POSTPARTUM MOTHERS' PERCEPTION AND PRACTICE OF SELF-MEDICATION DURING PREGNANCY IN IBADAN SOUTH WEST LOCAL GOVERNMENT AREA, OYO STATE

BY

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CERTIFICATION

I certify that this study was carried out by Khadeejah Adedoyin Adedokun under my supervision at the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan.

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DEDICATION

This work is dedicated to Almighty Allah for his countless mercies over me

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ABSTRACT

Poor health seeking behaviour, especially among the poor, is one of the factors affecting the achievement of the third Sustainable Development Goal (SDG 3), whose target is to improve maternal health. Such poor health seeking behaviours include self-medication practices during pregnancy and non-attendance of antenatal care. Studies have explored practice of self-medication among pregnant women attending antenatal clinics within hospitals, but little has been done in the community to capture women that do not attend antenatal clinics during their pregnancy. This study therefore aimed at investigating the perception and practice of self-medication among postpartum women during pregnancy in Ibadan South West Local Government Area (LGA), Oyo State.

A community-based descriptive cross-sectional survey design was conducted among 359 consenting women in Ibadan South-West in Ibadan. They were selected using a four-stage sampling technique. Data was collected using pre-tested semi-structured interviewer administered questionnaire. The questionnaire assessed the knowledge of the postpartum mothers' on the safety of drugs that are commonly used during pregnancy using a 34 points scale. Scores of 0-13, 14-23, 24-34 were categorised as poor, fair and good knowledge respectively. Perception of risks associated with self-medication during pregnancy was also asssesd using a 14 points scale. Scores of 0-8 and 9-14 were categorised as negative and positive perception respectively. Similarly, practice of self-medication was assessed using a 22 points scale. Scores of 0-12 and 13-22 were categorized as good and poor practice respectively. The data was analysed with SPSS version 24 using descriptive statistics. Chi-Square test was also used to analyse the relationship between the variables with level of significance set at 5%.

Mean age of the respondents was 29±3.6 years. Majority (64.9%) of the respondents had completed tertiary education and 43.2% of them were into trading. Almost half (47.1%) of the respondents had good knowledge about the safety of some commonly used drugs in pregnancy, 33.1% had fair knowledge while 19.8% had poor knowledge. Similarly, half (50.7%) of the respondents perceived self-medication during pregnancy to be associated with risks and 59.1% engaged in practice of self-medication extensively during their last pregnancy. A significant relationship was found between attendance of antenatal clinic and practice of self-medication (P-value<0.001). A significant relationship was also found between perception of risks and practice of self-medication (p-value<0.001). However, there

was no significant relationship between knowledge and practice of self-medication (p-value=0.06). This study revealed that the overall knowledge of safety of drugs used during pregnancy was just on the average. A similar result was obtained for the perception of risks associated with self-medication during pregnancy. The practice of self-medication was however considerably high. Certain factors predispose pregnant women to self-medication. Practice of self-medication was found to be higher in those who did not attend antenatal clinic.

Health education and awareness programmes should be carried out in communities to educate women of reproductive age on the risks associated with self-medication in pregnancy and on the need for attendance of antenatal care.

Keywords: Self-medication, Post-partum mothers, Perception, Practice, Antenatal attendance

Word count: 483

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ACRONYMS

SM	-	Self Medication
LGA	-	Local Government Area
SDG	-	Sustainable Developmental Goals
NDHS	-	Nigerian Demographic and Health Survey
NPC	-	National Population Commission
OTC	-	Over-The-Counter
POM	-	Prescription-Only-Medicines
UNFPA-		United Nation Population Fund
UNICEF-		UnitedNationsInternational Children's Emergency Fund
USAID-		United States Agency for International Development
WHO	-	World Health Organization
FDA	-	Food and Drug Administration
CDC	-	Center for Disease Control
BNF	-	British National Formulary

OPERATIONAL DEFINITION OF TERMS

Postpartum Mothers - Mothers with babies of 0-6 months; a period clinically defined as delayed postpartum period

Knowledge - awareness and understanding of a particular subject

Practice – the use of an idea or belief

Perception - a way of understanding a particular subject

Self-medication - the use of drug to treat one-self without medical consultation

Over the counter (OTC) drugs - medicine bought or sold without a prescription

Teratogen – substances (e.g medicines) that may produce physical or functional defects in the human embryo or foetus (but not necessarily kill it) after a pregnant woman is exposed to them

Fetotin - Substances (e.g medicines) that poison a health foetus or even kill it, usually in the second and third trimesters.

® - signifies a drug called by its trade name

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Self-medication in pregnancy is a major public health concern as it greatly influences maternal health and child health. Maternal and Child Health is one of the goals of the Sustainable Development Goal (SDG) (Fakeye, Adisa and Musa, 2009). The third SDG is to ensure healthy lives and promote wellbeing for all at all ages and one of the targets under this goal is to reduce global maternal mortality ratio and to reduce neonatal mortality (Fakeye et al., 2009).

WHO (2012) defined self-medication as the selection and use of medicines by persons to treat self-recognized illnesses or symptoms. This broadly includes the use of old prescription, acquiring medication without prescription, consulting friends and relatives, neighbours and social groups. Simply put, self-medication is the treatment of common health problems with medicines without medical supervision.

Certain drugs, called over the counter (OTC) drugs are usually available for self-medication. These products/drugs do not require a medical prescription for their distribution or purchase (WHO, 2000). Self-medication has the benefits of reducing pressure on medical services and reducing health burden of those in rural areas where accessibility to medical services might be low. It is promoted for initial treatment at community levels in sub-Saharan African where geographical and economic access to orthodox health care services is poor (Nicoll, 2000; WHO, 2000 and Cooks, 2000). Even though these benefits are essential, in pregnancy, the risks involved are too consequential to be overlooked. Drug information leaflets are usually not provided to the consumers for a number of these OTC drugs.

Pregnancy is a state in which great physiological changes occur in the mother (Asfaw, 2016). In this state, most of the substances the mother is exposed to usually find their way to the foetus, therefore the benefits of self-medication in this state cannot be relied on. The risk of self-medication in pregnancy increases by many folds. Medicines can exert potentially harmful effects on the unborn child during any stage of the pregnancy, though

to varying degrees (Walbrandt, Pigarelli and Kraus, 2008). Self-medication with even seemingly harmless OTC drugs can have grave consequences on the developing foetus. Even though a few OTC drugs have a proven safety profile for use during pregnancy, others have unproven safety or are known to adversely affect the foetus (Tillett, Kostich, and VandeVusse, 2003).

Medication use during pregnancy has been an issue of concern both for the mother and foetus since the discovery of birth defects resulting from use of thalidomide in early pregnancy in 1960s (Gebreegziabher, Berhe, Gutema and Kabtyimer, 2012; Kennedy, 2014; Wondesen, Satessa and Gelaw, 2016). Thalidomide was synthesised by a German pharmaceutical company early in 1954 (Wondesen et al., 2016). Animal testing showed it wasn't toxic at even large doses; a few years later it was considered safe for everybody and by the end of the decade, it was used as on over-the-counter medication to ease the nausea in pregnancy. German physicians however noticed a strange surge in infant deformities towards the end of the 1950s; more than 120,000 infants were affected. Most cases resulted in miscarriages, but around 10,000 babies were born with truncated arms and legs (Gebreegziabher et al., 2012).

The tragedy now serves as an infamous reminder of the importance of clinical testing and strict drug regulation. .This has necessitated critical evaluation of the risk level of medicines during pregnancy (FDA, 2017) and avoidance of self-medication during pregnancy.

1.2 Statement of the Problem

Approximately 830 women die from preventable causes related to pregnancy and childbirth every day in 2015 and 99% of these maternal deaths occur in developing countries (WHO, 2018). Sadly, almost all of these deaths occurred in low-resource settings, and most could have been prevented. In most developing countries, especially Nigeria, the progress in reducing maternal ratio has been to slow (WHO, 2015). While self-medication is not a direct cause of these high maternal and child mortality rate, its consequences could lead to pre-term labour, maternal haemorrhage and subsequently death (WHO, 2015). There is increasing evidence that self-medications among pregnant women are common in many low-resource developing countries (Abasuibong, Bassey, Udobong, Akinbami, Udoh and Idung, 2012). Self-medication in pregnancy can lead to structural and functional adverse effects on the foetus (Creanga, Sabel, Ko, Wasserman,

Shapiro-Mendoza and Taylor, 2012; Verstappen, Smolders, Munster, Aarnoudse and Hak, 2013 and Adanikin and Awoleke, 2016) including foetal toxicity, malformations, teratogenic effects, and other potential harms (Yang, Walker, Krewski, Yang, Nimrod and Garner, 2008; Wacha and Szijarto, 2011; Creanga et al., 2012; Asfaw, Bekele, Temam and Kelel, 2016 and Pogliani, Falvella, Cattaneo, Pileri, Moscatielio and Cheli, 2017). In addition to these, it may cause low birth weight, premature birth, feeding problems; and respiratory problems in the fetus and affect the health of mother (Yang et al., 2008; Creanga et al., 2012 and Pogliani et al., 2017).

For many commonly used drugs, evidences of their safety in pregnancy have not been established (Beyene and Beza, 2018). This is because medication safety information for pregnant women is limited due to the fact that pregnant women are often excluded from clinical trials of medicines (Yang et al., 2008; Irvine, Flynn, Libby, Crombie and Evans, 2010;Stephansson, Granath, Svensson, Haglund, Ekbom and Kieler, 2011 and Kurushee and Dhande, 2013). The limited medicine information has considerable contribution to maternal and neonatal mortality and morbidity, and foetal death (Creanga et al., 2012 and Smolina, Hanley, Mintzes, Oberlander and Morgan, 2015). Despite this, studies showed that there is a high level of self-medication use among pregnant women (Irvine et al., 2010 and Kurushe and Dhande, 2013). Globally, the practice of self-medication during pregnancy has been increasing in many regions of the world, especially in developing countries. (Kurushe and Dhande, 2013; Mohammed, Ahmed, Bushra and Aljadhey, 2013 and Abeje, Admasie and Wasie, 2015).

Studies have shown that the prevalence of self-medication in pregnancy is high in Western, Northern and Eastern Europe; North and South America and Australia (Bohio, Brohi and Bohio, 2016; Baghianimoghadam, Mojahed and Baghianimoghadam 2013; and Kassada, Miasso, Waidman and Marcon, 2015 and Lupattelli, Spigset, Twigg, Zagorodnikova, Mardby and Moretti, 2014). Low prevalence rates have however been observed in Peru, Portugal, Netherlands Brazil and Iran (Verstappen et al., 2013; Mini, Varas, Vicuna, Levano, Rojas and Medina, 2011; Rocha, Bezerra, Lima and Costa 2013; Brum, Pereira, Felicetti and Da Silveira 2011 and Shamsi and Bayati, 2010). In Africa, self-medication with both modern and herbal medicines is very common (Beyene and Beza, 2018). Studies conducted in different parts of Nigeria revealed that 72.4% in Uyo, 31.5% in Ado-Ekiti, 63.8% in Ibadan, and 85% in Jos of pregnant women practiced self-

medication (Adanikin and Awoleke, 2016; Emmanuel, Achema, Afoi and Maroof, 2014; Yusuff and Omarusehe, 2011). Nigeria is among the developing countries of the world, where drugs are freely displayed for sale in unauthorized places such as markets, shops, roadside stalls, motor parks, and other public places by individuals not duly licensed (Abasuibong et al., 2012). This occurs as a result of poor medical services and lack of professional control of pharmaceutical products, thus, forcing people to self-medicate irresponsibly (Baig, 2012). There is a high incidence of self-medication with OTC and prescription medicines ranging from 15.0 to 81.5% in different localities (Bello, Morhason-Bello and Olayemi 2011 and Emmanuel et al., 2014). It is a serious problem in Nigeria, and a study from the southern part of the country showed that as many as 60–90% of the population in some communities practice self-medication in one way or the other (Abasuibong et al., 2012). Prevention of pregnancy and delivery-related problems associated with self-medication practice helps to protect the health of the mother and foetus (Creanga et al., 2012 and Smolina et al., 2015)). Identifying the perception to risks associated with self-medication during pregnancy and the extent to which it is practiced may contribute to achieving the targets of Sustainable Development Goal (SDG). (Beyene and Beza, 2018). This study will add to the body on information on self-medication during pregnancy, in an effort to achieve these targets.

1.3 Justification of the Study

To achieve more significant success in the reduction of high maternal and child mortality, a lot of attention should be paid on health education and promotion activities of pregnant women like control of self-medication in pregnancy. Some studies have been carried out on self-medication among pregnant women in Nigeria but all the studies involved only pregnant women that attend antenatal clinics. This means pregnant women that do not attend antenatal clinics, yet self-medicate have been left out. The health implication of this is even more disturbing. Also, no study has been carried out in the Ibadan South West Local Government Area.

This study attempts to evaluate self-medication practice among postpartum women during pregnancy in Ibadan using Ibadan South West Local Government Area as the study population. It will include women that attended antenatal clinics during their pregnancy and those that did not. This information will throw more light into addressing roots of the problem of self-medication among pregnant women. The results can help to find ways of controlling it, thereby increasing maternal and foetal health in Nigeria.

1.4 Research Questions:

1. What is the level of knowledge of women towards self-medication during pregnancy?
2. What is the perception of women towards self-medication during pregnancy?
3. What is the practice of self-medication during pregnancy?
4. What is the relationship between attendance of antenatal clinics and self-medication?

1.5 Objective of the Study

1.5.1 Broad Objective:

The broad objective of this study was to investigate the practice and perception of postpartum mothers to self-medication during pregnancy in Ibadan South West Local Government

1.5.2 Specific Objectives:

The specific objectives of this study were to:

1.assess the level of knowledge of women towards self-medication during pregnancy

2.determine the perception of risk of self-medication during pregnancy

3.examine the extent to which self-medication is practiced during pregnancy

4.identify factors affecting self-medication during pregmancy

1.6 Research hypotheses

The following null hypotheses were tested by the study:

There is no significant association between:

1. socio-demographic variable and practice of self-medication
2. knowledge of self-medication and practice of self-medication
3. perception of risk associated with self-medication in pregnancy and its practice
4. attendance of antenatal clinics and practice of self-medication

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview of Self-Medication

Self-medication is a major form of self-care (Drug Utilization Research Group, 1997). It is the process by which the patient assumes a greater role in the management of an ailment, using a pharmaceutical product without a prescription from the physician (Hughes, McElnay, and Fleming, 2001). It is practised by a significant fraction of the world's population, in both developed and developing countries (Figueiras, Caamaño, and Gestal-Otero, 2000). It is majorly affected by socio-demographic and socio-economic factors (Cocks and Dold, 2000).

Self-medication is a global challenge as its prevalence is high throughout the world. This is mostly due to the ease of accessibility of a wide range of medicines. Inadequate health service is a factor that positively influences self-medication in developing countries, (Shankar, Partha and Shenoy, 2002). The major classes of drug that are majorly used for self-medication worldwide is antibiotics, antihistamines and anti-malarial (Tabiei, Farajzadeh and Eizadpanah, 2012; Patil et al., 2014 and Alipour et al., 2015). Self-medication with drugs like antibiotics is highly prevalent in developing countries, with the exception of a few developed countries (Donkor, Tetteh-Quarcoo, Nartey, and Agyeman, 2012). This is very unfortunate as it has led to rapid development of incidences of antibiotic resistance (CDC, 2013**),** making bacterial infections a renewed threat.

2.2 Self-Medication in Pregnancy

Self-medication during pregnancy is more disturbing. This is because the health of the growing baby (foetus), and not just the pregnant woman, is affected. Medicines can exert potentially harmful effects on the unborn child during any stage of the pregnancy though to varying degrees (Walbrandt, Pigarelli and Kraus, 2008). Over the years, ease of accessibility of many OTC medications and even prescription-only-medicines has greatly improved the incidences of self-medication in pregnancy.

Irrational drug use in pregnancy can have negative consequences on the foetus, as some drugs are teratogenic (Pangle, Herfindal and Gourley, 2006) and there is a great possibility of the medications used crossing the placenta barrier to the foetus. Although

reports of teratogenicity in Nigeria are very few, this is very likely as a result of non-reports of such cases due to cultural beliefs and stigmatization associated with such birth defects; and not necessarily because of its non-existence (Feyisetan, Asa and Ebigbola, 1997).

Self-medication is not restricted to synthetic drugs as herbal medicines are also been used in the treatment of diseases especially in developing countries (Azadbakht, 2008). Many pregnant women undergo self-medication with these herbal medicines with the belief that they are natural products, therefore cannot affect the developing foetus (Holst, Haavik and Nordeng, 2009). Contrary to this belief, use of some herbal compounds in pregnancy can lead to uterine contractions. For example ingestion of high amounts of liquorice in pregnancy can increase the risk of premature delivery in two to three folds and can subsequently lead to miscarriage (Strandberg, Jarvenpaa, Vanhanen and McKeigue, 2001).

2.3 Perception of risks associated self-medication

A significant number of women do not believe self-medication has grave consequences on developing foetus (Suleman, Ketsela and Mekonnen, 2009). Studies have shown that a few percentages of pregnant women believe that that some ailments or diseases are mild and does not require a doctor's consultation (Garofalo, Guiseppe and Angelillo, 2015). Other reasons why poor pregnant women have poor perception to risks of self-medication are the belief that they have previous good experience of treating similar illness; feeling of independence to take care themselves and non-availability of doctors (Haider and Thaver, 1995; Shankar, Partha and Shenoy, 2002; Afolabi, 2008, Suleiman et al. 2009 and Garofalo et al. 2015).

Advertisement of pharmaceutical products by pharmaceutical companies is also another promoting factor for self-medication (Suleiman et al., 2009). In addition, low financial capability and high cost of health care services are common reasons why pregnant women self-medicate (Brieger, Ramakrishna and Adeniyi, 1986 and Uzochukwu and Onwjekwe, 2004).

A study carried out by Abeje et al. (2015) revealed that the two most common reasons for self-medication are prior experience with the drug and avoidance of long waiting time at the Doctor's waiting room. This result is similar to studies obtained at Jima Specialized

University Hospital (JSUH) (Befekadu, Dhekama and Mohammed, 2014), governmental health centres in Bahir Dar city (Abeje et al., 2015) and at selected hospitals in Jos, Nigeria (Emmanuel et al., 2014). According to Ebrahim, Atashsokhan, Amanpour and Hamidzadeh (2017), easy access to drugs without prescription is a major factor that facilitates self-medication in pregnancy.

In Tanzania, even though there has been expansion of primary health facilities over some decades (Kante, Exavery, Phillips and Jackson, 2016), absent of trained staff, ineffective chain supply of medical equipment, and occasional failure in the health system are some of their challenges of of adequate antenatal care services (Kahabuka, Moland, Kvale and Hinderaker, 2012; Gross, Schellenberg, Kessy, Pfeiffer and Obrist, 2011 and Manzi, Schellenberg, Hutton, Wyss, Mbuya, Shirima, Mshinda, Tanner and Schellenberg, 2012). This results in more pregnant women engaging in self-medication.

Some other reasons for self-medication in pregnancy that have been identified by many studies are: prevention of abortion, treatment of insomnia, treatment of infection, control of nausea and vomiting and prevention of anaemia (Abasuibong et al., 2012). In addition, the study of Ebrahimi et al. (2017) showed that perceived non-seriousness of an illness is a major influencing factor of self-medication.

2.4 Knowledge of drugs and practice of self-medication

According to the United States Food and Drug Administration (USFDA) risk classification of medicines during pregnancy, medicines under category A show no risks in controlled studies and those medicines in category B have no evidence of human risk in controlled studies. Medicines in category C may have potential risks to the foetus. The risks cannot be ruled out but the medicines under category C should be used only if the potential benefits justify the potential risks to the foetus. Medicines in category D have positive evidence of human foetal risk, and those in category X are totally contraindicated in pregnancy because they have proven foetal risks (FDA, 2017).

Medicines in pregnancy categories C and D may have some potential risk to the foetus but that is considered to be outweighed by the potential benefits. The FDA considered that medicines in category X should not be prescribed to pregnant women because the risks outweigh the benefits.

Salbutamol and co-trimoxazole are category C medicines while ibuprofen; naproxen are category D medicines and oral contraceptives are category X medicines, yet studies show that pregnant women have poor knowledge of these drug safety classification and use these drugs in pregnancy (Abeje et, al., 2015). According to a study conducted by Wen and Walker (2008) in Canada using a pharmacist database, about 19.4% of the women were found to have used FDA category C, D and X medications at least once during pregnancy.

A study was conducted in France by Autret-Leca, Deligne, Leve, Caille, Cissoko and Jonville-Bera (2011) which primarily aimed at evaluating the incidence of exposure to teratogenic medicine during early pregnancy. It was realized that 1.1% women received at least one medication that was contraindicated during the first trimester, 9.5% received a medication that was not recommended, and 42.8% received a medication that was to be avoided.

The study of Karol, Agnes, Deodatus, Deogratias and Erasmus (2018) showed that the drugs commonly used in self-medication among pregnant women were anti-malaria, antiemetic and analgesics. Self-medication with antimalarial drugs is a common practice in communities/countries in which malaria is endemic such as Tanzania, Uganda and Nigeria (McCombie, 2002 and Karol et al., 2018). Though malaria is endemic in these areas, WHO recommend restriction on drug use for safety purposes especially in the first trimester, in which there could be increased risk of teratogenicity; and the third trimester, in which some drugs could induce abortion (WHO, 2015). For example high doses of the antimalarial drug, Quinine is teratogenic in the first trimester, it should therefore only be used when the benefits outweighs the risks (British National Formulary, 2009). Since a health practitioner is in the best position to determine such benefit-risk ratio, such drug should not be self-medicated.

Based on the findings of Karol et al. (2018) on self-medication among pregnant women in Tanzania, the antimalarial drug mostly used in self-medication is are Sulphadoxine-Pyrimethamine (SP) and Artemether-Lumefantrine (AL). SP is the drug of choice in Intermittent Preventive Therapy for malaria in pregnant women (IPT_P). According to Centre for Disease Control, IPT_P entails administration of an effective antimalarial drug (currently SP) to all pregnant women, without testing them for malaria parasite. It is

usually given at routine antenatal clinics starting from second trimester. SP is contraindicated in first trimester of pregnancy because it is a folate antagonist, can therefore be possibly teratogenic. In addition it is not the drug of choice for treating diagnosed malaria but rather for preventing it. Yet studies showed that most pregnant women use it for malaria treatment due to poor knowledge about the use of the drug (Beyene and Beza, 2018); this constitutes irrational drug use. This can lead to incomplete eradication of the malaria parasite, and subsequently lead to maternal anaemia, foetal loss, premature delivery and low birth-weight infants (CDC, 2018).

Other drugs commonly used for self-medication include analgesics especially paracetamol and the non-steroidal anti-inflammatory drugs (NSAIDS), vitamins, antibiotics, anti-emetics, histamines and herbs (Yusuf and Omarusehe, 2011; Abasuibong et al., 2012 and Emmanuel et al., 2011). This is similar to the study conducted by Jambo, Mengistu, Mekonnen, amare and Dumessa (2018) in Harar town, Ethopia, where it was revealed that paracetamol, cough syrup and amoxicillin were the most commonly used drugs. Other similar studies are the study done at JSUH (Befekadu, Dhekama and Mohammed, 2014) and Eastern Congo (Mbarambara, Songa, Wansubi, Mututa, Minga and Bisamgamo, 2016), which showed paracetamol and amoxicillin were among the commonly used medications for self-medications during pregnancy. Despite its wide use, prolonged use of paracetamol in pregnancy has been associated with Attention deficient Hyperactive Disorder, ADHD (Ystrom, Gustavson, Brandlistuen, Knudsen, Magnus and Susser 2017) in the child later in life. It has also been associated with increased risk of overall cerebral palsy and unilateral spastic cerebral palsy in the child (Liew et al., 2016 and Petersen, Liew, Andersen, Andersen, Andersen and Martinussen, 2017). Therefore caution should be taken with prolonged use of "ordinary paracetamol" in pregnancy.

With regards to the use of non-steroidal anti-inflammatory drugs for body pains in pregnancy, most of its manufacturers advise that it should be avoided in pregnancy (unless benefits outweighs risk - a decision to be made by only the gynaecologist in-charge of the pregnant woman) (British National Formulary, 2009). Ketorolac, a NSAID, is contraindicated during pregnancy, labour and delivery (BNF, 2017). Constant or Prolonged use of all NSAIDS in the third trimester can lead to closure of the *foetal ductus arteriosus in utero*. The fetal ductus arteriosus is the foetal blood vessel that carries oxygenated blood from the mother to the foetus thereby making sure that the foetus does

not make use of its not-yet-developed lungs. When a new-born breathes and uses the lungs, the ductus is no longer needed therefore it should close by its self. This usually occurs about two days after birth. Premature closure of the blood vessel while the foetus is still growing is termed *fetal ductus arteriosus in utero.* It can lead to pulmonary hypertension of the new-born (BNF, 2017). In addition, prolonged use of NSAIDS in the third trimester can lead to delayed onset and increased duration of labour (BNF 2017).

Concerning antibiotics, aside the fact that their irrational use can lead to bacterial resistance, some of them are contraindicated in pregnancy. Examples of antibiotics that are contraindicated in pregnancy are:

- Tetracyclines –it has adverse effects on skeletal development in the first semester and causes discolouration of child's teeth when used in pregnancy.
- Co-trimoxazole (Septrin) – it is teratogenic if used in the first trimester because trimethoprim is a folate antagonist. It also causes neonatal haemolysis if used in the third trimester.
- Nitrofurantoin- should be avoided at term, because it causes neonatal haemolysis.
- Macrolides- Manufacturer of Azithromycin and Clarithromycin advices that they should be avoided in the first trimester, unless potential benefits outweigh risk.
- Quinolones such as Ciprofloxacin

Antiprotozoal drugs that are contraindicated in pregnancy are

- Metronidazole- which should be avoided in high doses, except benefit outweighs risk
- Tinidazole- should be avoided in high doses

Antifungal drugs that should be avoided in pregnancy are:

- Fluconazole – high doses should be avoided in pregnancy
- Griseofulvin- it is fetotoxic and teratogenic, should therefore be avoided in pregnancy. Long time high doses of it can cause congenital abnormalities.

Source: BNF, 2017

An antiulcer drug that should be avoided in pregnancy is Cimetidine. Manufacturer advises that it should be avoided unless essential (BNF, 2009).

For Mebendazole, an anti-helminthic, studies in animals shows high degree of toxicity, manufacturer therefore advises that it should be avoided (BNF, 2017).

Even self-prescription with vitamins has been found to be unsafe. High doses of vitamin A may be teratogenic, as it causes birth defects (BNF, 2017). Pregnant women should

therefore not take vitamin A supplements (including tablets and fish liver oil drops), except when it is prescribed by their gynaecologist (BNF, 2017).

A study conducted in Rajshahi City Bangladesh, on the prevalence and nature of self-medication of drugs among pregnant women (Haque, 2016) showed that a small percentage of women evenuse phenobarbitone without prescription.

Many studies also show that a lot of pregnant women self-medicate with local herbs. Self-medication with herbal drugs was substantially high among pregnant women (Karol et al., 2018). This act is rampant in Nigeria and some other developing countries (Fakeye et al., 2009; Gibson, Powrie and Star, 2001; Refuuerzo, Blackwell, Sokol, Lajeunesse, Firchau, Kruger and Sorokin, 2005; Cha-Hua, Wu-Shiun, Yueliang, Yi-Jian, Pei-Jen, Shio-Jean, Pauchung, 2007 and Glover, Amonkar, Rybeck and Tracy, 2003). Surprisingly even those who did not self-medicate with modern drugs used herbal drugs. This is probably because self-medication with traditional herbal drugs is part of African culture in Africa due to its easy accessibility, affordability and availability (Kasilo, Soumbey,-Alley, Wambebe and Chatora, 2005). In addition local herbs are believed to be more effective, safer and have more rapid action (Ernst and White, 2000). However according to Joseph, Ezie and Aya (2016), none of the respondents could identify the constituents of the local herbs they consume. This is expected as the herbs are usually obtained from the local markets or from hawkers as concoctions as decoctions, therefore the consumers are usually unaware of its contents. Similar finding with herbal medicine use in pregnancy was found in other African countries such as South Africa (Abrahams, Jewkes and Mvo, 2002) and in some developed countries like Norway (Nordeng and Havnen, 2005).

2.5 Determining Factors of Self-Medication in pregnancy

Education is one of the determining factors of self-medication during pregnancy. In developing countries like Sri-Lanka, Ghana and Nigeria (Afolabi, 2008; Balbuena, Aranda and Figueras, 2009 and Biritwum, Welbeck and Barnish, 2000), lower level of education is usually a strong determining factor of self-medication. Karol et al. (2018) believe that this is probably because the educated women have higher incomes and can therefore afford health care services unlike the illiterates. Also, they usually have health insurance coverage from their organizations and sometimes do not have to pay from their pockets. In contrast, different studies carried out in developed European countries showed that higher levels of education is positively linked to self-medication (Grigoryan, Haaijer,

Burgerhof, Mechtler, Deschepper and Tambic, 2006; Garofalo, Giuseppe and Angelillo, 2015 and Figueiras, Caamano and Gestal-Otero, 2000) This could be because in such developed countries, there is internet pharmacies that educated people are more likely to take advantage of (Karol et al., 2018). They also believe they can easily read drug leaflets and use internet search engines therefore do not spend hours at Doctors' waiting rooms to treat "minor" illnesses.

According to the study carried out by Karol et al. (2018) on self-medication among pregnant women in Jos, Nigeria, occupation is another determining factor. His study demonstrated that most of the pregnant women that engaged in self-medication had no form of employment e.g. housewives. He attributed the low level of self-medication among employed pregnant women to their high level of education. This finding of Karol et al. (2018) was similar to studies carried out in other developing countries like India (Deshpande and Tiwari, 1997).

Karol et al (2018) also showed that occupation is another strong predictor of self-medication among pregnant women attending antenatal clinics. Those that engaged more in self-medication were those with no form of employment. The low level of self-medication among employed pregnant women could be due to their high level of education and vice-versa. It could also be due to the fact that most organizations have insurance schemes that cover antenatal services that employed pregnant women could take advantage of for, without them having to pay from their pockets. These finding were consistent with that of studies carried out in other developing countries, like India (Deshpande and Tiwari, 1997).

With regards to gestation period, most studies showed it to be a strong predictor while some studies showed that it was not so strong a determining factor of self-medication among pregnant women. Karol et al (2018) showed that self-medication was highest during first trimester of pregnancy and it decreased with increase in the gestation age. This is probably because first trimester is usually accompanied by a number of discomforts and illnesses such as dizziness, nausea and/or vomiting, headache and fevers; allowing more pregnant women to engage in self-medication in an attempt to relieve such uncomfortable symptoms. However, this finding is worrisome because exposure of foetus to drugs at this early stage (first trimester) is likely to cause congenital malformations

(Berard, Ramos, Rey, Blais, St-Andre and Oraichi,2007 and Gidai, Acs, Bánhidy and Czeizel,2008).

2.6 Illnesses associated with self-medication

The leading illnesses which necessitate self-medication among pregnant women were malaria, morning sickness and headache (Karol et al., 2015). The result is consistent with the studies carried out at JSUH (Befekandu et al., 2014), Bukavu, Eastern Congo (Mbarambara et al., 2016) and at selected hospitals in Jos, Nigeria (Emmanuel et al., 2014). This is expected in malaria endemic regions as immunity of women is suppressed during pregnancy (to protect the foetus from the being attacked by the pregnant woman's immune cells) making them susceptible to malaria. Sadly not all incidences of headache are related to malaria; headache is a symptom associated with many illnesses and diseases including pregnancy-induced hypertension. These distinctions/differences however, can only be detected by trained medical personnel such as gynaecologists.

Morning sickness is a common symptom experienced in pregnancy especially in the first trimester. Unfortunately, this first trimester is the period of greatest teratogenic risk because it is the trimester in which organogenesis (organ formation) occurs (Mitchell, Gilboa, Werler, Kelley, Louik and Hernandez, 2011). There have been concerns about the safety of the use of drugs in pregnancy for even "ordinary" nausea and vomiting since the thalidomide tragedy in the 1960s (Koren, Pastuszak and Ito, 1998). Thalidomide was considered safe in pregnancy and was used for prevention and treatment of nausea and vomiting in pregnant women (Miller and Stromland, 1999). Unfortunately, it caused a lot of severe limb defects and some cases of hearing and ocular anormalities in babies born (Diggle, 2001 and Miller and Stromland, 1999). This showed that it is highly teratogenic as it could easily cross the placenta and harm the developing foetus (Gidai et al., 2008). It was therefore withdrawn from the market.

Some other conditions that are associated with self-medication are fever, pain, infection, insomniaa (Abasuibong et al., 2012), gastrointestinal disorders, common cold, cough and pile (Joseph, 2016). This is expected as physiological changes that occur in pregnancy (such as constriction of blood vessels) make most pregnant women to be easily affected by cold and cough.

2.7 Conceptual Framework: Precede-Proceed Model

The PRECEDE-PROCEED model is a comprehensive structure for understanding individual's behaviour. This helps to assess their health needs, thereby facilitating the development, implementation and evaluation of health promotion programs.

The PRECEDE segment of the model will be used for this study. PRECEDE stands for Predisposing, Reinforcing and Enabling factors of educational diagnosis and evaluation.

Predisposing factors include knowledge, attitudes, beliefs and skills towards a desired behaviour change.

Reinforcing factors are factors that reward or reinforce behaviour change. They include the social support groups and social norms.

Enabling factors are factors that make facilitate the individual's behaviour.

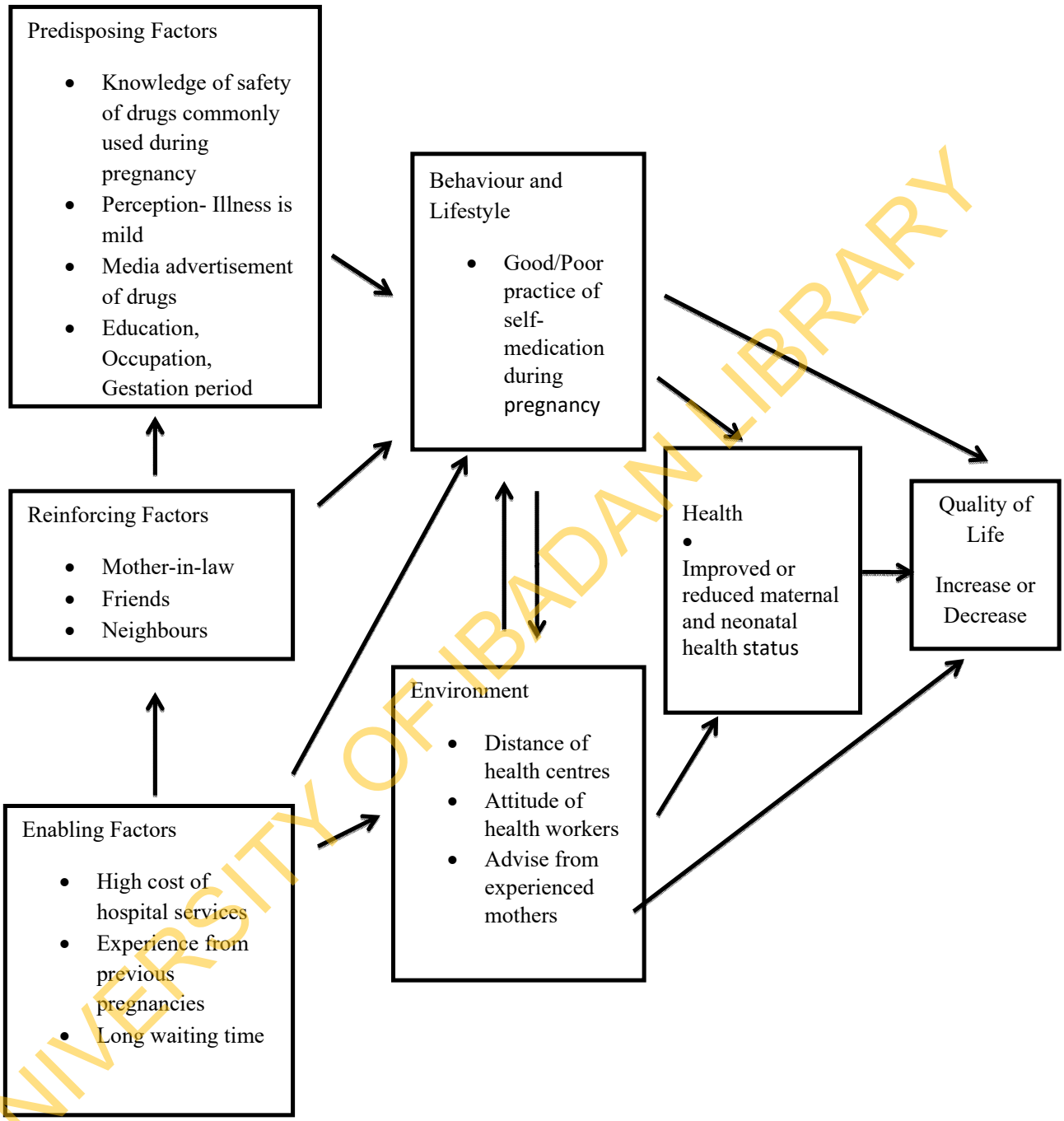

Figure 2.1: Application of PRECEDE model to the perception and practice of self-medication during pregnancy

CHAPTER THREE

METHODOLOGY

3.1 Study design

The Study was a descriptive community-based cross-sectional survey. It was used to assess the perception of postpartum mothers in Ibadan South West Local Government on self-medication during pregnancy. The reasons why they self-medicate, the types of drugs they used and their knowledge about the safety of the drugs were determined.

3.2 Study Variables

The dependent variables of the study were knowledge, practice, perception and attendance of ANC and the independent variables were socio-demographic characteristics such as age, level of education, occupation and number of children.

3.3 Study Site

The study was conducted in communities under Ibadan South west Local Government Area, Ibadan, Oyo State. Ibadan South West Local Government area was created by the Federal Military Government of Nigeria on 27th day of August, 1991. The administrative headquarters is located at Aleshinloye. It covers a landmass of 133,500 square kilometres with a population density of 2,401 persons by square kilometre. According to the National Population Commission of Nigeria, the local government has a population of 282,325 at 2006 census and the 2010 estimated population for the area was projected 320,536 people with a growth rate 0f 3.2% from 2006 census. Though it contains many ethnic groups like Ebira, Ijaw, Urhobo, Iksekiri and Igbo, the predominant ethnic group there is Yoruba.

It is bounded by Ibadan North West and Ido Local Government Area to the north, Oluyole Local Government in the south and Ido Local Government Area in the west and Ibadan North West and South East in the east.

Table 3.1: Categorisation of wards in Ibadan South West Local Government Area

Wards	Communities
1	Bere, Oja-Oba, Orita-merin,Alekuso, Ori Olowo, Orisinyan/Akere compound
2	Idi-Arere, Isale-Osi, Apampa compound, Born photo
3	Gege olopa, Ila Aregbe Omo Compound, Akuro, isale Ijebu
4	Idi Arere, Gbodu, ibuko, popoyemonja, Akino, bode
5	Gege, Apana, Foko Asaka, Maya, Akuro
6	Foko, Amule, Itamaya, Oke foko, Asaka
7	Amunigun, Agbeni, Agbokojo, Ogunpa, Ile Sakii
8	NTC road/Iyaganku Quarters, Ogunpa/Old gbagi, Oke Bola, Yaka
9	Bode, Molete, Challenge, College Cresent, Imalefalefia, ososami
10	Oke Ado, Liberty, Joyce B
11	Ring road, Oluyole Estate, Orita Challenge, Old Passport Office, Town Planning, New Adeoyo
12	Odo –Ona, Akinyemi, Apata, Gbekuba, Idi-Ishin, Railway station, Oke-Ayo, Gada, Jericho

3.4 Study population

The study population are postpartum mothers with babies under 6 months old in communities under Ibadan South West Local Government Area. This is necessary for easy recall of the drugs used during pregnancy. The local government was chosen because the residents are diverse with varying level of education.

3.5 Inclusion criteria

The inclusion criteria for the study are nursing mothers with babies of age 0- 6 months, who give their consent to participate voluntarily.

3.6 Exclusion criteria

The exclusion criteria for the study are nursing mothers with babies that are older than 6 months and those who do not give their consent. Nursing mothers less than 18 years old were also excluded

3.7 Sample size determination

The sample size for this study was estimated using Leslie Kish formula.

$$n = \frac{z^2pq}{d^2}$$

Where n = the desired sample size

Z= standard deviation, set at 1.96 corresponding to 95% confidence interval.

d= degree of accuracy desired for the study, which will be set at 0.05

p = estimated pregnant women that undergo self-medication in Ado-Ekiti, Nigeria, set at 31.5% (Adanikin and Awoleke, 2016)

p = 0.315

q= 1-p = 1-0.315 = 0.685

d= desired level of accuracy, set at 0.05

z= 1.96

$$n = \frac{1.96^2 \times 0.315 \times 0.685}{0.0025}$$

= 0.8289/0.0025 = 331.6 = 332

A 10% was added for non-response, making the total sample size of 365.

3.8 Sampling technique

A four-stage sampling technique was used to select participants for this study. There are twelve wards in Ibadan South West local government with a total of 63 communities, each consisting of a number of households. The procedures used to select the respondents are listed below:

Step 1: Six wards were randomly selected by balloting out of the twelve wards in Ibadan south West Local Government

Step 2: A list of all the communities in the selected wards were made and 50% of the total number of the communities were randomly selected by balloting from each of the wards.

Step 3: Proportionate sampling technique was used to determine the sample size from each selected community. Number of respondents from each community was calculated by: number of communities in a ward divided by total number of communities in the six wards multiplied by the sample size (Table 3.2). The number of respondents to be selected was calculated to be 365.

Step 4: Houses were systematically selected using a class interval of 13 from each of the communities. In houses where there were more than one eligible participant, balloting was done to select a participant for the study.

Table 3.2: Calculation of the number of repondents from each community

Ward	Communities	Sample size determination	Number of respondents
3	Gege olopa, Ila Aregbe Omo Compound, Akuro, isale Ijebu	$\frac{4}{34} \times 365$	43
4	Idi Arere, Gbodu, ibuko, popoyemonja, Akino, bode	$\frac{6}{34} \times 365$	65
6	Foko, Amule, Itamaya, Oke foko, Asaka	$\frac{5}{34} \times 365$	54
8	NTC road/Iyaganku Quarters, Ogunpa/Old gbagi, Oke Bola, Yaka	$\frac{4}{34} \times 365$	43
9	Bode, Molete, Challenge, College Cresent, Imalefalefia, ososami	$\frac{6}{34} \times 365$	63
12	Odo –Ona, Akinyemi, Apata, Gbekuba, Idi-Ishin, Railway station, Oke-Ayo, Gada, Jericho	$\frac{9}{34} \times 365$	97
Total	**34**		**365**

3.9 Instrument for data collection

Data was collected using quantitative method. The instrument for the data collection was semi-structured interviewer-administered questionnaire. The research instrument consisted of five different sections:

Section A included demographic characteristics of the study participants and their spouses such as age, highest level of education, number of children etc.

Section B tested the level of knowledge of the pregnant women on the safety of drugs commonly used for self-medication.

Section C assessed the perception of risk associated with self-medication in pregnancy.

Section D assessed the practice of self-medication during pregnancy.

Finally, Section E gathered information on factors associated with practice of self-medication during pregnancy. These included obstetrics factors and predisposing factors of self-medication.

3.10 Data collection procedure

Prior to the beginning of the study, four (4) experienced female research assistants were recruited. They were trained for one week on data collection methods, using a developed training manual. During the training, participatory methods and approach were used to ensure everyone was carried along.

The copies of the questionnaire were serially numbered and the researcher, together with the trained research assistants collected the data. This was done by moving from house to house in the community and selecting eligible participants. The purpose of the study was explained to the participants. In addition, the informed consent forms were read to them. The questions were interpreted into the local language, Yoruba, prior to the beginning of the study. The researcher/research assistant then administered the serially numbered copies of the questionnaire to the willing participants by asking them the questions and filling in their responses.

3.11 Validityof instrument

Validity of an instrument is a measure of the extent to which the instrument performs what it is designed to perform. There are numerous ways of measuring the validity of quantitative instruments. In this study, the instrument's validity was measured by content validity analysis. Relevant literature materials were used as a template for the

questionnaires, after which the viewpoint of the project supervisor and other public health science experts of a medical university was sought.

3.12 Reliability of instrument

Reliability test of an instrument is a measure of the consistence of an instrument. A reliable instrument must be able to produce similar results after several administrations, provided the conditions of administration are similar. To establish the reliability of this instrument, a pre-test was done by administering copies of the questionnaire to 10% of the study population to a representative population in a local government with similar characteristics to the study site. In this study, postpartum mothers in Ibadan North East Local Government Area were selected as the representative population. The administered copies of the questionnaire for this pre-test were not be added to the final analysis of this work. A reliability co-efficient measure was carried out on the pre-test data to determine the level of reliability of the instrument**.** A co-efficient of 0.81 was obtained.

3.13 Data management and analysis

Administered copies of the questionnaire were numbered for easy entry and organization. A coding guide was developed along with the data collection tool in order to facilitate its analysis. Questionnaires were also reviewed to ensure consistency and completeness. Cleaning, recoding and coding of data for analysis were also done. Using the coding guide, the data collected was carefully entered into the Statistical Package for Social Science (SPSS IBM version 24) statistical software. Descriptive statistics such as mean, standard deviations, frequencies and percentages, were used to summarize study variables and to evaluate distribution of responses. Chi-square test was used to determine the relationship between self-medication and other variables.

Knowledge questions were measured on a 34-point scale; scores of 0-13, 14-23, 24-34 were categorised as poor, fair and good knowledge respectively. Each item was scored using the values ranging from 0 - 2 with the correct answer assigned 2 points each, and a wrong answer or ‘I don’t know’ answers will be assigned 0 points.

Perception score for self-medication were calculated using a 14-point scale. All responses were categorized into three: “True”, “I don’t know” and “False”. Correct responses were given a score of 2, while incorrect ones attracted no point. Participants with score

between 0-8 points were categorised and recorded as having "negative perception" while those with scores ranging from 9-14 were categorised as having "positive perception".
Practice of self-medication was determined on 22-point scale; scores of 0-13 and 13-22 were categorised as good and poor practice respectively. A score of 2 point was allocated for each positive response while negative responses and 'I don't know' responses attracted 0 points each. The total practice points of each respondent were summed; and frequency and percentages were calculated. The scores were computed to give combined practice score for the respondents.
The results obtained were presented as tables and figures.

3.14 Study limitation and strength

The participants for this study were nursing mothers and not pregnant women. This is because it is a community-based study and not a hospital-based one and from investigation, pregnant women in the selected study site do not like to give out information about their pregnancy; this can lead to a low level of cooperation (if they are used instead). However, a limitation of using nursing mothers is that they might not be able to recall all the drugs they used during pregnancy. To limit this tendency of recall bias, only women who give birth within 0-6 months will be involved in the study (inclusion criteria).

The strength of the study was the inclusion of women who did not attend antenatal clinics. All the previous studies that have been carried out on self-medication among pregnant women only focused on those that attended antenatal clinics. This study however, obtained the knowledge, perception and practice of women who did not attend antenatal care, during their pregnancy.

3.15 Ethical Consideration

Ethical approval was sought and obtained from the Oyo state Ministry of Health Research Ethics Committee before commencing the data collection. Informed consent was taken from the willing participants. They were intimated of their right to withdraw their consent at any point during the study. In addition, they were assured of utmost confidentiality of the information obtained from them. The nature and objectives of the study, together with its benefits were explained to the respondents.
In addition, the following ethical considerations were ensured in the conduct of this study.

3.15.1 Confidentiality

Confidentiality of the respondents was maintained at all points, during and after the data collection. Names and other information that can reveal the identity of the respondents were included in the questionnaire; serial numbers were used instead. The data of all participants were identified by codes. The print data were kept safe in secured office lockers during and after the study and electronic data were stored in a password-protected computer system.

3.15.2 Beneficence

This study can help in designing a socio-culturally acceptable intervention to discourage self-medication during pregnancy in future

3.15.3 Risk

There is no risk associated with this research

3.15.4 Informed Consent

The purpose of the research was adequately communicated to research participants and the entire community and every individual participant gave verbal consent prior to enrolment for the study

3.15.5 Voluntariness

Verbal informed consent was obtained from each participant and they were informed that they reserve full rights to withdraw at any stage of the study.

3.15.6 Feedback

The final outcome of this study and recommendations would be communicated to all stakeholders at the conclusion of the study.

3.15.7 Inducements

It is intended that no fees would be paid to any of the research participants.

CHAPTER FOUR

RESULTS

4.1 Socio-demographic characteristics of respondents

A total of 359 postpartum women participated in the study (Tables 4.1 - 4.3). Their ages ranged from 19years to 37 years with a mean age of 29±3.6 years. Most (83.6%) of the respondents were within the age group of of 26–32 years.

Most (88.8%) of them were married and majority (74.4%) were Christians Five ethnic groups were represented by the respondents with Yorubas accounting for the largest percentage (81.3%).

More than half (64.9%) had tertiary school education which included university education, polytechnics (Ordinary Diploma and Higher National Diploma), teacher's training school and NCE. A similar result was obtained with the highest level of education of the respondents' husbands in which a significant proportion (66.6%) of them had tertiary level of education.

Almost half (43.2%) of the respondents were engaged in trading and most (70.5%) of them had irregular monthly income, that is, their income every month varied and depended on sales from their businesses. The remaining 29.5% however had steady income which was largely based on their regular monthly salary.

Only about a quarter of the respondents (25.9%) had only been pregnant once, 38.2% had carried two pregnancies while 35.9% had carried more than two pregnancies. These pregnancies included those that were carried to term and those that were not.

Table 4.1: Social-Demographic Characteristics of Respondents (N=359)

Socio-demographic variable	Frequency	Percent (%)
Age (Years)		
19-25	25	7.0
26-32	300	83.6
33-37	34	9.5
Marital status		
Single	30	10.9
Married	319	88.8
Divorced	-	-
Widowed	1	0.3
Separated	-	-
Religion		
Islam	91	25.3
Christianity	268	74.7
Ethnicity		
Yoruba	292	81.3
Igbo	46	12.8
Hausa	3	0.8
Ebira	10	2.8
Esan	4	1.1
Bini	4	1.1
Level of education of respondent		
No formal	4	1.1
Primary	42	11.7
Secondary	80	22.3
Tertiary	233	64.9

Table 4.2: Social-Demographic Characteristics of Respondents (Cont'd) (N=359)

Socio-demographic variable	Frequency	Percent (%)
Level of education of respondents' husbands		
No formal	5	1.4
Primary	27	7.5
Secondary	88	24.5
Tertiary	239	66.6
Occupation of respondents		
Civil servant	32	8.9
House wife	-	-
Artisan	79	22.0
Student	16	4.5
Unemployed	19	5.3
Trading	155	43.2
Medical practitioner	10	2.8
Private establishment	32	8.9
Corporate organization	12	3.3
Menial Jobs	4	1.1
Average family monthly income		
Regular	106	29.5
Irregular	253	70.5

Table 4.3: Social-Demographic Characteristics of Respondents (Cont'd) (N=359)

Socio-demographic variables	Frequency	Percent (%)
Number of pregnancy of respondents		
1	93	25.9
2	137	38.2
3	103	28.7
4	23	6.4
5	3	0.8
Number of children of respondents		
1	119	33.1
2	142	39.6
3	80	22.3
4	17	4.7
5	1	0.3

Correct responses

Table 4.4: Knowledge of safety of drugs in all trimesters of pregnancy

	Yes (Safe)		No (Not Safe)		I don't know	
Drug	**Frequency**	**Percent (%)**	**Frequency**	**Percent (%)**	**Frequency**	**Percent (%)**
Paracetamol	*356	99.2	3	0.8	0	0.0
Ibuprofen	203	56.5	*153	42.6	3	0.8
Vitamin A	190	52.9	*132	36.8	37	10.3
Cod Liver Oil	179	49.9	*139	38.7	41	11.4
Fansidar®	92	25.6	*233	64.9	34	9.5
Fulcin®(Grise olfulvin)	44	12.3	*267	74.4	48	13.4
Cimetidine	42	11.7	*269	74.9	48	13.4
Septrin®	66	18.4	*255	71.0	38	10.6
Tetracycline	68	18.9	*250	69.6	41	11.4
Nitrofurantoin	15	4.2	*290	80.8	54	15.0
Quinine	18	5.0	*281	78.3	60	16.7

Correct responses

4.2 Knowledge of drugs used for self-medication

The postpartum mothers' were tested on their knowledge of safety of drugs commonly used in pregnancy (Table 4.4). Almost all the respondents (99.2%) knew that paracetamol is truly safe throughout pregnancy. However, more than half (56.5%) wrongly believed that ibuprofen is equally safe in all trimesters of pregnancy (Table 4.5). A similar result was seen for Vitamin A and Cod Liver Oil, in which even though it should not be used in large doses, 52.9% and 49.9% respectively, were of the opinion that they are safe for use. In contrast, majority of the respondents correctly believed that Fansidar® (64.9%), Fulcin® (74.4%), Cimetidine (74.9%), Septrin® (71.0%), Tetracycline (69.6%), Nitrofurantoin (80.8%) and Quinine (78.3%) were not safe in all trimesters of pregnancy (Table 4.4).

Respondents were also tested on how safe excessive/prolonged use of some over-the-counter drugs (which are generally believed to be harmless) are during pregnancy. Many of the respondents wrongly believed that paracetamol can be used as often as needed, even during pregnancy. Almost half were ignorant of the fact that high doses of Vitamin A (45.1%) and Cod Liver oil (49.9%) are not safe during pregnancy, as they claimed no dosage of those two drugs can be termed excessive. A similar result was obtained for ibuprofen, in which 47.6% of the respondents wrongly believed it to be relatively safe in high doses. However, for Fansidar® and Quinine, 66.6% and 81.1% respectively were right about the fact that they cannot be used as often as needed during pregnancy (Table 4.5).

Table 4.5: Knowledge of prolonged use of some over-the-counter (OTC) drugs during pregnancy

	Yes (Safe)		No (Not Safe)		I don't know	
OTC drug	**Frequency**	**Percent (%)**	**Frequency**	**Percent (%)**	**Frequency**	**Percent (%)**
Paracetamol	222	61.8	*136	37.9	1	0.3
Ibuprofen	171	47.6	*180	50.1	8	2.2
Vitamin A	162	45.1	*176	49.0	21	5.8
Cod liver oil	179	49.9	*156	43.5	24	6.7
Fansidar	96	26.7	*239	66.6	24	6.7
Quinine	35	9.7	*291	81.8	33	9.2

Correct responses

4.2.1 Categorisation of Knowledge

All the responses derived from the knowledge questions were graded into poor, fair and good (Figure 4.1). Nearly half of the respondents (47.1%) have good knowledge about the safety of these drugs in pregnancy.

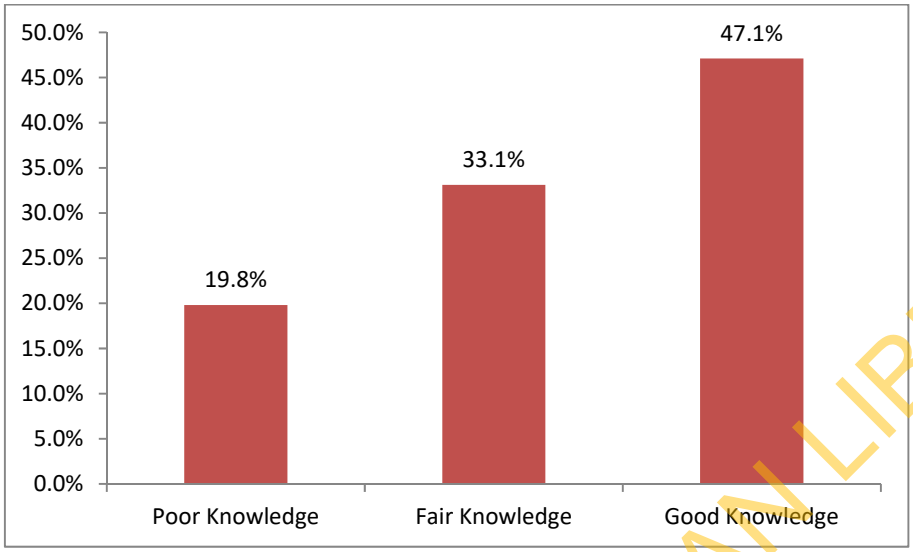

Figure 4.1: Respondents' level of knowledge of drugs commonly used during pregnancy

4.3 Postpartum mothers' perception of risks associated with self-medication during pregnancy

About half of the respondents (52.6%) wrongly said they considered it safe to diagnose themselves for "small" illnesses during pregnancy (Table 4.6). According to those respondents, some illnesses are minor and might therefore not necessitate consulting a doctor over. Nevertheless, majority (59.6%) correctly believed that the drugs they used when they were not pregnant might not be safe during pregnancy. A quarter of respondents (25.6%) wrongly viewed the statement that "when a drug is available over-the-counter (OTC), then it must be safe for everyone, including pregnant women" to be true. Almost a quarter of the respondents (19.2%) were also of the incorrect opinion that all antibiotics are safe during pregnancy. Correspondingly, 29.2% incorrectly said all antimalarial drugs are safe during pregnancy. With regards to checking drug leaflets for drug dosage, contraindications and adverse effects, 61.0% of the respondents often engaged in this. Futhermore, 15.9% of the respondents were wrong when they agreed that OTC drugs cannot pose risk to the developing foetus at any stage of pregnancy (Tabe 4.6)

Table 4.6: Postpartum mothers' perception on risk associated with self-medication during pregnancy

Statements	True (%)	False (%)	I don't know (%)
I consider it safe to diagnose myself for some illnesses during pregnancy	52.6	44.8	2.5
The medications I use when I am not pregnant can also be used during pregnancy	15.0	59.6	25.3
When a drug is available over-the-counter (OTC), then it must be safe for everyone, including pregnant women	25.6	57.9	16.4
I consider all antibiotics to be safe during pregnancy	19.2	52.4	28.4
I consider all antimalarials to be safe during all stages of pregnancy	29.2	44.3	26.5
I do not check drug leaflets for information as I believe I am familiar with the usage and the side effects of the drugs I use	33.4	61.0	5.6
OTC drugs cannot pose risk to the developing foetus at all stages of pregnancy	15.9	59.9	24.2

4.3.1 Categorisation of Perception

Perception of risks of self-medication was grouped into good and poor using a perception scale (Figure 4.2). One hundred and seventy seven (177) respondents (50.7%) perceived self-medication during pregnancy to be associated with risk (positive perception). However, 177 respondents (49.3%) had negative perception of these risks.

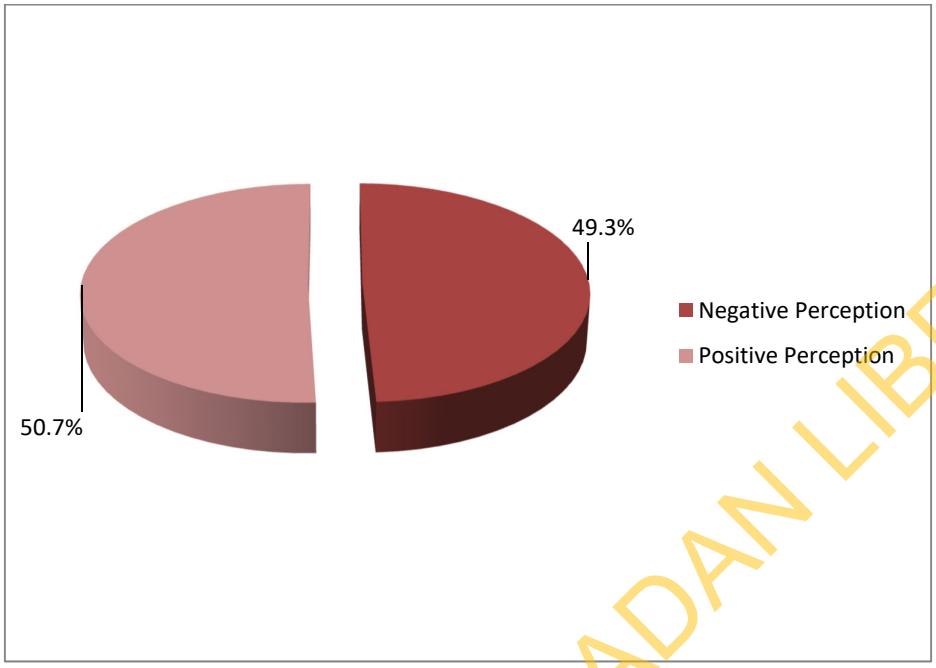

Figure 4.2: Classification of perception of risks associated with self-medication during pregnancy

4.4 Practice of Self-Medication

More than half of the respondents (54%) preferred to treat themselves for "minor" illnesses rather than consulting their doctor while 46% preferred otherwise (Table 4.7). Similarly, 53.5% admitted that they used other drugs, aside those prescribed by their gynaecologist, during their last pregnancy. About 34% of the respondents also agreed that self-medication was their first line of treatment for illness during their last pregnancy. In addition, 30.9% said they used old prescriptions for previous pregnancies to purchase drugs in their last pregnancy (Table 4.7).

A very few number of the respondents claimed they used some antibiotics during their last pregnancy, without any doctor's prescription (Figure 4.3). Twenty seven respondents (7.5%) used tetracycline, followed by Septrin® (3.1%), chloramphenicol (2.5%), ciprofloxacin (1.1%), doxycycline (0.6%) and finally, one person used ofloxacin (0.3%).

Table 4.7: Practice of self-medication during pregnancy

Statements	Yes (%)	No (%)
Self-medication is my first line of treatment when I come down with any illness during pregnancy	34.0	66.0
I used several drugs during my last pregnancy without consulting a gynaecologist	8.9	99.1
I use old prescriptions to buy drugs during my last pregnancy	30.9	69.1
I only used drugs prescribed by my Doctor during my last pregnancy	46.5	53.5
I prefer to treat myself for “minor” illnesses during my last pregnancy	54.0	46.0

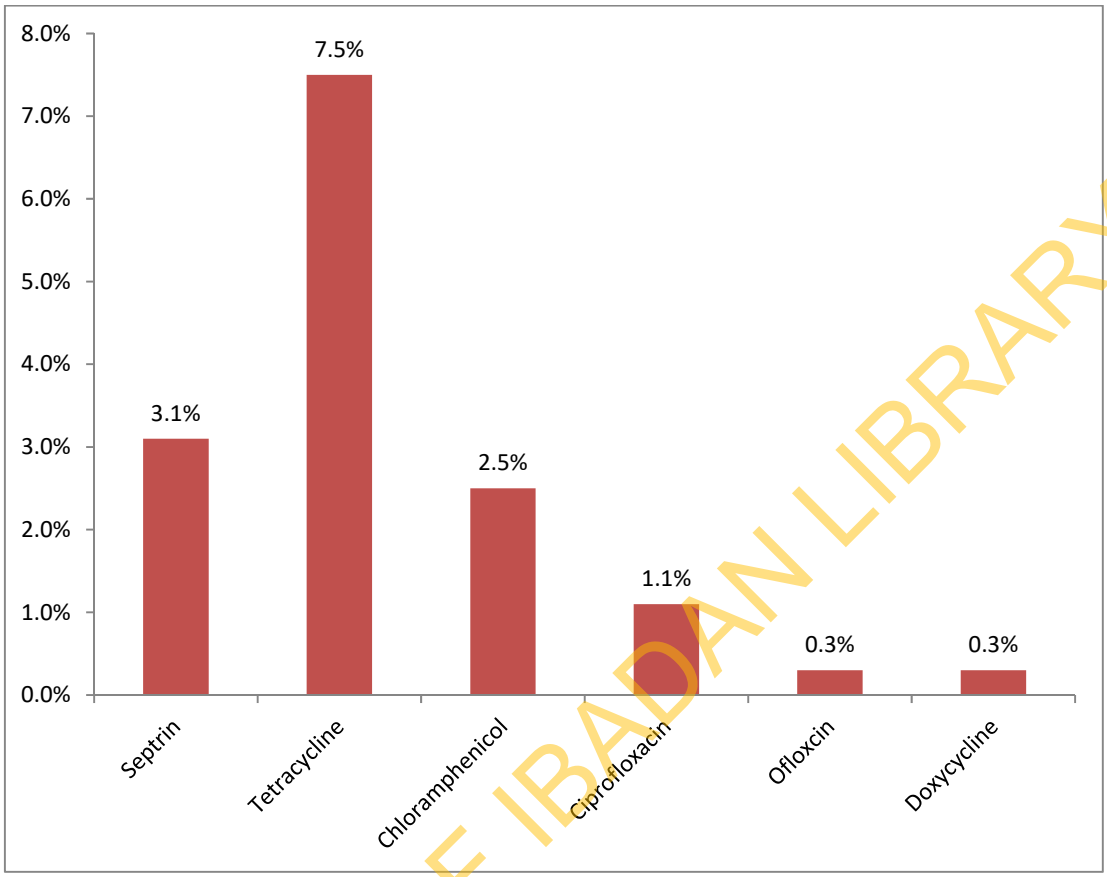

Figure 4.3: Practice of self-medication with antibiotics during pregnancy

4.4.1 Categorisation of practice

Based on the scores obtained, the practice of self-medication during pregnancy was grouped into poor and good (Figure 4.4). More than half of the respondents (59.1%) had poor practice of self-medication during pregnancy, while 40.9% of respondents had good practice of self-medication.

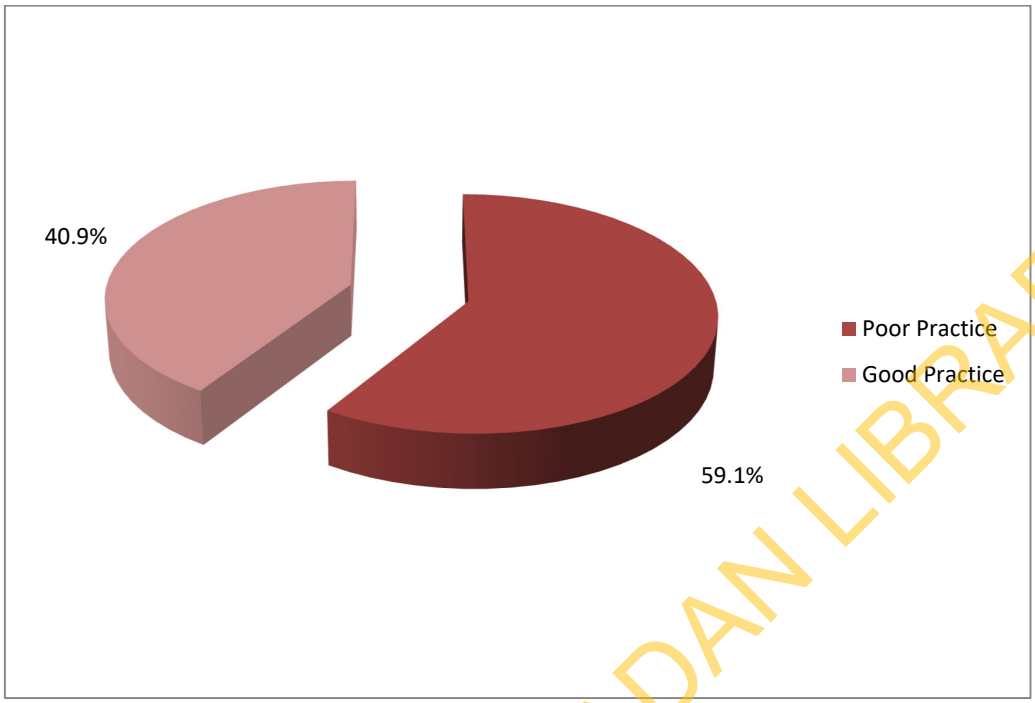

Figure 4.4: Categorisation of Practice of Self-Medication during pregnancy

4.5 Factors associated with practice of self-medication during pregnancy

Some factors could positively or negatively influence the practice of self-medication. These include obstetrics factors like previous pregnancy or delivery related problems and attendance of antenatal clinic (ANC). About 93 (25.9%) had experienced one gynaecologic or obstetric problem or the other (Figure 4.5); some of which included still birth, low birth weight, neonatal death, neonatal jaundice, maternal haemorrhage, abortion, miscarriage and preterm delivery. With regards to attendance of antenatal clinics (ANC), 293 respondents (81.6%) attended antenatal clinics during their last pregnancy (Figure 4.6).

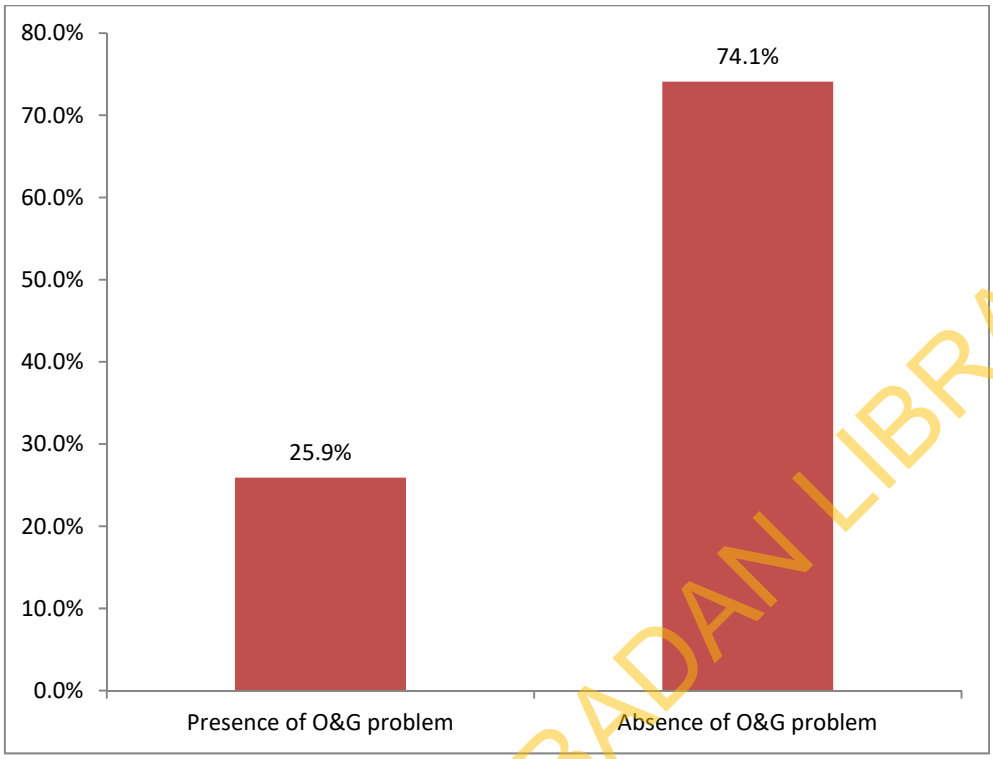

Figure 4.5: Presence or Absence of Obstetric and Gynacologic problems in previous pregnancies

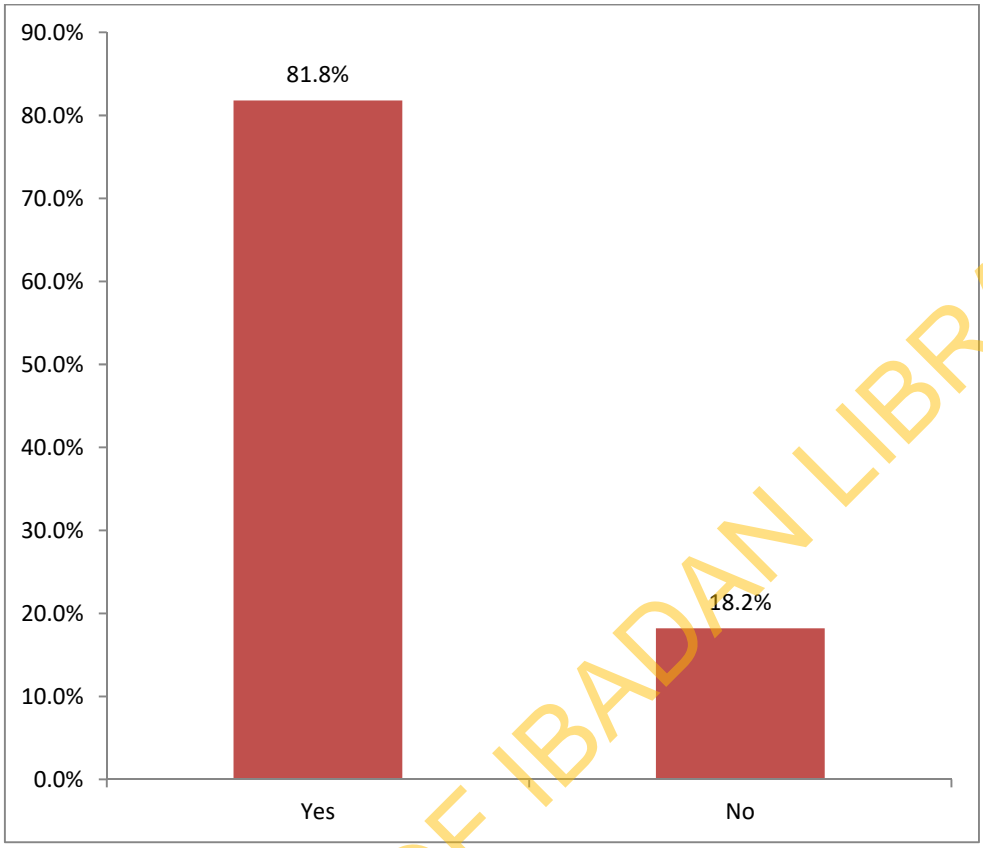

Figure 4.6: Attendance of ANC during the last pregnancy of respondents

Respondents' opinions were also sought on the factors (reasons) that are likely to encourage self-medication (Table 4.8). According to majority of the respondents, the major factor that influenced their practice of self-medication is the belief the illness is minor (51.0%) and therefore, does not require medical intervention. This was followed by the need for quick relief (37.3%) from discomforts associated with pregnancy. In addition, some mothers (30.4%) that had previous successful pregnancies believed they were experienced therefore felt confident about their knowledge of medicines.

Table 4.8: Postpartum mothers' reasons for practicing self-medication during pregnancy

	Yes		No	
Reasons for practicing self-medication	**Frequency**	**Percent (%)**	**Frequency**	**Percent (%)**
The illness was a minor one	183	51.0	176	49.0
There was need for quick relief	134	37.3	225	62.7
Self-medication saves time	89	24.8	270	75.2
I am confident in my knowledge about medicines	109	30.4	250	69.6
Self-medication is economical	81	22.6	278	77.4
It is more convenient and easier	61	17.0	298	83.0
It saves me from long waiting time in the hospital	59	16.4	300	83.6

4.6 Hypotheses testing

4.6.1 Relationship between antenatal clinic (ANC) and practice of self-medication

First null hypothesis: There is no significant association between attendance of antenatal clinic (ANC) and practice of self-medication

Analysis of this relationship was done with Pearson Chi-Square test (X^2=33.94, p=0.05 and df=1) and a p-value of <0.001 was obtained (Table 4.9). Since p-value obtained is less than 0.05, there is an association between attendance of ANC and practice of self-medication. Therefore the null hypothesis was rejected.

Table 4.9: Relationship between attendance of antenatal clinic (ANC) and practice of self-medication)

Attendance of ANC	Practice				
	Good (%)	**Poor (%)**	**X^2**	***Df***	***p-value***
Yes	152 (51.9)	141 (48.1)	33.94	1	*<0.001
No	60 (90.9)	6 (9.1)			

Statistically significant

4.6.2 Relationship between knowledge of drugs and practice of self-medication

Second null hypothesis: There is no significant association between knowledge of drugs with which women self-medicate during pregnancy and practice of self-medication. This relationship was also tested with Chi-Square (X^2=10.154, p-value = 0.05 and df = 2). A p-value value of 0.06 was obtained (Table 4.10). Since the obtained p-value is greater than 0.05, there is truly no statistical significant relationship between knowledge and practice of self-medication. Therefore the null hypothesis was failed to reject.

Table 4.10: Relationship between knowledge of safety of drugs and practice of self-medication

	Practice				
Knowledge	**Good (%)**	**Poor (%)**	**X^2**	***Df***	***p-value***
Poor	48 (67.6)	23 (32.4)	10.154	2	*0.06
Fair	79 (66.4)	40 (33.6)			
Good	85 (50.3)	84 (49.7)			

Not statistically significant

4.6.3 Relationship between perceptions of risks associated with self-medication and practice of self-medication

Third null hypothesis: There is no significant association between perception of risks associated with self-medication and practice of self-medication.

This hypothesis was analysed with Chi-Square test (X^2=71.995, df =1 and p= 0.05) and a p-value<0.001 was obtained (Table 4.11). This implies that there is a strong relationship between perception of risks associated with self-medication and its practice. Consequently, the null hypothesis was rejected.

Table 4.11: Relationship between perception of risks associated with self-medication and practice of self-medication

Perception	Good Practice (%)	Poor Practice (%)	X^2	Df	p-value
Poor	147 (80.8)	35 (19.2)	71.995	1	*< 0.001
Good	65 (36.7)	112 (63.3)			

Statistically significant

4.6.4 Relationship between socio-demographic variables and practice of self-medication

Fourth null hypothesis: There is no significant association between sociodemographic variables and practice of self-medication.

The hypothesis was analysed with Chi-Square test at p= 0.05) (Table 4.12). For age and number of pregnancy of respondent, a p-value of 0.07 and 0.242 was obtained. This implies that there is no relationship between age of respondents and number of pregnancy of respondents respectively with practice of self-medication.

Table 4.12a: Relationship between socio-demographics and practice of self-medication

Socio-demographic variable	Practice		X^2	*Df*	*p- value*
	Good (%)	Poor (%)			
Age (years)					
19-25	19 (76.0)	6 (24.0)	30.12	2	0.07
26-32	157 (52.3)	143 (47.7)			
33-37	9 (26.5)	25 (73.5)			
Education of respondents					
No formal education	3 (75)	1 (25)	36.47	3	*<0.001
Primary education	34 (80.9)	8 (19.1)			
Secondary education	64 (80.0)	16 (20,0)			
Tertiary education	111 (47.6)	122 (52.4)			
Education of respondents' husbands					
No formal education	3 (60.0)	2 (40.0)	31.34	3	*<0.001
Primary education	23 (85.2)	4 (14.8)			
Secondary education	69 (78.4)	19 (21.6)			
Tertiary education	117 (49.0)	147 (40.9)			
Occupation of Respondent					
Civil servant	15 (46.9)	17 (53.1)	26.26	8	*0.001
Artisan	60 (75.9)	19 (24.1)			
Student	7 (43.8)	9 (56.3)			
Unemployed	9 (47.4)	10 (52.6)			
Trading	90 (58.1)	65 (41.9)			
Medical Practitioner	3 (30.0)	7 (70.0)			
Private establishment	14 (43.8)	18 (56.3)			
Menial jobs	11 (91.7)	1 (8.3)			
Corporate organization	3 (75.0)	1 (25.0)			

Statistically significant

Table 4.12b: Relationship between socio-demographic variables and practice of self-medication (cont'd)

	Practice				
Socio-demographic Variable	**Good (%)**	**Poor (%)**	X^2	*df*	*P value*
Number of Pregnancy					
1	47 (50.5)	46 (49.5)	5.47	4	0.242
2	85 (62.0)	52 (38.0)			
3	61 (59.2)	42 (40.8)			
4	17 (73.9)	6 (26.1)			
5	2 (66.7)	1 (33.3)			
Number of children					
1	58 (48.7)	61 (51.3)	14.14	4	*0.007
2	82 (57.7)	60 (42.3)			
3	58 (72.5)	22 (27.5)			
4	13 (76.5)	4 (23.5)			
5	1 (100.0)	0 (0.0)			
Average monthly family income					
Regular	39 (36.8)	67 (63.2)	10.12	1	*0.01
Irregular	143 (56.5)	110 (43.5)			

Statistically significant

CHAPTER FIVE

DISCUSSION, CONCLUSION & RECOMMENDATIONS

5.1 DISCUSSION

5.1.1 Socio-demographic characteristics

The study found that the mean age of the respondents was 29 years and their ages ranged from 19years to 37 years. The predominant ethnic group was Yoruba. This is expected as the study was carried out in South-West part of Nigeria which Yorubas dominate. Most of them had tertiary school education although the kind of tertiary education varied widely. It included National Certificate in Education (NCE), Ordinary Diploma, University (Bachelor's) degree, Higher National Diploma degree and a few had Master's degree.

Karol et al (2018) showed that occupation is a strong predictor of self-medication among pregnant women attending antenatal clinics. According to him, the low practice of self-medication among employed pregnant women could be due to their high level of education and vice-versa. A similar trend was observed in this study. Chi-Square test analysis showed that there is a strong relationship between occupation and practice of self-medication. It was observed that the respondents that were artisans, traders and those that had menial jobs practiced self-medication extensively.

However, those that were civil servants and medical practitioners practiced it poorly. This could be because some occupations such as artisans do not yield steady or regular income and also have no form of health insurance benefit, making pregnant women in those occupations readily embrace self-medication (Ebrahimi, Atashsokhan, Amanpour and Hamidzadeh, 2017). This was buttressed by the significant relationship that was observed between average monthly family income and practice of self-medication. The relationship between number of children and practice of self-medication was also statistically significant. It was observed that as the number of children increased, the degree of practice of self-medication increased. This agrees with the study of Woodensen et al. (2016) which states that one of the major reasons why pregnant women practice self-medication during pregnancy is the belief that they are experienced with medications from their previous pregnancy.

However no significant relationship was observed with age, marital status, number of pregnancy and practice of self-medication.

5.1.2 Knowledge of safety of drugs commonly used for self-medication

The knowledge of the mothers on the safety of drugs they commonly used to self-medicate during pregnancy was just on the average.

This study showed that some respondents believed that paracetamol can be as often as the need is felt, even at large doses (Table 4.4). The study of Ystrom et al. (2017) disagrees with this as it has linked high doses or prolonged usage of paracetamol to increased risk of attention deficit hyperactive disorder, ADHD, later in the life of children. It also increases the risk of cerebral palsy in the child (Petersen et al., 2017). In addition, according to FDA (2017) paracetamol can damage the liver of the mother and the developing foetus when used excessively and for a prolonged period of time.

Similarly, from this study, a significant number of the respondents believed Ibuprofen, a non-steroidal anti-inflammatory drug (NSAID), is safe for use in all trimesters of pregnancy. This contradicts BNF (2017) which states that constant use NSAIDs in the third trimester can lead to pulmonary hypertension in the new born and delayed onset and increased duration of labour.

This study also showed that some respondents believed that vitamin A and Cod Liver oil are safe in all trimesters of pregnancy, as they are just vitamin and supplement respectively. However, FDA (2017) disagrees with this as it considers excessive dosage of vitamin A to be teratogenic. BNF (2017) also states that there are evidences suggesting that high levels of vitamin A may cause birth defects. Pregnant women (or women who are trying to get pregnant) are therefore advised to avoid taking vitamin A supplements (including tablets and fish oil drops such as Cod liver oil), except on advice of a doctor or antenatal clinic.

Majority of the respondents believed that Fansidar®, an antimalarial drug,is not safe in all trimesters of pregnancy. This is in line with FDA (2017) who categorizes Fansidar® as a drug that is not safe in the first trimester of pregnancy as it can affect brain development of the developing foetus. It is a drug that is routinely given to pregnant women on two different occasions starting from the beginning of second trimester to prevent malaria. However it is not the drug of choice for malaria treatment, but rather for prevention of

malaria (CDC, 2018). Using it for treatment can lead to incomplete eradication of the malaria parasite and consequently, some complications such as maternal anaemia, premature delivery and low birth weight in babies (CDC, 2018).

Similarly, most of the respondents were of the opinion that Fulcin®, is a popular brand of the antifungal drug griseofulvin, is not safe during pregnancy. This agrees with BNF (2017) which states that it is highly fetotoxic and teratogenic; therefore, it should be avoided during pregnancy. According to FDA (2017), griseofulvin is so teratogenic that effective contraception should be ensured during its administration to non-pregnant women and for at least one month after its administration.

Concerning Cimetidine, the study agrees with BNF (2017) as majority of the respondents believed that it should be avoided in pregnancy, unless it is very essential. This risk-benefit ratio can only be determined by a gynaecologist and not by self-medication.

A large percentage of the respondents agreed that Septrin®, a common brand of the antibiotic co-trimoxazole, cannot be used throughout pregnancy. Co-trimoxazole should be avoided in the first and third trimesters. In contains trimethoprim (just like Fansidar®), a folate antagonist and this makes it teratogenic when used in the first trimester (BNF, 2017). When used in the third trimester, it can cause neonatal haemolysis (BNF, 2017).

Tetracycline is also an antibiotic which belong to a class called Tetracyclines. More than half of the respondents gave the opinion that is safe for use during pregnancy. According to FDA (2017), Tetracycline use in pregnancy can lead to permanent discolouration of teeth in children later in life and impair foetal skeletal growth.

Nitrofurantoin is another antibiotic that is used for treatment of urinary tract infection (UTI), an infection that a significant number of pregnant women are prone to. In this study, almost all the respondents agree that it is not safe during all stages of pregnancy. According to BNF (2017), nitrofurantoin can cause neonatal haemolysis if used at term.

Quinine is an antimalarial drug and just like fansidar®, it is very affordable in Nigeria. Most of the respondents believe that it is not safe for use during all stages of pregnancy. This is in line with BNF (2017) which states that Quinine is teratogenic in the first trimester and should therefore be used when the benefits outweighs the risks.

5.1.3 Perception of risks associated with self-medication during pregnancy

Approximately half of the respondents (49.3%) had poor (negative) perception of the risks involved in self-medication during pregnancy. This could be due to the fact a significant percentage of them (64.9%) had tertiary education. Marbdy (2007) showed in a study that education have a major impact on pregnant women's perception to self-medication.

In a likewise manner, about half of the respondents (52.6%) did not perceive any risk with diagnosing and treating themselves for "minor" illnesses during pregnancy. This agrees with the study of Emmanuel, Achema, Afoi and Maroof (2014) which shows that a lot of pregnant women do not visit a doctor immediately they are sick, they only do so when they have unsuccessfully diagnosed and treated themselves.

Majority of the respondents (59.6%) perceived that there are risks involved in using medications they used when not pregnant during pregnancy. A similar statistics was obtained when the respondents were asked if they believe over-the-counter drugs were safe for everyone; and if it cannot pose any risk to the developing foetus. Over half of them (57.9%) believed that the fact that a drug is an OTC drug does not make it safe for use during pregnancy. This finding is in line with the study conducted by Hughes, McElnay and Fleming (2001) which reported that a significant number of pregnant women are quite careful with using drugs they are not entirely sure of. Almost a quarter of them believed that all antimalarials and all antibiotics are safe in pregnancy. According to a number of them, all antimalarials are safe and cannot harm their developing baby. This is supported by the findings of the study of Noha and Ahmed (2014) which shows that a number of pregnant women do not believe that medication use could result in congenital abnormalities.

However, majority agreed that they check drug leaflets for information when pregnant as they perceived there are risks associated with irrational drug use during pregnancy. This could be due to the fact that majority of them had higher education. According to the findings of Noha and Ahmed (2014), the percentage of women who read drug leaflets during pregnancy is 86% compared to their non-pregnant state (78%). This shows that majority of women are more cautious of using drugs during pregnancy

5.1.4 Practice of self-medication among postpartum women during pregnancy

More than half of the number of respondents (59.1%) practiced self-medication extensively during their last pregnancy while 40.9% had poor practice. Majority (54.0%) preferred to treat themselves for "minor illnesses" during pregnancy. A similar finding was obtained from the study of Emmanuel, Achema, Afoi, and Maroof (2014), which showed that majority of pregnant women prefer to treat themselves for some illnesses they termed minor. They believe such illnesses are so mild and do not require a visit to the doctor. This goes hand in hand with the fact that most of the respondents (53.5%) used some drugs that were not prescribed by the doctor, probably for treating the perceived minor illnesses.

About 34% of the respondents considered self-medication as their first line of treatment when ill. This is consistent with the study of Abeje, Admasie and Wasie (2015) which showed that a significant percentage of pregnant women first considered self-medication and only visit the doctor when they do not get a positive result. In addition, some of the respondents used old prescriptions from previous pregnancies for a similar illness during their last pregnancy. It confirms the findings of Emmanuel et al., (2014) that revealed that pregnant women use old prescriptions for subsequent pregnancies. Unfortunately, the circumstances surrounding the prescription of the original drug might have changed. In addition, the diagnosis of the two illnesses might only appear similar but different.

A few percentages of the respondents used some antibiotics that are unknowingly contra-indicated in pregnancy. The use of these drugs by the respondents did not depend on their knowledge of the safety of these drugs in pregnancy, as no association was found between them knowledge and practice of self-medication. Septrin was used by 11 respondents (3.1%) even though it is contraindicated in the first and third trimesters of pregnancy. It is a folate antagonist, therefore teratogenic in the first trimester and it could lead to neonatal haemolysis in the third trimester (BNF, 2017). Tetracycline can affect the growth of the foetal skeleton and can lead to discolouration of the teeth of children later in life, yet it was used by 27 respondents (7.5%) during their last pregnancy. Self-medication with chloramphenicol was engaged in by 2.5% of the respondents. Chloramphenicol is contraindicated the third trimester as it can lead to *neonatal grey syndrome* (BNF, 2017). This is a syndrome that occurs in new-borns a result of their inability to metabolize chloramphenicol (babies lack the enzyme to do so). It therefore

accumulates in the body and lead to hypotension, cyanosis (blue coloration of lips and skin due to insufficient oxygen in the blood and often death (Gebreegziabher et al., 2012). Ciprofloxacin and Ofloxacin were used by 1.1% and 0.3% of the respondents respectively. They both belong to a class of antibiotics called Quinolones (BNF, 2017). Quinolones is contraindicated in all trimesters of pregnancy, as it can interfere with growth and development of the foetus (FDA, 2017). It can only be used if the benefit outweighs the risks and in the absence of safer alternatives. This means it should not be used without a gynaecologist's prescription.

A significant relationship was observed between education of respondents and practice of self-medication. In a likewise manner, a significant relationship was found between level of education of respondents' husbands and practice of self-medication. Poor practice of self-medication was found to increase with higher level of education in both groups. This is similar to results of studies carried out in different developing countries such as Ethopia (Beyene and Beza, 2018) and Tanzania (Marwa, Njalika, Ruganuza, 2018) where they showed that practice of self-medication decreases with increase in education. A significant relationship was also observed between occupation of respondents and practice of self-medication. This is in line with the result of the study of Beyene and Beza (2018), which showed that some occupations predispose pregnant women to practice self-medication.

5.1.5 Factors associated with practice of self-medication during pregnancy

A significant relationship was observed between attendance of antenatal clinic and practice of self-medication. Poor practice of self-medication was majorly observed among those who attended ANC in comparison to those who did not.

From the study, the major reason why self-medication was practiced was because the illness was believed to be minor. Other reasons were the need for quick relief, the belief that it saves time and it was more economical, it was easier and more convenient; and the fact that it saved pregnant women from long waiting time at the hospital, especially for seemingly mild conditions. These reasons are in line with studies of Beyene and Beza (2018) who discovered that time saving, disease not serious, self-medication is cheaper, long waiting time for health services are the major reasons for practice of self-medication. From this study, another reason why self-medication was well practiced was confidence in knowledge about medicines from previous pregnancy experiences. It agrees with the

findings of a research carried out in Jos (Joseph, Ezie, Aya and Dapa (2017). Their study revealed that the reasons for self-medication are the belief that pregnant women know about the disease from experience and how it is treated, the belief that the ailment is a minor one, it is cost effective and saves time.

5.1.6 Implications for health promotion and education

Findings in this study revealed that knowledge of safety of drugs used for self-medication was just on average. It was also realized that half of the population of the respondents had poor perception of risk, and half of them practiced self-medication extensively (good practice). In addition, this study has shown that practice of self-medication is largely influenced by the identified predisposing factors. This has health promotion and education implications, as there is need for interventions. The interventions should involve all women in the reproductive age. The predisposing factors needs to be addressed using appropriate health promotion and education strategies. Emphasis should also be laid on pregnant women in the community that do not attend antenatal clinic and those who have low level of education.

5.1.6.1 Health education and awareness

At least half of the population have negative perception to the risks associated with self-medication. Analysis has shown that perception affects the practice of self-medication. Therefore to curb down the practice of self-medication, health talks that focus on prevention of self-medication should be scheduled in communities and antenatal clinics. All women of reproductive age should be educated on the dangers associated with self-medication during pregnancy. They should be made to understand that the fact that a drug was prescribed in a previous pregnancy does not make it safe in subsequent pregnancies. There should also be made to understand that medical advises should also be sought only from medical personnel in the health centres. Furthermore, the importance of attending antenatal clinic should be emphasized. Behavioural change communication materials such as posters and fliers, interpreted in different local languages should be available at all health centres. Audio-visual channels such as television and radios should also be used to educate those in the community.

5.1.6.2 Advocacy

Another major reason why respondents practiced self-medication was because it was more economical. Governments should subsidize the fee for antenatal clinics and drugs prescribed and purchased in the hospital so as to reduce the financial burden on pregnant women. Public health practitioners should advocate to the government on the local, state and federal government levels to ensure that these free and subsidized services are possible. Private sectors and non-government organization should also be sought out for support. In addition, public health professionals should advocate for the expansion of health insurance services for pregnant women to universal coverage, by liaising with public, private and non-governmental donors,

Furthermore, the Pharmacists council of Nigeria (PCN) should ensure that pharmacies and patent and proprietary medicine vendors (PPMVs) enquire if their patients are pregnant or not before dispensing drugs for them. In addition, communication and referral system should also be improved between pharmacists and physicians.

5.2 Conclusion

Self-medication is dangerous in all trimesters of pregnancy, especially in the first trimester and third trimesters in which the foetal organs are developing rapidly. They have the greatest potential to cause structural malformations in the first trimester and functional abnormalities in the third trimester respectively. This study revealed that the knowledge of post-partum mothers' in Ibadan South West local government on the drugs they used during pregnancy was just on the average. Similarly, the positive perception of risks associated with self-medication and the practice of self-medication were found to be on the average. The study also showed that certain factors predispose pregnant women to self-medication. Practice of self-medication was found to be higher in those who did not attend antenatal clinic. To achieve a positive behavioural change in this practice, health promoters and educators have to provide extensive interventions such as advocacy and health education and awareness.

5.3 Recommendations

In view of the findings of this study and the health promotion and education implications, the following recommendations are made:

1. Organization of public enlightenment programs to pregnant women in- and out of hospitals on the dangers of practicing self-medication
2. Provision of free antenatal care for pregnant women so as to increase attendance of antenatal clinic
3. Advocacy to government, private and non-governmental organizations for support to ensure full health insurance coverage for pregnant women
4. Enforcement of regulations that ensure that prohibits indiscriminate selling of drugs to pregnant women.

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APPENDIX I: INFORM CONSENT LETTER

POSTPARTUM MOTHERS' PERCEPTION AND PRACTICE OF SELF MEDICATION DURING PREGNANCY IN IBADAN SOUTH WEST LOCAL GOVERNMENT AREA, OYO STATE

Dear Participant,

I am a post graduate researcher/student at the Department of Health Promotion and Education, Faculty of Public Health, University of Ibadan. The purpose of this study is to gather information about the "***POSTPARTUM MOTHERS' PERCEPTION AND PRACTICE SELF MEDICATION DURING PREGNANCY IN IBADAN SOUTH WEST LOCAL GOVERNMENT AREA. OYO STATE***".

Please note that your participation in this study is entirely voluntary because the main intention behind the study is not to associate any individual's response with their real identity but to explore your experiences. All information that would be collected during this study will be treated with utmost confidentiality.

Your participation in this study is very important as it would help the researcher in his study. Please also note that there are no right or wrong answers to the questions asked or the statements made.

The time needed to complete this interview is approximately 30-60 minutes. Your willingness to partake in the interview implies you have given consent to participate. Thank you for cooperating.

APPENDIX II: QUESTIONNAIRE

POSTPARTUM MOTHERS' PERCEPTION AND PRACTICE OF SELF MEDICATION DURING PREGNANCY IN IBADAN SOUTH WEST LOCAL GOVERNMENT AREA, OYO STATE

Introduction

Greetings Ma, I am a postgraduate student of Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Nigeria. The purpose of this study is to conduct a study on "Postpartum mothers' Perception and Practice of Self-Medication during Pregnancy in Ibadan South West Local Government Area, Oyo State, Nigeria". I will very much appreciate your participation. The information gathered will be important for planning interventions toward the promotion of safe self-care. Whatever information you provide will be kept strictly confidential and I do not require your name.

I sincerely hope you will participate in this study as your view is important.

Serial Number_____

Please answer all the questions as honestly and accurately as you can — this is very important.

SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS

Instruction: Kindly respond appropriately to the following by marking or writing as appropriate in the space provided.

1. What is your age as at last birthday (in years) _____
2. Marital status: 1. Single [ ] 2. Married [ ] 3. Divorced [ ] 4. Widowed [ ] 5. Separated [ ]. If married, what type of marriage? a. Monogamy [ ] b. Polygamy [ ]
3. Religion: 1. Islam [ ] 2. Christianity [ ] 3. Traditional [ ] 4. Others [ ]
4. Ethnicity: 1. Yoruba [ ] 2. Igbo [ ] 3. Hausa [ ] 4. Others [ ]
5. Highest level of education: 1. No formal education [ ] 2. Primary [ ] 3. Secondary [ ] 4. Tertiary [ ]
6. Husband's highest level of education: 1. No formal education [ ] 2. Primary [ ] 3. Secondary [ ] 4. Vocational [ ] 5. Tertiary [ ]
7. Occupation of participant: 1. Civil servant [ ] 2. House wife [ ] 3. Artisan [ ] 4. Student [ ] 5. Unemployed [ ] 6. Self-employed [ ] 7. Medical Practitioner [ ]
8. Place of Residence 1. Urban [ ] 2. [ ] Rural 3. Semi-urban [ ]

9. Average monthly family income: 1. Regular [ ] 2. Irregular [ ]

10. How many times have you been pregnant before? 1. [ ]. 2 [ ] 3 [ ] 4 [ ] 5 [ ]
    More than 5 [ ]

11. How many children do you have? _____

SECTION B: KNOWLEDGE OF RISKS ASSOCIATED WITH DRUGS USED FOR SELF MEDICATION

Instruction: Please provide the answers in the box below

12. Is safe to practice Self-medication? (1) Yes (2).= No

13. In your opinion, can the following drugs be used in all trimesters during pregnancy? (Tick Yes/No)

Indications	Yes	No
Paracetamol		
Ibuprofen		
Vitamin A		
Cod Liver Oil		
Fansidar		
Fulcin		
Cimetidine		
Septrin		
Tetracycline		
Nitrofurantoin		
Quinine		
Analgesic		
If any others (please specify)...		

14. Which of the following Over-the-counter medicines (OTC) should not be used excessively during pregnancy?

Indications	Safe	Not Safe
Paracetamol		
Ibuprofen		
Vitamin A		
Cod Liver Oil		
Fansidar		
Quinine		

SECTION C: POST-PARTUM MOTHERS' PERCEPTION ON RISK ASSOCIATED WITH SELF MEDICATION DURING PREGNANCY

S/N	Statement	True	I don't know	False
15.	I consider it safe to diagnose myself for some illness during pre			
16.	The medications I used when I am not pregnant can also be use pregnant			
17.	When a drug is available over- the- counter, then it must be safe everyone, including pregnant women			
18.	All antibiotics are safe during pregnancy			
19.	All antimalarials are safe during all stages of pregnancy			
20.	I do not check drug leaflets for information as I believe I am alr familiar with the usage and side effects of drugs I use.			
21.	OTC drugs cannot pose risk to the developing foetus at different stages in pregnancy			

SECTION D: PRACTICE OF SELF MEDICATION DURING PREGNANCY

S/N	Questions/Comments	Yes	No
22.	Self-medication is my first line of treatment when I come down with any illness.		
23.	I use several drugs during your last pregnancy without consulting a gynaecologist?		
24.	I use old prescription to buy drugs during my last pregnancy?		
25.	I use only the drugs prescribed by the doctor during my last pregnancy		
26.	I prefer to treat myself for "minor" illnesses or diseases during pregnancy?		

27. Which of the following antibiotics did you use during pregnancy?

Antibiotics	Yes	No
Septrin		
Tetracycline		
Chloramphenicol		
Ciprofloxacin		
Ofloxacin		
If any others (please specify)……		

SECTION E: FACTORS ASSOCIATED WITH PRACTICE OF SELF-MEDICATION DURING PREGNANCY

28. Have you had any previous pregnancy and delivery related problems before?
    1.Yes [ ] 2. No [ ]
29. If Yes, which pregnancy related problem? 1. Low birth weight [ ] 2. Still birth [ ]
    3. pre-term [ ] 4. Abortion [ ] 5. Neonatal death [ ] 6. Congenital anomalies [ ]
    7. Haemorrhage [ ] 8. Others ……
30. Did you attend antenatal clinics during your last pregnancy? 1. Yes [ ] 2. No [ ]
31. If No, why not? 1. high cost of antenatal services [ ] 2. long waiting time there [ ]
    3. distance of antenatal clinic to my house [ ] 4. I have experience from my previous pregnancies [ ] 5. attitude of health workers [ ]
32. If yes, how many times? 1. one-three times [ ] 2. four – six times [ ]
    3. seven - nine times [ ] 4. nine – twelve times [ ]
33. The following are factors that may likely encourage an individual to practice self-medication. Kindly tick the appropriate response as it applies to you (multiple responses allowed). Which of the following were the reasons that influenced you to practice self-medication during your last pregnancy?

Reasons	Yes	No
The illness was a minor one		
There was a need for quick-relief		
Self-medication saves time		
I was confident in my knowledge about medicines		
Self-medication is economical		
Self-medication is more convenient and easier		
It saves me from long waiting time at the hospital		
If any others (please specify)...		

Thank you for your time.

APPENDIX III: YORUBA VERSION

ÌWÒYÈ ÀTI ÌṢẸṢÍ AWỌN IYA ỌMỌ NIPA LILO OOGUN LAI GBA ALAYE LỌWỌ AWỌN DOKITA NIGBA TI WỌN WA NINU OYUN NI AGBÈGBÈ ÌJỌBA ÌBÍLẸ ÌBÀDÀN SOUTH-WEST, ÌBÀDÀN ÌPÍNLẸ ỌYO.

Ẹyin olùkópa mi ọwọn,

Mo jẹ́ akẹ̀ẹ́kọ́ làtí ile ìwé giga Yunifàsitìi tí Ile Ibadan, Koleeji tí a tín sètọjú alaisan pélu oogun òyìnbó, ní abala tí óhún rísí ètò ìlera àwọn ará ìlú, ẹka tí àtí n risi eto nípa idanilẹkọọ ati igbega eto ilera**.** Mo nse ìwadìí yìí gẹgẹ bi akẹẹkọ lati gba iwe erii yunifasitii ti ipele giga, Ìwadìí yìí da lóríiìwòyè àti ìṣẹṣí awọn iya ọmọ nipa lilo oogun lai gba alaye lọwọ awọn Dokita nigba ti wọn wa ninu oyun ni Agbègbè Ìjọba Ìbílẹ Ìbàdàn South-West, Ìbàdàn Ìpínlẹ Ọyo.

Ẹ se àkíyèsí wípé a peyin láto kópa nínúu iwadi yìí nitori pe ẹ jẹ iya ọmọ ti o ń tọju ọmọ lọwọ ni Agbègbè Ìjọba Ìbílẹ Ìbàdàn South-West. Ti ẹ ba gba lati kopa ninu iwadi yii, ao beere lọwọ yin lati fowo si iwe igbasẹ lọwọ olukopa. A yoo tun beere lọwọ yin lati dahun si awọn ibeere nipa ìwòyè àti ìṣẹṣí awọn iya ọmọ nipa lilo oogun lai gba alaye lọwọ awọn Dokita. Didahun si awọn ibeere yi ko ni gbayin ni akoko pupọ iseju mẹwa tabi ogbun lọ, ko si ni ko ipanilara kankan bayin yato si ti akoko ti e ma fi dahun si awọn ibeere ti a ma biyin niinu iwe ibeere yii. E jọwọ e ma ko orukọ yin si iwe ibeere yii nitoripe ati fi ohunka idanimọ si ara awọn iwe ibeere kookan lati dabobo idanimọ rẹ. Gbogbo àlàyé tí ẹba si se fún mi ninu iwadi yi ni yìí o wa ni ipamọ larin emi àtí ẹyìín, mi ko sini se afihan rẹ fún ẹnikẹni. Ìwadìíi yìí yóó ṣe ìrànlọwọ fún awọn eleto ilera, onitọju ati onisegun oyinbo lori ona ti wọn yi o fi se iranlọwọ fun awọn awọn alaboyun lati dènà iku ojiji latara lilo oogun lai ni alaye lati ọdọ awọn Dokita.

Ẹ se àkíyèsí wípé kíkópa nínúu iwadi yìí jẹ tí èyí tí óti okàn yín wá, àti wípé ẹ le yẹra kuro nínúu ìwadìí yìí ní gbogbo ìgbà tí ó bá wù yín láìsí ìsòro kankan sugbọn ẹni lati se akiyesi pe diẹ ninu awọn alaye ti a ti gba nipa yin ṣaaju ki ẹ to yẹra kuro le ti yipada tabi di mimu lo ninu awọn ijabọ ati awọn atẹjade ti ao se, sugbọn oniwadii yio fi imọ shọkan pẹlu yin lorii ohun ti ẹ ba fẹ ki o she. Oniwadi naa yoo sọ fun yin nipa abajade iwadi naa nipa sisẹ iwe ijabo. Gbigba lati dahun awọn iwe ibeere tumọsi gbigba lati kopa ninu iwadi naa. Ẹ jọwọ fi ọwọ si iwe ibuwọlu ni abala ti o wa ni isalẹ ibi iwe igbasẹ lọwọ olukopa ki

o le daju pe ẹ ti gba lati kopa ninu iwadi naa. Mo mọ ríri ìrànlọwọ yín nípa gbígbà láti kópa nínúu ìwadìí yìí pẹlú dídáhùn si ìwadìí yìí.

Ọjọ Ibuwọluwe ……

Ibuwọluwe ……..

Gbólóhùn eniyan ti o ń fun oluwadii ni aṣẹ

Mo ti ka alaye ati ijuwe ti iwadii yii ni, wọn si ti tumọ ẹ si ede ti mo gbọ. Mo ti sọrọ pẹlu oluwadi nipa iwadi naa, atiwipe alaye ti mo gba titẹmilọrun . O ye mi pe kikopa mi jẹ atinuwa. Mo ti mọ nipa idii, awọn ọna ati awọn anfani ti o wa fun iwadi yii debi pe mo le se idajọ pe mo fẹ lati kopa ninu rẹ. O ye mi wipe mo le dawọ duro ti iwadi yi ba ń lọ lọwọ nigbakugba. Mo ti gba ẹda iwe igbasẹ yii ati iwe alaye ni afikun lati tọju fun ara mi.

Ọjọ Ibuwọluwe ……

Ibuwọluwe ……..

ABALA A (APA KINI)
(Àlàyé lori eto igbesiaye olùkópa)

Ilana Idahun: Fi ara balẹ dahun awọn ibeere wọnyibni ibamu pẹlu sisamisi tabi kikọ esi rẹ si awọn aaye ti a pese silẹ nisalẹ.

1. Ọmọ ọdún mélo ni ẹ jẹ ní ìgbà tí ẹ se ọjọ ìbí yín kẹhìn (ní ọdún)? _____
2. Kíni ipo igbeyawo yìín? : 1. = Mi o i tí fe oko ( ) 2. = Mo ti ṣe igbeyawo ( ) 3. = Mo tí fi oko mi sile ( ) 4. = Moti kuro nile ọkọ ( ) 5.Oko mi tí ku ( ) Ti ẹ ba ti ni iyawo, melo ni iyawo ti ẹ ni? 1.= Oniyawo kan ( ) 2. Oniyawo pupọ ( )
3. Kíni ẹsìn tí ẹ n sìn? 1 Kìrìstíẹnì ( ) 2Mùsùlùmí ( ) 3Ẹlẹsìn ìbílẹ ( ) 4 Elesìn miran: (ẹ dárúkọ ẹ ni pàtó) _____
4. Kíni Eya tí ẹ tíwa?: 1 = Yoruba ( ) 2 = Igbo ( ) 3 = Hausa ( ) 4 = Awọn ẹya miiran (ẹ dárúkọ ẹ ni pàtó) _____
5. Kíni ipéle tí ẹ ka ìwé de? 1= Mi o ka iwe Kankan rara ( ) 2 = ile ìwé alakobere ( ) 3 = Ile ìwé girama ( ) 4 = Ile iwe giga agba ( ) 6 = Ipele ẹkọ miiran: (ẹ dárúkọ ẹ ni pàtó)_____
6. Kíni ipéle tí ọkọ yin ka ìwé de? 1. = Wọn o ka iwe Kankan rara ( ) 2.= Wọn lọ ile ìwé alakobere ( ) 3. = Wọn lọ Ile ìwé girama ( ) 4 = Wọn lọ Ile iwe giga agba ( ) 5 = Ipele ẹkọ miiran: (ẹ dárúkọ ẹ ni pàtó) _____
7. Kini iṣẹ ti ẹ ń se? 1 = Iṣẹ ijọba ( ) 2 = Iyawo ile ( ) 3 = Onisẹ ọwọ ( ) 4 = Akẹkọọ ( ) 5 = Alainisẹ lọwọ ( ) 6 = Onisowo ( ) 7 = Isẹ miiran: (ẹ dárúkọ ẹ ni pàtó)
_____
8. Nibo ni ẹ ń gbe? 1.= Aarin gbungbun ilu ( ) 2.= Arọko ( )
9. Kíni gbèdéke àpapọ owó ọyà idile yìín lósoosù? _____
10. Ṣe oyun alakọkọ yin niyi? 1 = Bẹẹ̀ni [ ] 2 = Bẹẹ̀kọ́ [ ]
Ti kii ba ṣe bẹ, ẹ mu ọkan ti o jẹ ninu awọn idahun isalẹ yi)
(a) Oyun keji (b) Oyun kẹta (c) nọmba miran: (ẹ dárúkọ ẹ ni pàtó) _____
11. Melo ni awọn ọmọ ti ẹbi?_____

ABALA B (APA KEJI)

ÌBÉÈRÈ LORÍI ÌMÒ NÍPA AWỌN IYA ỌMỌ LORI EWU TI O WA NINU LILO OOGUN LAI GBA ALAYE LỌWỌ AWỌN DOKITA NIGBA TI WỌN WA NINU OYUN

Ilana Idahun: Fi ara balẹ dahun awọn ibeere wọnyibni ibamu pẹlu sisamisi tabi kikọ esi rẹ si awọn aaye ti a pese silẹ nisalẹ

12. Njẹ ewu wa ninu lilo oogun lai gba alaye lọwọ awọn Dokita?1 = Bẹ́ẹ̀ni [ ] 2 = Bẹ́ẹ̀kọ́ [ ]
13. Ninu ero titi yin, njẹ awọn oogun wọnyi dara fun lilo ni gbogbo akoko oyun?

(Fi ami si pẹlu Bẹ́ẹ̀ni tabi Bẹ́ẹ̀kọ́)

Awọn oogun itọkasi	Bẹ́ẹ̀ni	Bẹ́ẹ̀kọ́
Parasitamọ		
Ibupurofin (Ibuprofen (Oogun ara riro))		
Fitamin amojuseyere (Vitamin A)		
Cod Liver Oil (Oogun eku eja)		
Fansidar (Ogun iba)		
Fulcin		
Cimetidine		
Septrin (Oogun kokoro)		
Tetracycline (Oogun kokoro)		
Nitrofurantoin		
Quinine (Ogun iba)		
Analgesic (Oogun ara riro)		
Ti oogun miiran bawa (ẹ dárúkọ ẹ ni pàtó)		

14. Ewo ninu awọn oogun wọnyi ti o jẹ oogun ti ale lo ra ki a si lo funrawa lai gba alaye lọwọ (OTC) ni ko yẹ ki a lo pupọ nigba oyun?

Awọn oogun itọkasi	Ko lewu	O lewu
Parasitamọ		
Ibupurofin (Ibuprofen (Oogun ara riro))		
Fitamin amojuseyere (Vitamin A)		
Cod Liver Oil (Oogun eku eja)		
Fansidar (Ogun iba)		
Quinine (Ogun iba)		
Ti oogun miiran bawa (ẹ dárúkọ ẹ ni pàtó)		

ABALA D (APA KETA)

ÌBÉÈRÈ LORÍI ÌWÒYE AWỌN IYA ỌMỌ LORI EWU TI O WA NINU LILO OOGUN LAI GBA ALAYE LỌWỌ AWỌN DOKITA NIGBA TI WỌN WA NINU OYUN

Òhùńkà	Ìbéèrè	Mo faramọ gidi	Ko daju pé mo faramọ	Mi o faramọ
15.	Mo lero pe ko si ewu nibi ki ń ṣe iwadii arami nipa fifi idi aisan mi mulẹ lakoko oyun			
16.	Awọn oogun ti mo ń lo nigbati mi ko i ti loyun tun le ṣee lo nigbati mo loyun			
17.	Nigbati ẹnikẹni bale ra awọn oogun lai ni alaye nipa lilo, Ko yẹ ki ewu wa fun ẹnikẹni lati loo, pẹlu awọn alaboyun			
18.	Gbogbo awọn oogun kokoro ni ko lewu ti eniyan ba loyun			
19.	Gbogbo awọn oogun iba ni ko lewu ni gbogbo akoko ati awọn ipo oyun			
20.	Emi ko ki ń ṣayẹwo awọn iwe alaye oogun pelebe nitoripe mot i mọ bi mo ṣe le lo awọn oogun wọnyi pẹlu ewu ti o wa fun wọn			
21.	Awọn oogun ti a le loo lai ni alaye ko lewu fun idagbasoke ọmọ inu oyun			

ABALA IPIN E (APA KERIN): ÌBÉÈRÈ LORÍI ÌṢẸṢÍ NIPA LILO OOGUN LAI GBA ALAYE LỌWỌ AWỌN DOKITA LAKOKO OYUN

(Fi ami si pẹlu Bẹ́ẹ̀ni tabi Bẹ́ẹ̀kọ́)

Ohunka	Awọn Ibeere	Bẹ́ẹ̀ni	Bẹ́ẹ̀kọ́
22.	Lil**lo oogun lai gba alaye lọwọ awọn dokita** ni ohun akọkọ ti mo ma ń se ti aisan ba ń semi.		
23.	Mo ti lo ọpọlọpọ oogun oyum lakoko oyum **lai gba alaye lọwọ awọn dokita to ń tọju alaboyun**		
24.	Mo ti lo iwe ilana oogun ti mot i gba tẹlẹ lati ra awọn oogun tuntun miiran lakoko oyun ti o koja?		
25.	Awọn oogun ti dokita paṣẹ fun mi nikan ni mo lo lakoko oyun ti o kọja		

26.	O tẹmilọrun lati se itọju ara mi niwọnba igba ti aisan na ko ba ti pọ lakoko oyun?		

27. Ewo ninu awon oogun kokori yi no elo ninu oyun

Antibiotics	Beeni	Beeko
Septrin		
Tetracycline		
Chloramphenicol		
Ciprofloxacin		
Ofloxacin		
Ti oogun mi bawa, ẹ dárúkọ ẹ ni pàtó		

ABALA IPIN Ẹ (APA KARUN): ÌBÉÈRÈ LORÍI OHUN TI LILO OOGUN LAI GBA ALAYE LỌWỌ AWỌN DOKITA NINU OYUN LE FA FUN AWỌN IYA ỌMỌ

Awọn Okunfa ti o Jẹmọ Itọju Alaboyun

28. Njẹ ẹ ti ni isoro pẹlu oyun tabi ibimọ ri? 1 = Bẹ́ẹ̀ni ( ) 2 = Bẹ́ẹ̀kọ́ ( )
29. Ti o ba jẹ Bẹ́ẹ̀ni, iru isoro woni? 1=ọmọ mi kere ( ) 2= Abiku ( ) 3= Mo bi ọmọ saaju akoko ti wọn fun mi ni ile-iwosan ( ) 4= Oyun bajẹ momi lara ( ) 5= ọmọ ku ni aipe ti abi ( ) 6= Ara ọmọ tobi ju bi o se yẹ lọ ( ) Ẹjẹ n y alai da ( ) Ti isoro mi bawa, ẹ dárúkọ ẹ ni pàtó……..
30. Njẹ ẹ lọ si ile-iwosan fun eto itọju alaboyun ki ẹ to bi ọmọ yi? 1 = Bẹ́ẹ̀ni ( ) 2 = Bẹ́ẹ̀kọ́ ( )
31. Ti ẹ o ba lọ, kini idi naa lode? 1= owow rẹ wọn juu ( ) 2= Didani duro fun igba pipẹ nibẹ ( ) 3= ile-iwosan jinna si ile mi ( ) 4=Mo ni iriri lati igba oyun akọkọ ( ) iwa ti awọn osisẹ ilera ń wu koda ( )
32. Ti o ba jẹ bẹẹni, igba melo? 1= ẹekan si ẹmẹta 2= ẹmẹrin si ẹmẹfa ( ) 3= ẹmeje si ẹmeẹsan ( ) 4= ẹmẹsan si ẹmejila

Awọn Okunfa ti o lemu isẹlẹ waye

33. Jowo fesi ti o yẹ si awọn aye ti o wa ni isalẹ yi (Anfani wa lati mu ju esi kan lọ). Ewo ninu awọn okunfa yi ni o le mu mi lo oogun lai gba alaye lọwọ awọn dokita?

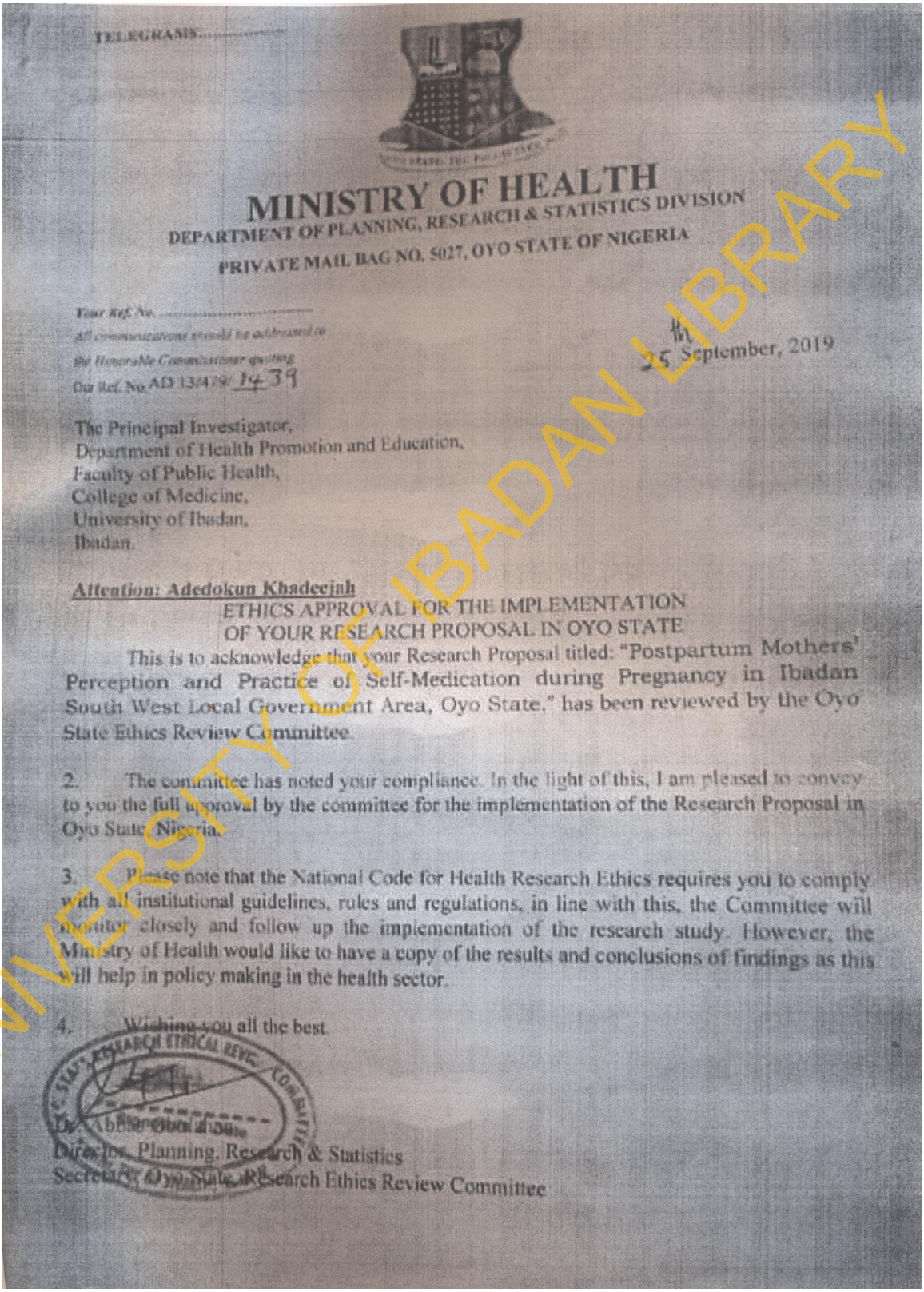
Awọn Okunfa	Bẹ́ẹ̀ni	Bẹ́ẹ̀kọ́
Ti aisan ba jẹ eyi ti ko le		

Ti mo nilo ki ara mi tete ya		
Lilo oogun fun ra mi lai gba alaye lọwọ awọn dokita ko ni fi akoko mi sofo.		
Mo ni idaniloju pẹlu imọ mi nipa oogun lilo		
Lilo oogun fun ra mi lai gba alaye lọwọ awọn dokita ko ni jẹ kin fowo sofo		
Lilo oogun fun ra mi lai gba alaye lọwọ awọn dokita rọmi lọrun		
Lilo oogun fun ra mi lai gba alaye lọwọ awọn dokita ko mi yọ kuro nibi wahala diduro pẹ ni ile-iwosan		
Ti okunfa mi bawa, ẹ dárúkọ è ni pàtó ati iye igba		

ESEUN FUN IFỌWỌSOWỌPỌ YIN

APPENDIX

ETHICAL APPROVED LETTER



TELEGRAMS.....

MINISTRY OF HEALTH

DEPARTMENT OF PLANNING, RESEARCH & STATISTICS DIVISION

PRIVATE MAIL BAG NO. 5027, OYO STATE OF NIGERIA

Your Ref. No. .....

All communications should be addressed to the Honorable Commissioner quoting

Our Ref. No. AD 13/479/ 1439

25th September, 2019

The Principal Investigator,
Department of Health Promotion and Education,
Faculty of Public Health,
College of Medicine,
University of Ibadan,
Ibadan.

Attention: Adedokun Khadeejah

ETHICS APPROVAL FOR THE IMPLEMENTATION
OF YOUR RESEARCH PROPOSAL IN OYO STATE

This is to acknowledge that your Research Proposal titled: "Postpartum Mothers' Perception and Practice of Self-Medication during Pregnancy in Ibadan South West Local Government Area, Oyo State," has been reviewed by the Oyo State Ethics Review Committee.

2. The committee has noted your compliance. In the light of this, I am pleased to convey to you the full approval by the committee for the implementation of the Research Proposal in Oyo State, Nigeria.

3. Please note that the National Code for Health Research Ethics requires you to comply with all institutional guidelines, rules and regulations, in line with this, the Committee will monitor closely and follow up the implementation of the research study. However, the Ministry of Health would like to have a copy of the results and conclusions of findings as this will help in policy making in the health sector.

4. Wishing you all the best.

Dr. Abiola Obadina
Director, Planning, Research & Statistics
Secretary, Oyo State Research Ethics Review Committee