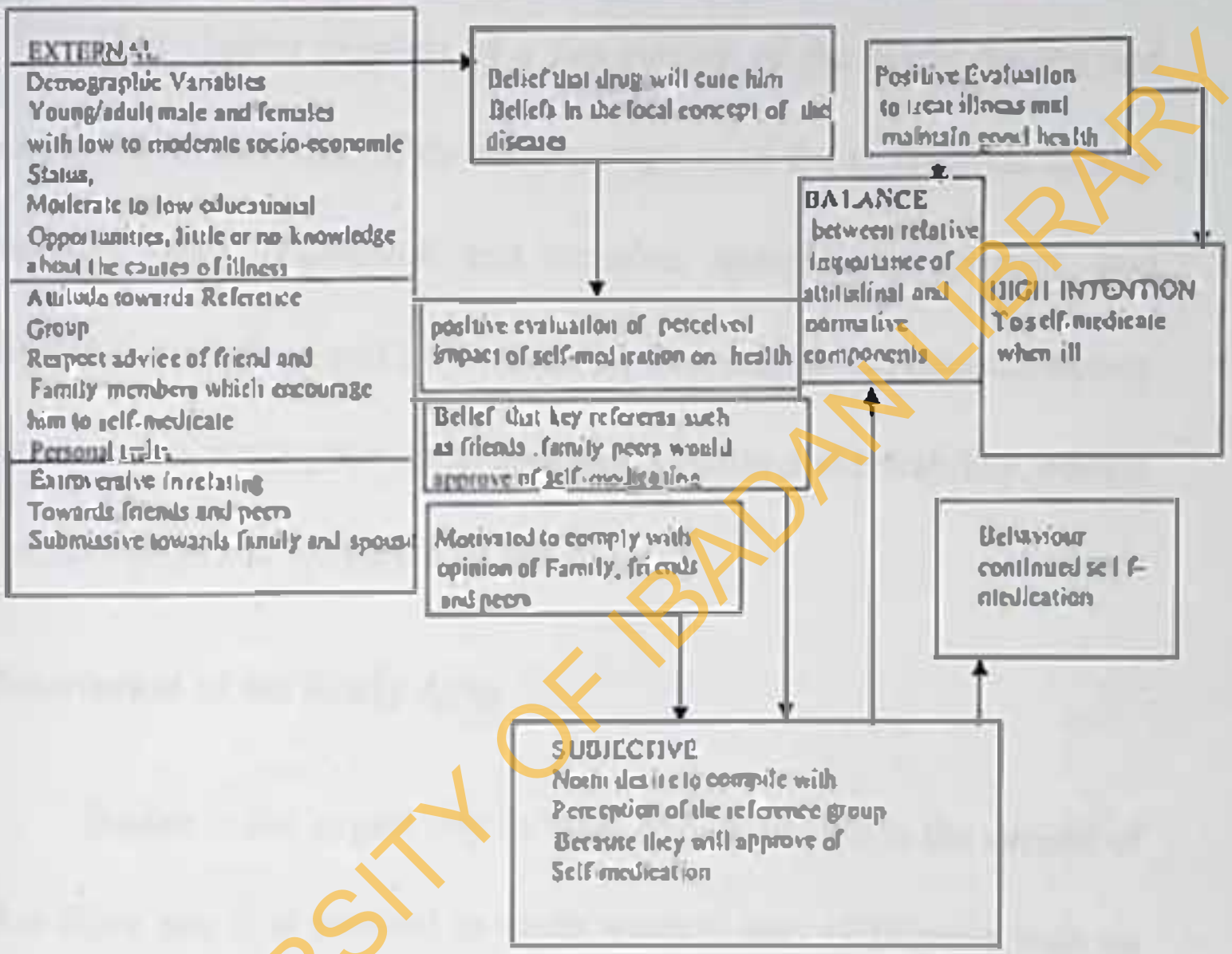
FIGURE 2

THEORY OF REASONED ACTION AS APPLIED TO SELF – MEDICATION



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CHAPTER THREE

METHODOLOGY

This chapter consists of a description of the study design and scope, variables in the study and description of the study area. It also includes study population and samples, sampling procedure, and sample size, method and instrument for data collection, data collection process, data management and analysis, validity and reliability, ethical consideration and limitation of the study.

Description of the Study Area

Ibadan is the largest city in West Africa, Ibadan is the capital of Oyo State and it is situated in south western part of Nigeria with an estimated population of 4 million people (National Population Commission (NPC), which makes up to about 1.2% of Nigerian population. Ibadan South - West Local Government area of Oyo State in which the study area in located, is one of the five local government

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areas carved out from the former Ibadan Municipal Government in August 1991. See figure three.

It is bounded in the east by Ibadan South East Local Government area, in the North by Ibadan North - West Local Government Area and South by Oluyole Local Government Area. It is composed of ten political and seven health districts namely Aleshinloye, Oluyole, Oja-Oba, Molete, Gege, Apata and Odo-Ona. The projected population of the local government is over 500,000 and NID target population of children 0 - 59 months was 108,000 in January 2001. The Local Government comprises of high density, poorly planned, poor access area like Oritamerin, Foko, Isale-ijebu, Isale-osi Agbeni, Agbokoja. Medium density areas are Oke-Ado, Oke-Bola, Joyce - B, Ososami, Molete, Odo-Ona and Apata. The larger areas are now urban and low - density better planned with better access and drainage facilities e.g. Ring Road, Challenge, Oluyole Estate and Extension, Iyaganku Quarters, Alalubosa area.

There are two seasons:- The dry seasons - (November to March) with December and January being the driest months and the rainy season -

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(April to October) with June as the wettest month of the year. There is no great variation in temperature. The mean monthly maximum temperature is 94°F in February and March while the lowest is 70°F for most of the year. The major language used is Yoruba but the people speak English. They trace their historical origin to Ibadan. The present ground on which Ibadan City occupies today is called Igbo - ipara forest. The forest was a boundary between those towns within the rain forest and the Savannah. The land remained unoccupied until the arrival of Lagelu "Oro Apata Maja" from Ile-Ife. It was Lage'u who first settled in this forest before other people joined him others who joined him were ex-communicated from their towns or communities. It was Lagelu who first called Ibadan "Eba-Odan" meaning a place near Savannah forest. It was this Eba-Odan, which later metamorphosed into Ibadan. After Lagelu's settlement, some other people from other neighbouring towns, who settled with him regarded him as their leader.

This first settlement was destroyed by war waged against them, by the Alafin of Oyo and other surrounding Obas. This war which

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Alalubosa, challenge and Molete. In the inner-core the extended family system is a cherished unit of identity. It presents a clustered settlement pattern with family houses organized into compounds. The transitional community is less congested (urban- rural) and the peripheral community is well planned with good roads and well defined streets (urban municipal) and drainage facilities.

Farming and trading are the main stay of the economy in the inner - core areas where crops are grown like Cassava, Yam, Maize and Vegetables. There are main markets e.g Oja-Oba, Agbeni, Dugbe and Bode markets which have special market days but trading is do: e on a daily basis. Buses, Cars or Taxis, Motorcycles, Lorries and Bicycles are used for transportation of goods and services in Ibadan South- West Local Govemment area. Other economic activities, health and educational facilities are shown. See table one.

Local industries include yam cassava and maize milling, blo. k moulding and black-smiting. The people mainly are business men and, women traders teachers, artisan and civil- servants.

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Health care establishments, there is one federal owned clinic, (Nigeria Railway Clinic Dugbe), eight state owned health facilities and twelve Primary Health Care facilities owned by the local government. The local government owned facilities are Awodife primary health centre, Awowonji primary health centre, Adifase primary health centre, Akere primary health centre Elewura primary health centre, Foko primary health centre, Government College Ibadan primary health centre, molete primary health centre, odo - ona primary health centre, Oja - Oba primary health centre, Oke - Bola primary health centre and oluyole primary health centre. Two of the health facilities are health post (Oke - Bola, Akere) while three of them offer maternity services (Odo - Ona, Foko and Awodife).

Politically Ibadan South - West LGA is divided into twelve wards. See table two. The LGA is headed by a chairman who was democratically elected by residents of the community under Ibadan South - West Local Government Area. The Chairman's office is sited within the Local

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Government Area. The deputy in line are the Vice - Chairman and Counsellors. These sets of people are also democratically elected as political leaders of each ward. This denotes that Ibadan South - West Local Government Area has 12 counsellor for each of the wards. The Chairman holds meeting with counsellors once a month in these forums, decisions are made on how to run the LGA. The Chairman also uses this forum to get feed - back on the people welfare, their felt needs and others. He also is the head of all departments or unit leaders in the LGA. A meeting is held with all opinions leaders in the LGA. Sources of information are the radio, television newspaper, interpersonal relationship and circulars. The major source of water is well although there are taps in some houses. (IBSWLG DIAGNOSTIC REPORT, 2001)

Study Design And Scope

This is a community- based descriptive cross- sectional survey in Ibadan South- West Local Government Area of Oyo - State, involving the use of questionnaire and an observation checklist.

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The study looked at both reported and actual behaviours of those adults who store drugs at home. The study assessed the different types of drugs stored at home for self-care, factors influencing this practice, and perceptions of dangers associated with this practice.

Variables

Dependent variables are the actions or behaviours exhibited and reported by adults. Variables were operationalised through questions that sought information on the different types of drugs stored at for self-care, ailments the drugs are used for, knowledge on proper drug use, factors influencing this practice and perception of dangers associated with drug storage at home for self care and suggestion for improving the safety and use of the drugs stored at home for self-care.

The main independent variables were demographic in nature, namely educational level age, sex, socio-economic status, level of education religion, occupation and income.

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These main hypotheses were formulated based on study variables.

There are framed as null hypotheses as seen below:

1. There is no significant relationship between respondents, socio demographic variables (e.g. age, sex, educational level, income, occupation and religion) and drug use.

2. The is no significant relationship between antecedent factors (attitudes and self-efficacy) drug - use.

Study Population

The people under study are mainly male and female adults residents in Ibadan south west local government area community. The target population of the study therefore are adults in selected households of the three communities of Ibadan south west LGA.

Sampling Procedure and Sample Size

The communities in Ibadan south west were divided into three mainly inner core, transitional and peripheral communities then into wards, these were then divided into household and selected

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households were chosen by systematic random sampling procedure in the community where adults were interviewed.

Entry into the community was facilitated through the contact made at the office of Ibadan South West Local Government area through a meeting with the chairman of the community development associated who linked us with each community leader during our field trip.

The several meetings held with the community leaders of the several wards in the LGA facilitated subsequent contact with community members during the administration of the instrument. A total of 470 questionnaires with an observational checklist were administered in the three communitys based on a population weighed ratio of one hundred and eighty by one hundred and fifty by one hundred and ten for each of the community.

The wards in the inner core community included Oita-Merin, Agbokojo and Agbeni, Foko Isale-Ijebu, Isale-Osi,. The wards in the transitional community included Oke-Ado and Oke-Bola, Joyce - B,

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Ososami, Molete, OdoOna and Apata. The wards in the peripheral community included Challenge Ring Road, Alalubosa, Iyaganku Quarters, Oluyole Estate and Extension. Households were selected by systematic random sampling.

Instruments for Data Collection Process

The instruments for data collections were a set of semi-structured interviewer administered questionnaire, which also had an observational checklist. The data were collected between September and October 2002. A 28 - item questionnaire was designed to obtain information on the different types drug stored at home for self-care, factors influencing practice and perception of dangers associated with this practice.

The questionnaire had an introduction and four sections. Section A consisted of questions on demographic variables. Section B contained questions on the different drugs stored at home for self care knowledge on correct dosage regimen, ailments the drug are used for treatment. Section C containcl questions on factors influencing drug

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Validity and Reliability of the Study

To ensure validity, the draft of the questionnaire was presented to the experts in Health Education including the researcher's supervisor for review of content validity.

The items on the questionnaire were made as simple as possible to ensure reliability. The combination of both open ended and close - ended questions gave less room for ambiguity. The questionnaire were interpreted from English into Yoruba and back into English for validity and reliability. The questionnaire was pretested in Bashorun. Review of instrument after pretesting led to few modifications, which improved the clarity, provided opportunities to validate certain responses to determine the number of questionnaires that the research assistants can conveniently complete in a day, and the approximate number of days for data collection.

Appropriate training was conducted for research assistants to ensure they have a common understanding of the instrument prior to commencement of data collection.

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Data Collection Process

The qualitative and quantitative data collection process are described below. The qualitative data collection process involved the use of an observational checklist. Each research assistant under the following headings did observation. Different types of drugs stored at home for self_care, drug storage conditions and drug expiry date.

The quantitative data collection process on the survey component of the study involved the use of ten trained and experienced research assistant who were to administer the questionnaire.

The research team moved from pre-selected households in the each community until the required number of respondents was reached. Informed consent was obtained from the interviewers after proper explanation of the purpose of the interview. Each research assistant completed five questionnaires per day.

The researcher made sure the questionnaire with observational checklist were well answered and submitted to her on daily basis. A

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total of 408 respondents were interviewed on the whole out of which 308 respondents were observed.

Data Management and Analysis

The completed questionnaire and observation checklist were checked for completeness and accuracy on the field. All errors found were corrected. The researcher reviewed all open ended portions of the questionnaire and observation checklist, codes were later developed and all responses coded.

They were then entered into the computer using an EPI – INFO. Means and frequencies were first generated and out of range variables were identified and corrected. Tests of significance were done using the Chi-square test for comparing discrete variables using SPSS. Frequencies were presented as both raw numbers and percentages. The results were summarized using tables and graphs as were appropriate.

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Ethical Consideration

In the households when an adult male or female is met, introduction is made by the interviewer and the purpose of the study. Consent was sought from those who participated in the study. They were assured of the confidentiality of the study that no information given by them would be disclosed and when asked questions by the respondents concerning the nature, purpose and benefits that would accrue from the study. The questions were answered after which they agreed to participate in the study of which 408 responded.

Limitations of the Study

The researcher's practical experience on the field showed that some of the respondents were reticent to answer questionnaire on the drugs stored at home for self-care. Only four outright refusal occurred, eighteen adults stopped their interview halfway because they expected drugs or some form of financial inducements. These questionnaire of these group of respondents were discarded. Another limitation of the

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study is that responses in the survey are based on self- reported and observed behaviour, while efforts was made to giving truthful responses, the potential for bias and recall problems cannot be totally eliminated. To rectify this problem respondents were enlightened on confidentially and importance of giving correct answers.

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CHAPTER FOUR

RESULTS

This chapter presents the qualitative (Observational Checklist) and quantitative (Survey) findings of the study. The findings from the observational checklist on the drugs stored at home for self-care are presented first.

The findings from the quantitative aspect of the study are organized into seven sections. The demographic characteristics; drugs stored at home for self-care, uses and sources, knowledge of dosage regimen of drugs stored at home for self-care, side effects experienced with the use of drugs stored at home for self-care, factors influencing drug storage at home for self-care and comparison of drug stored at home for self-care by demographic variables; perceptions of danger associated with drug storage at home for self-care and suggestions for improving the safety and use of drug stored at home for self-care.

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Finding from the Observational Checklist on Drugs Stored at Home for Self-Care.

Analgesic drugs

Findings from observation of drugs stored at home reveal the following. The analgesic drugs observed to be stored were paracetamol and novalgin. More respondents 69(22.4%) stored paracetamol at home compared with 14(4.5%) respondents for novalgin.

Findings on the drug packaging of paracetamol and novalgin showed that only 20(9.3%) of the observed respondents packaged paracetamol in paper while 9(4.3%) in nylons and 40(18.6%) in sachets compared with 2(0.4%) who packaged novalgin in nylons and 12(2.6%) in sachets.

In respect to drug storage conditions of paracetamol and novalgin, findings showed that 24(11.2%) of the respondents stored paracetamol on the shelves, 15(5.1%) in cupboards, 31(14.4%), stored in plastics and 6(2.8%) on tables compared to novalgin in which only

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4(0.8%) of the observed respondents stored the drug in shelves, and 13(2.9%) in cupboards.

Neither paracetamol nor novalgin had any expiry date written on them. Analgesic drugs observed are shown in Table 3.

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Antibiotic Drugs

The antibiotic drugs observed were septrin and flagyl. More respondents 46(12.1%) stored septrin at home compared with 33(10.7%) respondents for flagyl.

Findings on the drug packaging of septrin and flagyl showed that only 11(10.6%) of the observed respondents packaged septrin in paper, while 6(5.8%) in nylons and 9(8.7%) in sachets compared with 16(13.3%) who packaged flagyl in paper, 4(0.3%) in nylons, and 2(0.2%) in sachets. In respect to drug storage conditions of septrin and flagyl findings showed that 9(8.7%) of the respondents stored septrin on the shelves, 16(15.4%) in cupboards, and 10(9.6%) on tables compared to flagyl in which only 5(0.4%) of the observed respondents stored the drug in shelves, and 14(11.6%) on tables.

Neither septrin nor flagyl had any expiry date written on them. Antibiotic drugs observed are shown in Table 3.

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Antimalarial Drugs

The antimalarial drugs observed were chloroquine and fansidar. More respondents 42(13.6%) stored chloroquine at home compared with 30(9.7%) respondents for fansidar.

Findings on the drug packaging of chloroquine and fansidar showed that only 7(6.8%) of the observed respondents packaged chloroquine in paper, while 15(14.7%) in nylons and 20(19.6%) in sachets compared with 6(1.1%) who packaged fansidar in paper, 15(2.8%) in nylons, and 9(1.7%) in sachets.

In respect to drug storage conditions of chloroquine and fansidar findings showed that 20(19.6%) of the respondents stored chloroquine on the shelves, 6(5.9%) in cupboards, and 16(15.9%) on tables compared to fansidar in which only 13(2.4%) of the observed respondents stored the drug in shelves, and 7(1.3%) on tables.

Neither chloroquine nor fansidar had any expiry date written on them. Antimalarial drugs observed are shown in Table 3.

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Antihelmintic drugs

The antihelmintic drugs observed were ketrax and combantrin. More respondents 26(8.4%) stored ketrax at home compared with 16(0.5%) respondents for combantrin.

Findings on the drug packaging of ketrax and combantrin showed that only 9(1.5%) of the observed respondents packaged ketrax in paper and 3(0.8%) in nylons compared with 11(2.8%) who packaged combantrin in paper and 3(0.8%) in sachets.

In respect to drug storage conditions of ketrax and combantrin findings showed that 3(0.5%) of the respondents stored ketrax on the shelves, 5(0.8%) in cupboards, and 9(1.5%) on tables compared to combantrin in which only 6(1.5%) of the observed respondents stored the drug in shelves, while 4(1.8%) on the cupboard and 3(0.8%) on the tables.

Neither ketrax nor combantrin had any expiry date written on them. Antihelmintic drugs observed are shown in Table 3.

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Hypnosedative Drugs

Hypnosedative drugs only valium was observed.. 32(8.4%) respondents stored valium at home.

Findings on the drug packaging of valium showed that only 3(0.4%) of the observed respondents packaged valium in paper and 14(20.3%) in nylons.

In respect to drug storage conditions of valium findings showed that 13(18.8%) of the respondents stored valium on the shelves, 8(11.6%) in cupboards, and 3(0.8%) on tables.

There was no evidence of written expiry date written on valium.

Hypnosedative drugs observed are shown in Table 3.

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TABLE 3

OBSERVATIONAL CHECKLIST TABLE

TABLE 3

Observational Checklist on Drugs Stored At Home for Self - Care

OBSERVATION CHECK LIST	STORED AT HOME		PACKAGING						STORAGE CONDITIONS							
LIST OF DRUGS	NO	%	IN PAPER	%	IN NYLON	%	IN SACHET	%	SHELF	%	CUPBOARD	%	PLASTIC	%	TABLE	%
ANTIMALARIALS																
Chloroquine	41	13.6	7	0.8	13	14.3	20	19.8	20	0	100	9.5	NIL	NIL	10	15.0
Fansidar	30	9.7	0	1.1	13	2.8	9	8.7	13	2.4	NIL	NIL	NIL	NIL	7	1.3
ANALGESICS/ ANTIPYRETICS																
Paracetamol	69	23.6	20	9.3	9	4.2	40	18.8	34	11.3	15	3.8	31	14.4	0	3.8
Novalgin	14	4.3	NIL	NIL	3	0.4	17	2.6	4	0.8	13	2.9	NIL	NIL	NIL	NIL
ANTIHELMINTIC																
Ecaris	24	8.4	9	1.3	NIL	NIL	33	3.1	3	0.8	NIL	NIL	9	1.5	NIL	NIL
Combantrin	10	0.3	11	2.9	NIL	NIL	3	0.5	0	1.3	4	5.8	NIL	NIL	3	0.8
ANTIHELMINTICS																
Vermox	33	10.4	3	0.4	14	30.3	20	3.9	1	11.4	NIL	NIL	3	2.9	NIL	NIL
ANTIBIOTICS																
Septrin	46	12.1	11	10.6	6	3.8	0	0.7	0	0.7	10	13.4	NIL	NIL	10	9.0
Flagyl	33	10.7	10	13.3	4	0.1	2	0.10	3	0.4	NIL	NIL	NIL	NIL	14	11.0

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Survey Results

Demographic Characteristics of the Respondents

A total of 408 adults were interviewed in Ibadan South West Local Government Area. The ages of the respondents ranged between 18 and 99 years, with a mean of 35.1 years (SD ±13.52) See Table 4.

The majority of the 408 respondents were females 275 (67.4%) while 133(42.6%) were males. More than two – thirds 268(66.7%) of the respondents were married and 131 (32.6%) were unmarried, 21(5.2%) were widowed and 5(1.0%) are divorced. The respondents had between 1 – 12 children with an average of 3.8. On the type of family 248(62%) respondents were of monogamous family, while 152 (38%) were from polygamous family. The majority of the respondents were Nigerians 397(97.8%) and by ethnicity Yorubas 361(96.9%) form the majority. Other ethnic groups of the respondents included Igbo 23(5.7%), Hausa 9(2.2%) and others 5(1.2%).

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The educational level ranges from no formal education 57(18.3%), some primary education 40(13.0%), some secondary education 17(5.5%) completed secondary education 48(15.4%) diploma 71(22.8%), incomplete university education 20(6.4%) and completed university education 58(18.6%).

A slightly higher proportion were Christians 210(52%), while Moslems constitute 178(44%) and 16(4.0%) claimed other religions including African indigenous belief. The distribution of the respondents by occupation were varied within the 408 respondents. Three hundred eighty – nine (95.4%) of the respondents stated their occupation. The most common occupation reported by the respondents, 179(47.1%) to be professionals including teachers, medical workers, lecturers and bankers, 29(7.4%) were artisan such as hairdressers and fashion designers, 26(6.6%) were farmers, 9(2.3%) were self-employed, 2.0(0.5%) secretary, 1.0 (0.3%) were youth corper and 45(11.6%) were students.

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The income of the respondents varied between ₦1,000 - ₦250,000 out of which only 280(68.6%) disclosed their income. Those with low income ranged between ₦1,000 - ₦20,000 which are 231(82.5%), medium income of between ₦21,000 - ₦79,000 which are 42 (15%) and those on high income of between ₦80,000 – ₦150,000 which constitute 7 (2.5%).

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TABLE 4
DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENT
N = 408

Characteristic	Number	Percentage
Age Group		
18 – 28	117	28.6
22 – 39	115	28.1
40 – 50	90	22.1
51 – 61	48	11.7
62 – 72	20	4.9
73 – 83	8	2.0
83 – 93	1	0.3
94 - 104	1	0.3
Occupation		
Trader	179	47.6
Professional	93	23.1
Student	45	11.6
Farmers	26	6.6
Artisan	18	4.6
Fashion Designer	11	2.8
self-employed	9	2.3
Secretary	2	0.5
Housewife	1	0.3
Footballer	1	0.3
Youth Corper	1	0.3
Marital Status		
Currently Married	268	66.7
Single, Unmarried	109	27.1
Separated/divorced	5	1.0
Widowed	21	5.2
Level of Education		
No Formal Education	57	18.3
Some Primary Education	40	13.0
Some Secondary Education	17	5.5
Completed Secondary Education	48	15.4
Diploma	71	22.8
Some University Education	20	6.4
Completed University Education	58	18.6
Religion	210	52%
Christianity	107	42%
Islam	16	4%
Traditional Religion		
Ethnic Group	361	90.9
Yoruba	23	5.7
Igbo	9	2.2
Hausa	5	1.2
Others		

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Drugs Stored At Home for Self Care, Uses and Sources

Drugs stored at home for self-care

Information was sought form the respondents on the drugs stored at home for self-care. A variety of drugs were reported. (See Table 5). These include antibiotics, analgesics and antipyretics, blood tonic and multivitamins, antimalarials antihistamines, cough expectorants and antithelmintics. Among these, antibiotics (44.3%) is most stored, follow by analgesics/antipyretics (20.5%), blood tonics and multivitamins (20%).

In respect of antibiotics 272 (23.0%) of the respondents stored septrin, 178 (15.51%) flagyl, 47 (4.0%) ampiclox and 27 (2.3%) amoxycillin. For analgesics and antipyretics, 102 (8.6%) of the respondents stored paracetamol, 77 (6.5%) novalgin, 29(2.5%) Ibuprofen, 29(2.5%) aspirin and 5 (0.4%) Indocid. Furthermore, in respect of blood tonics and multivitamins 107(9%) of the respondents stored Vit Bco, 59 (5.0%) blood tonic 38 (3.2%) Vitc, 28 (2.4%) folic acid and 5 (0.4%) yeast.

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Drugs that are stored in few quantities include antimalarials, antihistamines, cough expectorant and antihelmintics.

In respect to antimalarials, 65(5.5%) of the respondents stored choroquine, 8(0.7%) fansidar, 8(0.7%) daraprim and 8(0.7%) paludrine, for antihistamines, 39(3.3%) of the respondents stored piriton and Cough expectorant 24(2.0%). On antihelmintics 21(1.8%) of the respondents stored combantrin and 5(0.4%) ketrax.

Uses of Drugs Stored at Home

These drugs are stored and used by the respondents for the treatment of several health conditions which include fever 180(62.5%) pains 167 (57.0%), headache 186 (67.6%), stomachache 55 (27.0%), convulsions 7(3.6%) worm infestation 10 (5.7%) and others 9 (4.5%). Eighty (19.6%) respondents reported that they use antibiotics to treat skin diseases 45(11.0%), pile 15(3.6%), colds 10(2.4%) and pains 10(2.4%). Sixty-five (15.9%) respondents reported using antimalarials to treat fever 15(3.6%), pains 20(4.9%), headache 19(4.6%) and convulsions 6(1.4%). Seventy-five (18.3%) respondents

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reported that they used analgesics to treat headache 35(8.5%), fever 15 (3.6%) and pain 25(6.1%). Nearly one sixth of the respondents 50(12.2%) reported that they used antihistamines to treat headaches 15(3.6%), colds 15(5.6%) coughs 12 (2.9%) and catarrah 8(1.9%). Interestingly 25(6.1%) respondents reported that they used antihelmintics to treat worm infestation 10(2.4%) headache 5(1.2%, and anxiety 5(1.2%). In addition, 48(11.7%) respondents reported that they used blood tonics and multivitamins to treat anxiety 12 (2.9%), headache 10(1.7%) and worm – infestation 7(1.7%).

Sources of Drug Procurement

The major sources of drug procurement by the respondents were chemists 230(65.9%), followed by patient medicine shops. (See Table 7). When the respondents were asked under whether these drugs procured were used under medical supervision. Majority of the respondents, 273(75%) said the drugs were reportedly used without medical supervision or doctors' prescription.

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TABLE 5

DRUGS STORED AT HOME FOR SELF-CARE

Drugs	No (%)
Antihintics	
Septrin	272 (23.0)
Flagyl	178 (15.0)
Ampiclox	47 (4.0)
Cap Amoxycillin	27(2.3)
Analgesics	
Paracetamol	102(8.6)
Novalgin	77(6.5)
Ibuprofen	29(2.5)
Aspirin	29(2.5)
Indocid	5(0.4)
Blood Tonics & Multivitamins	
Vit.Bcomplex	107 (9.0)
Blood tonic	59(5.0)
Vit.C	38(3.2)
Folic Acid	28(2.4)
Yeast	5(0.4)
Antihistamines	
Piriton	39(3.3)
Cough Expectorant	
Cough Expectorant	24(2.0)
Antimalarials	
Chloroquine	65(5.5)
Fansidar	8(0.7)
Darsprim	8(0.7)
Paludrine	8(0.7)
Antihelmintics	
Combantrin	21(1.8)
Ketrax	5(0.4)

*Multiple Responses

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Table 6

Source of Drug Procurement by Respondents

Source of Drug Procurement	No (%)
Chemists	230(65.9)
Patent Medicine Shops	166(46.4)
Government Hospitals	63 (20.1)
Private Hospitals	51(15.2)
Itinerant Drug Peddlers	47(14.0)

* Multiple Responses

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Knowledge of Dosage Regimen on Drugs Stored at Home for Self-care

Respondents' lack of knowledge on dosage regimen of the variety of drugs stored at home for self-care are presented in Table 7. The drugs on which they gave information on dosage regimen were antibiotics (septrin), analgesics (paracetamol), antimalarials (chloroquine and fansidar) and multivitamins (vitamin c and vitamin Bco).One hundred and twenty--one (63.0%) of the respondents knew the correct dosage regimen of septrin for an adult (which is (2 – 2) 5/7 i.e. 2 tablets twice daily for 5 days). While 60(50.4%) for paracetamol (adult dose of two tablets three times daily for three days) and 64 (45.6%) for chloroquine (adult dose of 4 tablets start on day one, another 4 tablets on day two and 2 tablets on day three).

Furthermore 47(43.9%) of the respondents knew the correct dosage regimen for fansidar (adult dose of three tablets at once), 55(55.1%) of the respondents knew the correct dosage regimen of vitamin c (adult dose of one tablet to be taken three times daily for 7 days) and

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75(62.5%) for vitamin Bco adult dose of one tablet to be taken three times daily for 7 days).

These findings indicate average knowledge by respondents of antibiotics, analgesics, antimalarials and multivitamins.

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TABLE 7

Respondent's Knowledge on Dosage regimen of Drugs Stored at Home

Name of Drugs	Correct Knowledge of Dosage Regimen	Incorrect knowledge of Dosage	Don't Know	Total
Antibiotics				
Septrin	12(63%)	20(20.3%)	15(14.7%)	100
Analgesics & Antipyretics				
Paracetamol	60(50.6%)	12(8.0%)	45(41.4%)	100
Antimalarials				
Chloroquine	64(45.6%)	56(34.4%	22(20%)	100
Fansidar	47(43.9%)	54(46.1%)	6(10%)	100
Blood Tonics & Multivitamins				
	55(45.1%)	21(24.3%)	3(35%)	100
Vitamin C	72(62.5%	41(26.1%)	12(11.4%)	100
Vitamin B12				

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SIDE EFFECTS EXPERIENCED WITH THE USE OF DRUG STORED AT HOME FOR SELF-CARE

The respondents were requested to mention any drug side – effect experienced after using some of the drugs stored at home for self-care. The drugs side – effect experienced by the respondents drugs varied reflecting the adverse drug reactions encountered with the use of drugs. See Table 8. The drugs on which drug side effects were experienced are namely paracetamol, chloroquine, vitamin c and septrin.

Sixty-seven (16.4%) respondents experienced the following side effects after using paracetamol namely nausea 37(50.7%), fainting 11(15.1%), vomiting 1(5.5%) stomachache 3(4.1%) and others (20.5%).

In respect to chloroquine, 60(14.7%) respondents experienced drug side – effect. The side effects experienced are as follows name y nausea 32(42.4%) fainting 15(20.2%), headache 4(5.6%), allergy 4(5.6%), vomiting 1(1.0%), itching (5.6%).

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Furthermore 14(3.4 %) respondents experienced the following drug side – effects after using vitamin c, nausea 6(60%), vomiting 4(20%) and stomachache 4(20%).

Twenty-five(6.1%) respondents experienced the following drug side – effects after using septrin allergy 16(54%) nausea 5(17.5%) vomiting 4(28.5%).

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TABLE 8

Side – Effects of Drugs Stored at Home for Self-care

Side – effects	Paracetamol No (%) N = 64	Chloroquine No % N = 50	Vit C No % N = 14	Septrin No % N = 25
Nausea	22 (30.1)	32(42.4)	6 (60.0)	5(17.5)
Headache	15(20.5)	4(5.6)	NIL	NIL
Allergy	NIL	4(5.6)	NIL	16(54.0)
Fainting	11(15.1)	15(20.2)	NIL	NIL
Stomachcache	3(4.1)	3(4.2)	4(20.0)	NIL
Vomiting	1 (5.5)	1(1.0)	4(20.0)	4(28.5
Unknown	15(20.5)	1(1.0)	NIL	NIL

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Comparisons Between Drug Stored at Home (DSH) for Self-Care with other Demographic Variables

The comparisons between drug stored at home for self – care (DSH) and the independent variables, the respondents socio – demographic characteristics are shown.

The following were not significantly associated with drug storage at home namely sex (P = 0.117), type of family (P = 0.167), religion (P= 0.849), education (P = 0.164) and income (P = 0.468).

However, comparison between DSH and marital status of the respondents showed that those who are married stored more drugs at home than others.

Two hundred and eighteen respondents who are married out of the 408 stored more drugs are home than others. The p. value at 0.04 shows that there is a strong association which is significant. Table 9.

Comparison between DSH and the type of community showed that those from the inner – core and transitional community stored more drugs at home than those from the peripheral community. One hundred and twenty seven respondents out of 408 in the inner core

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community stored more drugs at home compared with 121from the transitional communities and 6from the peripheral communities. However the p. value 0.003 shows that there is a significant association, between drug stored at home and type of community.

Table 10.

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TABLE 9

Comparison of Drug Stored at Home by Marital Status

Drug Storage at Home	Married	Unmarried	Single	Widowed	Others	No
Yes	218(70.3)	12(3.9)	61(19.7)	15(4.8)	4(1.3)	310
No	56(57.1)	10(10.2)	26 (26.5)	6(6.1)	0 (0)	98

Chi – Square = 9.99

Degree of freedom = 4

p – Value = 0.04

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TABLE 10

Comparison of Drug Stored at Home by Community

	Community			
Drug Storage at Home	1 Inner	2 Transitional	3 Peripheral	No
Yes	127 (41.2)	121 (39.2)	6(1.9)	254
No	35(35.0)	29(29.0)	36(36.0)	100

Chi – Square (χ^2) = 11.67

df = 2

p value = 0.00293

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FACTORS INFLUENCING DRUG STORAGE AT HOME

Information was sought from the respondents on the major factors influencing drug storage at home in Ibadan SWLGA. The major factors influencing drug storage at home were given as convenience 296(86.3%) followed by time 73(29.3%); distance 65(24.9%) and cost 41(15.8%).

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PERCEPTION OF DANGERS ASSOCIATED WITH DRUGS STORED AT HOME FOR SELF-CARE

Measurement of attitudinal disposition toward drug storage at home was carried out. Six statements of which a respondent has to indicate whether they 'agree' 'disagree' or 'undecided' were used. Attitude towards drug stored at home is highlighted. A large majority 290(77.7%) agreed it is always good to keep drug at home, while 29(7.8%) disagreed. Only 47(12.6%) of them were undecided about keeping drugs at home.

A small proportion 30(8.0%) of the respondents agreed that home stored drug for child – care should not be kept by mothers while a large proportion 267(71.4%) disagreed only 78(19.3%) were undecided.

Similarly a small proportion of the respondents 65(16.6%) agreed that home stored drugs except those relating to child – care should be kept by the fathers while a large proportion 240(61.2%) disagreed. Only 87(22.2%) were undecided. Others are shown in Table 11.

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TABLE II

Respondents Perception of Dangers Associated with Drug Storage at Home

Perceptions	Agree	Disagree	Undecided
It is always good to keep drugs at home. (P)	290 (77.7%)	29 (7.8%)	47 (12.6%)
Home stored drugs for child-care should not be kept by mothers. (N)	30(8.0%)	267(71.4%)	78(19.3)
Home stored drugs except those relating to child-care should be kept by the fathers. (N)	65(16.6%)	24061.2%)	87(22.2%)
All home stored drugs that change in colour should not be discarded but used. (N)	12(3.1%)	312(79.6%)	68(17.3%)
All home stored drugs with expiry date and which have expired should not be discarded but used. (N)	9(2.3%)	338(86.7%)	42(10.8%)
There is nothing wrong in using home stored drugs even when stored for over 5 years. (N)	14(3/6%)	344(88.2%)	30(7.7%)

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Suggestions for Improving the Safety and Use of Drug Stored at Home

The respondents gave suggestions for improving the safety and use of drugs stored at home for self – care . Drugs should be kept in a safe – place (36.5%) topped the list of suggestions given by the respondents. This was followed in a descending order by drugs should be kept in a closed container (30.1%), drugs should be kept out of the reach of children (10.5%) drug should only be used on doctor's prescription (9.4%), discard any unused drugs (7.3%), others are shown in table 12.

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TABLE 12

RESPONDENTS SUGGESTIONS FOR IMPROVING THE SAFETY AND USE OF DRUG STORED AT HOME

N = 339

SUGGESTIONS	No (%)
Drugs should be kept in a safe place	125(36.5)
Drugs should be kept in a closed container	103(30.1)
Drugs should be kept out of the reach of children	36(10.5)
Drugs should only be used on doctor's prescription	32(9.4)
Drugs stored at home should be properly labelled	6(1.8)
Mothers should be educated on the proper usage of drugs	3(0.9)
Adults should administer only Drugs should be administered by adults only	1(0.3)
Drugs should be properly stored	1(0.3)
Drugs should be used only during emergencies	4(2.0)
Discard any unused drugs	25(7.3)
Discontinue usage of any expired drugs	9(0.6)
Drugs should be used following the correct dosage regimen	1(0.3)

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CHAPTER FIVE

DISCUSSIONS AND CONCLUSION

The findings of the study are discussed in this chapter. The health education implications are also considered. The chapter ends with a set of conclusions and recommendation.

Demographic Characteristic of the Respondents

The result revealed that the study population women constitute two third of the population and are married. Women in the community have multidimensional roles/functions as mothers, housewives, care bearers and workers.

About a quarter of the adults were literate and this may have influenced their knowledge and self – efficacy to use drug stored at home properly. Majority of the respondents were Yorubas since Ibadan South West Local Government is located in a Yoruba speaking zone. The socio – economic status of the respondents showed that those on low – income constitute a high proportion of the study population. Poverty is usually associated with economic inaccessibility to health – care.

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Drugs Stored at Home for Self-care

Antibiotics, analgesics/antipyretics, antimalarials, blood tonics and multivitamins, antihistamines and anthelmentics ranked among the drugs stored at home for self-care. This confirms the findings of other researchers. According to Brieger and Oshiname (1992) different varieties of drugs are stored at home for self-care in Igbo-ora, Oyo State Nigeria. Drug used included choloroquine, panadol paracetamol, phensic, aspirin, multivite and phenergan. Akala (1993) stated that drug is a frequently preferred technique in treating, preventing and controlling diseases.

This study has shown that antibiotics namely septrin flagyl and ampiclox, are the drugs most stored at home for self care. Automedication is currently one of the most serious problems in antiobioticotherapy since it is accompanied by bad usage, together with therapeutic unfulfillment and storage of antibiotics in the homes. (Analysis of automedication with antibiotics in Spain, 1998).

Furthermore among the analgesic drugs namely paracetamol and novalgin are the drugs most stored at home for self care. Some drugs,

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notably analgesics are regarded as "harmless" when in fact at high doses they can be very toxic whereas others, such as antibiotics may be regarded as "dangerous" leading to patients halting their treatment too early (WHO, 1991).

Finding from the observation of drugs stored at home showed that most home stored drugs were packed in paper, nylons or sachets. The improper packaging of drugs on paper could lead to the fast degradation of the active drugs ingredients by water, moisture and heat. Furthermore, this study showed that many drugs are stored at home for the treating several health conditions and inappropriate knowledge of their therapeutic use by some respondents might be responsible for the experienced after the use of home stored drugs. Majority of these drugs were purchased from chemists and patent medicine vendors. In light of this findings, drug education is needed to sensitize individuals and community members on proper usage of drugs.

Drug use education is a process of instructing patients through a variety of techniques and strategies on the appropriate use of drugs

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(Eniojukan 1997). The aim of drug education is to ensure that patient understand the role and administration of their medication, encourage correct compliance thus improving therapeutic outcomes (Cochran, 1992) since patients want to know more about their drugs, (Eniojokan, Alebiosu and Oni (1997). Salami (1995), this necessitates the provision of drug use education by pharmacist. Salako and Adedevoh (1972) observed that patients often asked questions about dosage of their drug. In addition, it is worth mentioning that many patients may not always understand the pharmacists instructions. Even when informed, dosages are described wrongly when interviewed after collecting their drugs. According to Salako and Adedevoh (1992) those patients not satisfied wanted more information on side effect, storage and expiry date.

Furthermore, crucial information about route, dosage from, administration, precautions to be observed during administration and common side-effects among others can be misunderstood by patients and result in misuse of drugs and poor compliance.

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This has been proved in studies which show that one in four people who take medication harm their health by using medications incorrectly (Berg and Mc Lauchlan 1994). Also the information passed across must be accurate, simple and understandable with appropriate motivation to follow the instruction and consequences of default stressed (Sowemimo, 1992). Drug education enables the patient understand and incorporate taking his drugs into daily routine (Hoje,1987).

According to the Alma Ata Declaration (W.H.O.1978), and its view on the patient's right to know, increased public interest and subsequent demand for comprehensive drug information, make it mandatory for drug education to be part of the dispensing technique (Salawu, 1995; Uchefuna,1997). In addition, patients are incapable of monitoring their own therapy for interaction, thus they should be informed on food, alcohol beverages and non-prescription drugs to be avoided (Eniojukan, 1995).

Edwards and Roger (1999) on the concept of drug information reported that the type of information request by patient on either over

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the – counter (OTC) or prescription only drugs (POD) are usually in the following areas.

- What the drug is for and how it works
- How much to take
- When to take
- Length of time until treatments begins to work and expected duration of therapy.
- Side – effects.
- Over the counter (OTC) drug to avoid
- Storage.

In another related study conducted in Zimbabwe on drug use education, investigations revealed that 728 out of the 910 patients obtained very little drug information from health workers. When challenged about drug information they desired, the following:

- General information about the disease
- Duration of treatment

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- Name of drug
- Best way to take medication
- What to do when experiencing events perceived to be side – effects.
- Proper storage of medicine.

Furthermore in a study conducted by Mcmahon et al (1987) on 349 patients in a teaching hospital in Britain, Information requested by the patients included 98 on drug side – effects, 119 on how often to take the drugs, 70 – on the best way to take the drugs, 112 on duration of therapy and another 112 on action of the drugs.

This study has shown the need for increased knowledge on drug – use education in the community.

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KNOWLEDGE OF DOSAGE REGIMEN ON DRUGS STORED AT HOME FOR SELF – CARE.

This study has revealed that majority of the respondents lacked knowledge on dosage regimen of drugs stored at home for self-care. Among the antibiotic drugs stored at home by the respondents, only two-thirds of adults knew the correct dosage regimen of septrin for an adult.

In respect to the antimalarial drugs stored at home by the respondents, information was given on only choloquine and fansidar in which slightly less than half of the respondents knew the correct dosage of chloroquine for an adult. Furthermore for fansidar also slightly less than half of the respondents knew the correct dosage of fansidar for an adult. Also with the analgesics drugs, only half of the respondents knew the correct dosage regimen for an adult, and for multivitamins and blood tonics, slightly more than half of the respondents knew the correct dosage regimen of vitamin C and two third for vitamin B.co. This shows that inappropriate use of drugs stored at home for self-care predominates in the community.

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FACTORS INFLUENCING DRUG STORAGE AT HOME FOR SELF-CARE

This study revealed the various factors influenced drug storage at home for self-care in Ibadan SWLA of Oyo State, Nigeria which are namely convenience; followed cost, distance and time. Convenience of drug procurement at chemist and patent medicine shops was a factor influencing home drug use. This finding is similar to that of Raynal (1985) in Zimbabwe, Snowet al (1992) in Kenya and Makubalo (1992) in Zambia which showed that people with malaria stored drugs at home because it is convenient.

The cost of drug in the formal health sector is another factor influencing home drug use. vander Geest (1987) in South – Cameroun gave the reason why patent medicine vendors (PMVS) respond better to the health needs of the poor than the formal institutions as hospitals and health centres. Clients can purchase as little or as much drugs as it suits the self-care needs at the moment. In Ghana, the chemist provided an in expensive medical service than clinics for medical treatment (Osei, 1987).

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Distance of health facility is a factor influencing drug storage at home. Weiss, et al (1970) noted that the patronage of medical establishment is affected by distance since consumers usually patronise health facilities that are nearer to their homes. Mburu et al (1996) in Kenya confirmed that people who bought antimalarials from shops gave reason that other sources of care are far and the shop was open during emergencies. Deresa et al (2003) in Ethopia confirmed that those further than one hour's walk from the nearest health – care facility intiated treatment later than those with less than one hour is walk. This agreed with the findings of this study.

Wasting of patients time in public health institution is another factor influencing drug storage at home. In Nigeria, public health institution waiting time should be reduced so as to encourage people's patronage. (Katung, 2001). Many a times patients go through a hurdle of health related services such as consultations investigations and payment for services. This is similar to the findings of a study conducted in Trindad and Tobago in which the respondents mentioned that the greatest need for improvement were perceived to be in

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pharmacist and doctor's services with particular reference to waiting time (Singh, Hagg and Mustapha 1999).

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PERCEPTION OF DANGERS ASSOCIATED WITH DRUG STORED AT HOME SELF-CARE

The attitudinal disposition towards drug storage at home for self-care by the respondents showed that majority are favourably disposed to this practice with more than three-quarters (77.7%) of the adults agreeing that it is always good to store drugs at home. People belief that it is good to store drugs at home drug with home stored drugs that should be kept by mothers. These adults are not favourably disposed to using drugs that have changed in colour and expired drugs, and even those drugs which have expired over five years. This study shows that adults are to some extent aware of the dangers associated with using expired drug stored at home for self-care.

The theory of reasoned action posits that a particular behaviour is predicted by the individuals intention. Attitude depends on perceived benefits and positive evaluation of this practice on health. If there is no perceived benefit, a particular behaviour will not be imbibed. This practice of self-medication is an illness behaviour,

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which is the result of the perceived benefit to be gained from such behaviour. Furthermore the social pressure by significant others can influence the behaviour.

The storage of home stored drugs on shelves, cupboards and plastics showe l that adult are to some extent aware on the proper storage of drugs. Alarming though is the lack of expiry date seen in the packaging and labelling of home stored drugs. Drugs without expiry date are a source of accidental drug induced poisoning in the population.

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IMPLICATION OF THE FINDING FOR DRUG USE EDUCATION

Health education strategies should be targeted at the public on the problems of drug abuse and dependence in our community using the mass media.

Emphasis should be placed on self-care with non - drug therapy. Efforts should be made to upgrade the public knowledge on health promotion which should focus on the importance of good nutrition to health, personal hygiene, exercise and drinking of potable water. The aspect of drug education in the community these areas need to be incorporated into the methods of delivery information, education and communication materials, group discussion and the mass media. The mass media have been found to be most important in disseminating drug education using drama, radio shows and a follow up process evaluation so that people can give feedback.

A community based intervention programme should be organized in churches, mosques and market - place using health workers to upgrade the public knowledge on drug use education. Training of

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health workers to upgrade their knowledge so as to be able to educate their patients/public on the importance of drug use education. Training workshops for health workers who would go back to their health institution to the disseminate information to be given by drug dispensers to their clients. Evaluation can be done by mystery clients.

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RECOMMENDATIONS

Based on the findings the following recommendations are made:

1. Adults should be educated on proper drug usage. This would involve dissemination of information by the pharmacist, patent medicine vendor health workers and itinerant drug peddlers on the proper usage of drug before dispensing. This should involve giving them information on dosage regimen and drug side effects.

2. The State Ministry of Health (SMOH) should organize training programmes for patent medicine vendors and itinerant drug peddlers on the use of over the counter drugs and there should retraining / refresher curse every two years to upgrade the knowledge on OTC drugs.

3. The training sessions should involve education on symptomatic management of prevailing health problems such as fever, pains, headache, stomachache, worm infestation and others. Emphasis

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should be placed on the need for referral when complications occur during therapy.

4. Community members through the various religious and community based organisations should be sensitized on the problems of drugs abuse and dependence by using non-drug therapy.

5. Health workers through the various community associations should organise public campaigns on "Health is Wealth" by promoting a healthy lifestyle behaviour. This would help to reduce the current prevalence of certain diseases such as obesity, hypertension, diabetes and reduce the future incidence of such diseases by promoting a fitness culture.

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Observational Checklist on Drugs Stored At Home for Self - Care

OBSERVATION CHECK LIST	STORED AT HOME		PACKAGING						STORAGE CONDITIONS										EXPIRY DATE
LIST OF DRUGS	Y/N	%	IN PAPER	%	IN NYLON	%	IN SACHET	%	SHELF	%	CUPBOARD	%	PLASTIC	%	TABLE	%	BASKET	%	
ANTIMALARIALS																			
Chloroquine																			
Fansidar																			
ANALGESICS/ ANTIPYRETICS																			
Paracetamol																			
Novalgin																			
ANTIHELMINTIC																			
Keliax																			
Combantrin																			
HYPNOSEDATIVES																			
Valium																			
ANTIBIOTICS																			
Septrin																			
Flagyl																			

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DRUGS STORED AT HOME FOR SELF- CARE IN IBADAN SOUTH – WEST LOCAL GOVERNMENT AREA, OYO STATE, NIGERIA.

QUESTIONNAIRE

INTRODUCTION

Good day,

My name is Mrs. Olasoji and I am a student of the Department of Health Promotion and Education, College of Medicine, University of Ibadan. This questionnaire is designed to assess the drugs stored at home and used for self – care. We will make sure that all the information you give us is kept confidential. Therefore we will not write down your name on this form or any other forms for this study. Your most open and sincere answers are needed to make this programme successful so we would like you to all questions completely and honestly.

Thank you: Are you willing to participate?

1. Yes (If "yes", continue interview)
2. No (If "no", stop interview and thank respondent)

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Form Number _____

Name of Community_____

Name of interviewer_____

SECTION A

DEMOGRAPHIC DATA

1. Type of Community

   1. Inner Core – Orita Merin, Foko, Isale – Ijebu, Isale – Osi Agbokojo, Agbeni.

   2. Transitional – Oke – Ado, Oke – Bola, Joyce B, Ososami, Molete, Odo – Ona , Apata.

   3. Peripheral – Oluyole Estate & Extension, Iyaganku Quarters, Alalubosa, Chanllenge, Ring Road.

2. Age in Years _____

3. Sex of respondent — 1. Male 2. Female

4. Type of Family — 1. Monoganious 2. Polygamous

5. Marital Status — 1. Married 2. Unmarried

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3. Single 4. Widowed

5. Others

6. Nationality 1. Nigerian 2. Non-Nigerian

7. Ethnic Background 1. Yoruba 2. Igbo

3. Hausa 4. Others specify

8. Religion 1. Christianity 2. Islam

3. Traditional Religion

9. Number of Children_____

10. Occupation _____

11. Level of Education

1. No formal education 2. Some primary education

3. Completed primary education 4.Some secondary education

5. Completed secondary education 6.OND/NCE/RN

7. Some University education 8. Completed University education

12. Income from all sources in a month.

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SECTION B

13. What type of ailment do you commonly suffer from? Please tick all that apply 1. Fever 2. Pain 3. Headaches 4. Stomachache 5. Convulsion 6. Worm infestation 7. Others

14a List all the drugs that you currently have in this house their quantity, knowledge of correct doses for Adult and side – effects.

DRUG NAME	QUANTITY AT HOME NOW	CORRECT ADULT DOSAGE	SIDE EFFECTS	KEY SIDE EFFECTS
				1. Headache
				2. Nausea
				3. Vomiting
				4.Stomachache
				5. Convulsions
				6. Fainting
				7. Allergy: Rashes and Itching
				8.Others specify

14b. Where do you buy drugs that you usually store at home from?

Please tick all that apply

1. Patent Medicine
2. Government Hospital

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3. Chemist

4. Private Hospital

5. Itinerant drug peddlers

15. Do you procure your drugs on medical prescription

1. Yes 2. No

16. Where do you store these drugs?

1. In an open container

2. In an unlocked cupboard or box

3. In a locked cupboard box

4. In a fridge

5. Other (please specify) _____

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17. I will like to ask you a few questions about the drugs stored at home in the last one-month and how they were used.

Name of home stored drug used in the last one month	Type of drug used in the last one month	Ailment the drugs was use for	Age of person the drug was used for	Who decided that these drug should be used	Dosage given /frequency of use (how many were given/used and at what time and for how many days	Side effect experienced if any	Outcome of treatment

KEYS

	1. Antimalarial	1. Myself		1. Mother		1. Headache	1. Fully cured
	2. Analgesic	1. Child		2. Father		2. Nausea	2. Partially cured
	3. Antihelmintics	2. Spouse		3. Friend		3. Vomiting	3. Non – cured
	4. Hypnosedative	3. Mother		4. Health-Worker		4. Stomachache	
	5. Expectorant	4. Father		5. Myself		5. Convulsion	
	6. Antibiotics	7. Others Specify		Others Specify		6. Fainting	
	7. Vitamins & Blood tonics					7. Allergy: Rashes and itching	
	8. GIT Drugs					8. others specify	
	9. Ant diabetics						
	10. Others please Specify						

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SECTION C

18. Why do you keep drugs at home? Please tick all that apply

    1. Convenience 2. Time 3. Cost 4. Distance

19. Do you belief it is always necessary to keep drugs at home

    1. Yes 2. No

20. If yes please state why?

21. If no please state why?

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Please I will like you to indicate whether you 'agree' or 'disagree' or 'undecided' on each of these statements.

	Agree	Disagree	Undecided
22. It is always good to keep drugs at home			
23. Home stored drugs for childcare should not be kept by mothers?			
24. Home stored drugs except those relating to childcare should be kept by fathers?			
25. All home stored drugs that change colour should not be discarded but used			
26. All home stored drugs with expiry dates and in which the dates have expired should not be discarded?			
27. There is nothing wrong in using home stored drugs even when stored for over 5 years			

28. What suggestions do you have for improving the safety and use of drugs stored at home?

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TABLE 1

CHARACTERISTICS OF THE STUDY AREA

S/N	CHARACTERISTICS	TYPE	NUMBER
1.	Health Care Services	Federal (Nig) Railway Clinic	1
		State	8
		Local Government	12
		Private	141
2.	Health Care Providers	Doctors	119
		Nurses	533
		Pharmacists	15
		Med. Lab. Scientists	21
		Radiographers	5
		Environmental Health Officer	20
		Chews	19
		Others	–
3.	Social Facilities	Industries	–
		Hotels	–
		Banks	14
		Stadia	2
		Railway Station	1
		Post – Officer	1
		High Courts	2
		Markets	10
		Churches/Mosques	–
		Electricity	Available
		Water Supply	Available
4.	Major Economic Activities	Civil Services	–
		Teachers	–
		Farming	–
		Trading	–
		Tailoring	–
		Artisans	–
		Farming, Tailoring	–
5.	Educational Institutions	Primary Schools	149
		Secondary Schools	–
		Post - Secondary Institutions	3

N.B
(–) Non – Available data

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TABLE 2

WARDS IN IBADAN SOUTH - WESTLOCAL GOVERNMENT AREA

S/N	LOCAL GOVERNMENT AREA	NAME OF WARDS	COMMUNITIES
1.	Ibadan south – west local government	Ward one (1)	beere, oja-oba oritamerin, alekuso, ori-olowo
		Ward two (2) Sw1	oja-oba, idi-arere
		Ward three (3) Sw3	gege, isale-osi, akuro, apanpa
		Ward four (4) Sw4 & 6	idi-arere, ibul ?, akuro, igbando, popoyemoja
		Ward five (5) Sw 4	gege, agbeni, foko, asake, maya, akuro
		Ward six (6) Sw 5	foko, maya, amole, akuro
		Ward seven (7) Sw 6	foko, amole, ile-soiku, agbokojo area ogunpa, amunigun
		Ward eight Sw 7	NTC, iyaganku, gbagi, ogunpa, oke-bola
		Waid nine (Sw 8)	molete, challenge, anfani, college crescent, imolefalafia, aiyegbusi, ayankoya and [illegible]
		Waid ten (Sw 8)	oke-ado, liberty road, joyce-b, [illegible]
		Waid eleven (Sw9)	ring-road, oluyole cable, challenge, new adeoyo
		Ward twelve (Sw 9)	ode-ona, apata, idi-ishin, jericho, gbekuba

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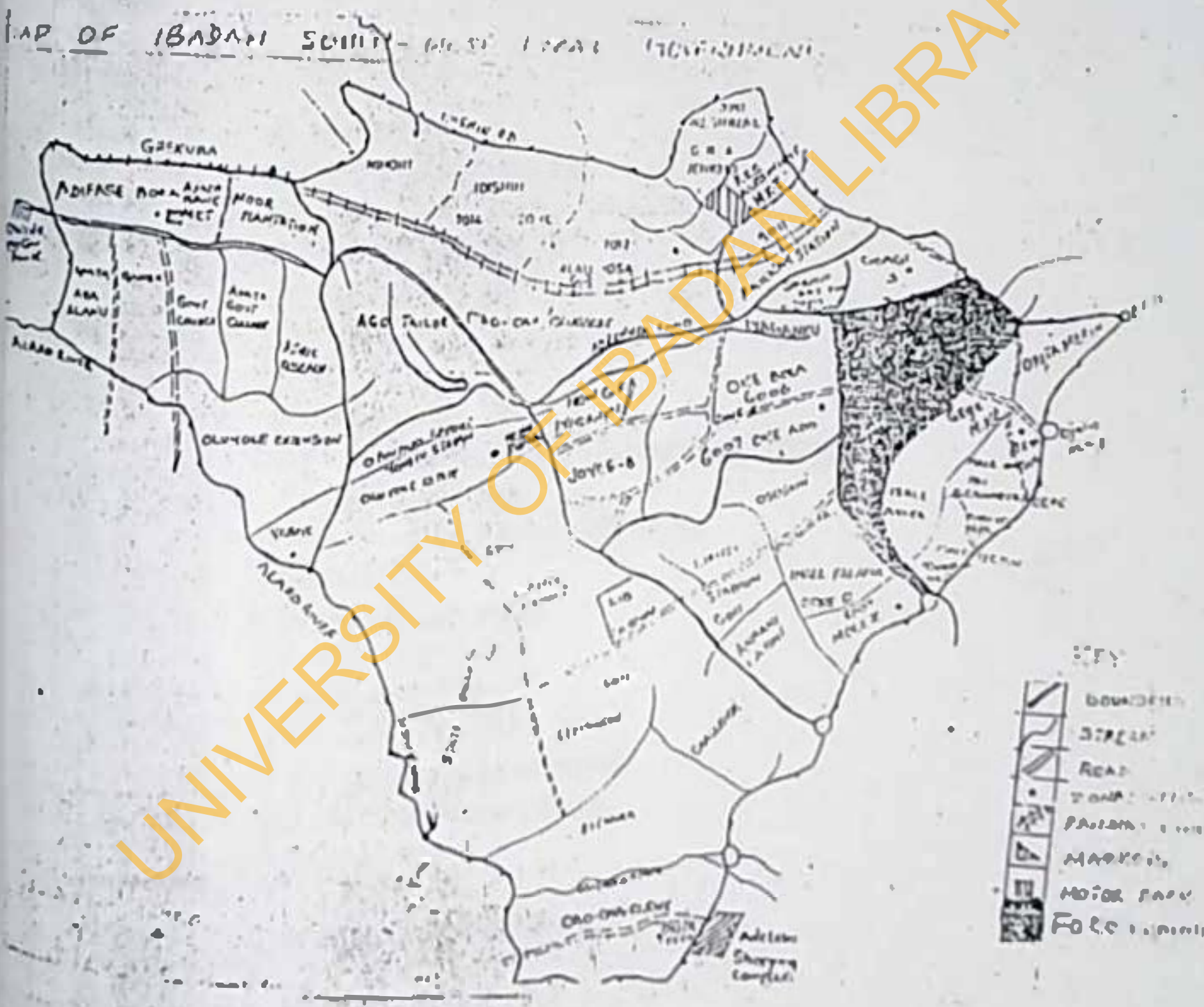
FIGURE THREE

MAP OF IBADAN SOUTH WEST LOCAL GOVERNMENT AREA



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APPENDIX I

CLASSIFICATION OF DRUGS BASED ON ESSENTIAL DRUG LIST

1. Analgesics, antipyretic and non - steriodal antiinflammatory drugs.
2. Anaesthetics
3. Antiallergics
4. Anticonvulsant/Sedatives
5. Antidiabetic drugs
6. Antihypertensive drugs
7. Antipsychotic drugs
8. Antiinfective
9. Antidotes
10. Anti helmintics
11. Anti neoplastic and immunosuppressive drugs
12. Dermatological drugs
13. Hormones and synthetic substitutes
14. Heamatinics
15. Ophthalmologic drugs
16. Oral rehydration salts
17. Antimigraine drugs
18. Intravenous fluids
19. Antiseptics and Disinfectants
20. Ear, Nose and Throat drugs
21. Dental drugs

(Essential drugs list 1996)

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