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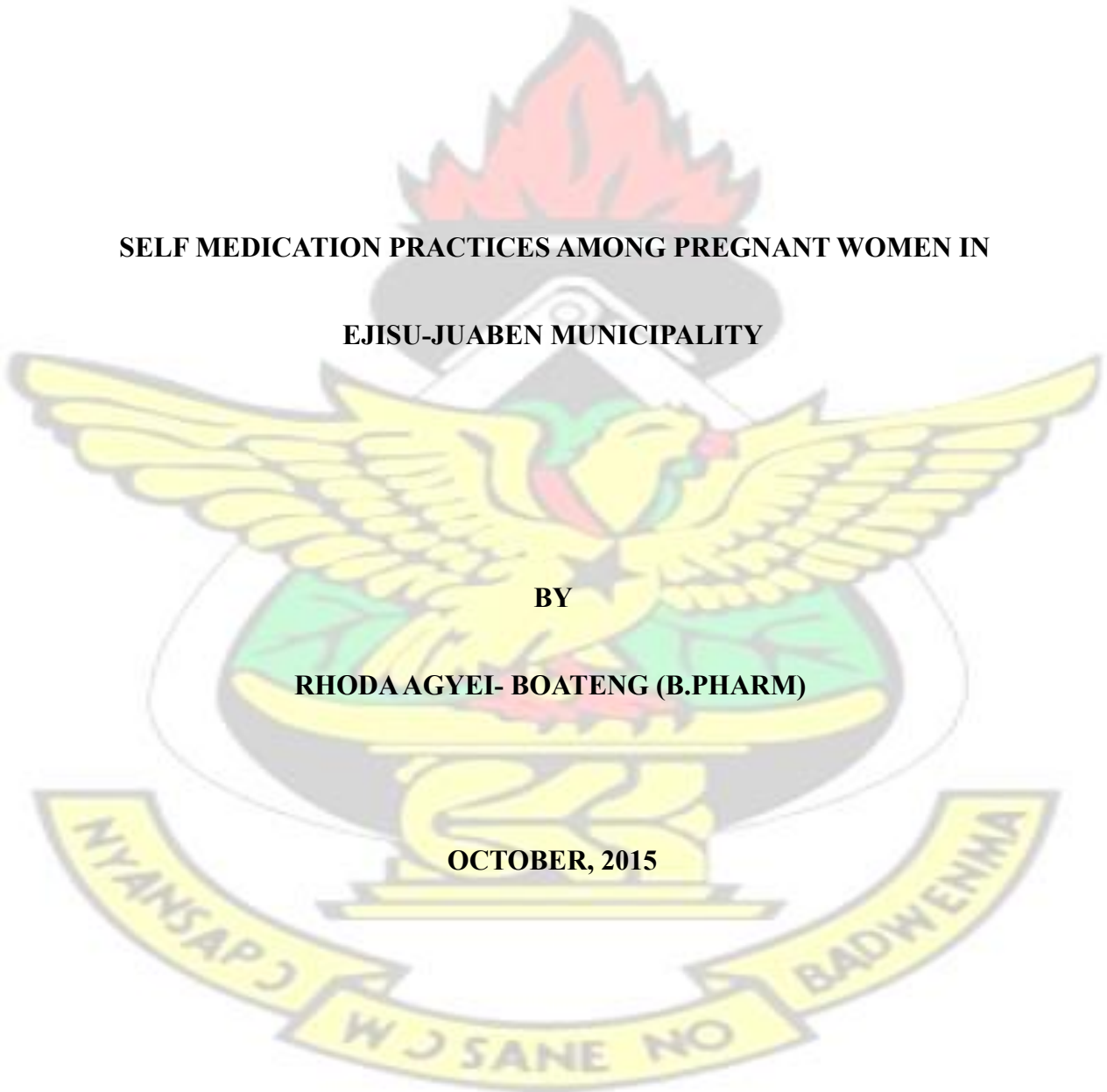
SELF MEDICATION PRACTICES AMONG PREGNANT WOMEN IN

EJISU-JUABEN MUNICIPALITY

BY

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OCTOBER, 2015



DECLARATION

I hereby declare that this submission is my own work towards the Master's Degree in Public Health and that, to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

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DEDICATION

This work is dedicated to the Almighty God for His unending love and ceaseless grace that brought me to the point of pursuing my Master's degree and for seeing me through the programme successfully.

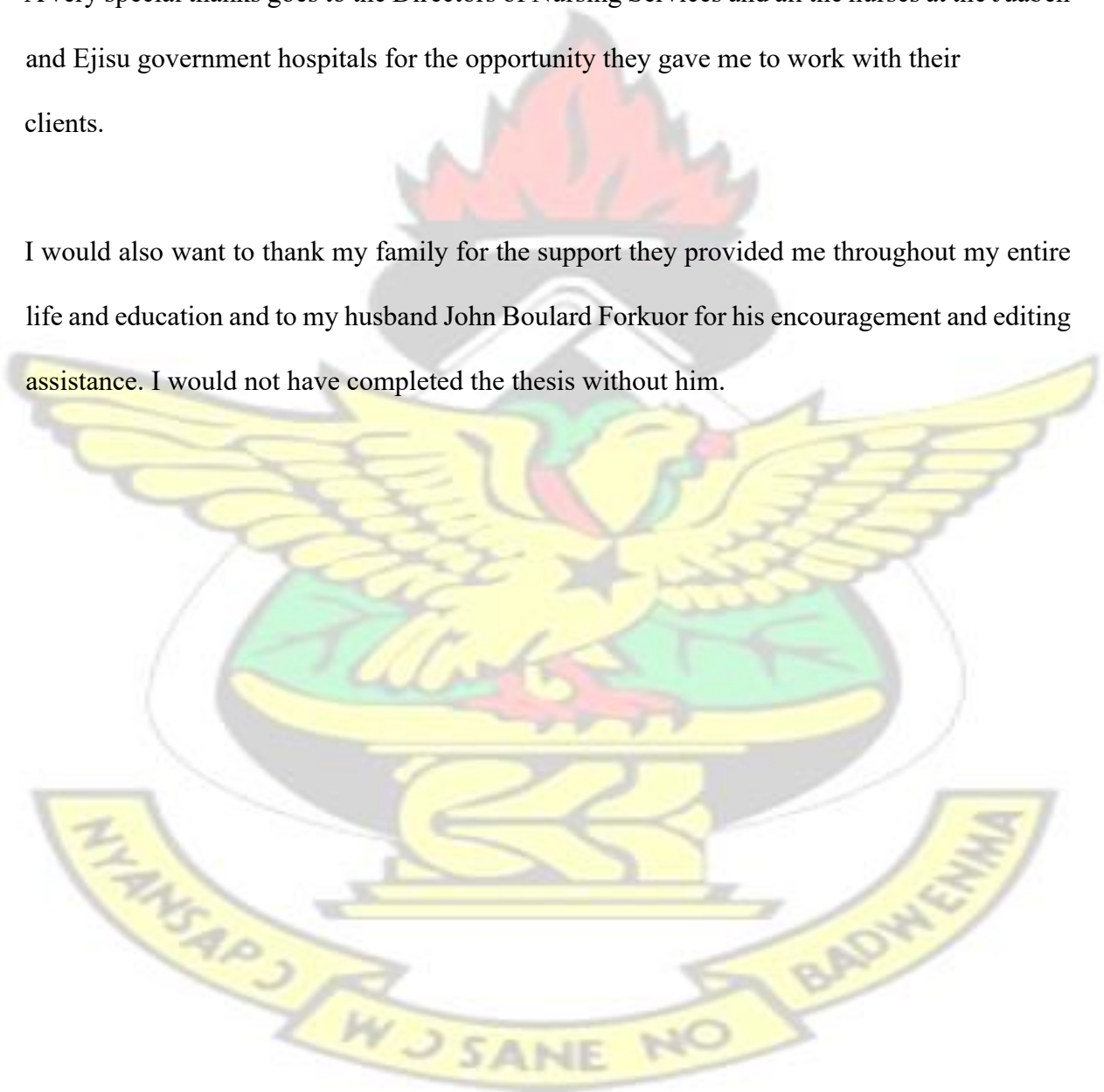


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ABSTRACT

Reducing maternal mortality is key to achieving the Millenium Development Goals in Ghana. However, self-medication is one of several health seeking behaviours that threatens the life of pregnant women and undermine the achievement of improved maternal health. Though selfmedication in general has received research attention, not much is known about the reasons that prompt pregnant women to self-medicate and the disease conditions for which selfmedicated drugs are used to treat. This research explored the phenomenon of self-medication among pregnant women in Ejisu Juaben municipal, in the Ashanti region of Ghana. Using a questionnaire survey, 300 pregnant women were interviewed on the factors that cause them to self-medicate, the disease conditions treated with self-medication, the most commonly selfmedicated drugs, and their knowledge of the potential effects of self-medication. The research revealed that self-medication was high among respondents (68.3%), even though most respondents (77.7%) remained informed of the potentially negative effects on the mother and the foetus. Perceived non-seriousness of disease conditions (37.3%), familiarity with certain drugs (22.8%), low cost of self-medicated drugs (25.1%) and dissatisfaction with health service delivery (11.5%) were some of the main factors that predisposed respondents to self-medicate. This research also found that headaches (44.8%), cold and flu (17.7%), stomach problems (14.2%) and body pains (10.9%) were the most commonly treated disease conditions, often treated with analgesics (46.4%), herbal drugs (23.5%), antibiotics (18.4%), and antacids (11.6%). Based on these findings, the research concludes by recommending that government intervention programs should go beyond pregnant women and target family members and relatives, since they are influential as trusted sources of drugs, and drug information. In addition, this research recommends that the government of Ghana initiate a mobile health delivery system for self-employed pregnant women, which will target these

pregnant women at their work places and through that reduce the reluctance and inconvenience that these pregnant women experience in seeking professional health services.

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LIST OF ABBREVIATIONS

GHS	Ghana Health Service
GLSS	Ghana Living Standards Survey
GMHS	Ghana Maternal Health Survey
GSS	Ghana Statistical Service
IPT	Intermittent Preventive Treatment
MDG	Millennium Development Goals
MOH	Ministry of Health
NDPC	National Development Planning Commission
NMCP	National Malaria Control Program
WHO	World Health Organisation



CHAPTER ONE

INTRODUCTION

1.0 BACKGROUND TO THE STUDY

Self-medication can be defined as the use of drugs to treat self-diagnosed disorders and symptoms, or the intermittent or continued use of a prescribed drug for chronic or recurrent disease or symptoms (Donkor et al., 2012). As a phenomenon, self-medication is manifested when people use over the counter medications to resolve usually perceived minor health challenges (Afolabi, 2008; Figueiras, Caamaño, & Gestal-Otero, 2000).

Self-medication is a global problem, common in developed, developing, and under developed countries. In 1990, it was estimated that between 70% and 90% of all illness episodes were handled by some form of self-treatment before it came to the attention of health professionals (Segall, 1990). Afolabi (2008) estimates that in the United Kingdom approximately 50% of all health care among people occurs as some form of self-medication. Self-medication has also been reported as a health behavior among people in Spain (Figueiras et al., 2000). Similarly, selfmedication has been reported as a common health behavior in different developing countries in general, including Nigeria, Zambia, and other countries in Asia like India, and Vietnam (Afolabi, 2008; Banda et al., 2007; Fakeye, Adisa, & Musa, 2009; Malan & Neuba, 2011; Okumura, Wakai, & Umenai, 2002; Rahman et al., 2008; Yusuff & Omarusehe, 2011).

The preceding information implies that as a health behavior, self-medication is not limited to a particular group of people but rather transcends race, age, occupational status, gender, culture, and

other such categorisations (Afolabi, 2008). This notwithstanding, self-medication has been argued to be especially prevalent among people living in areas with high incidence of malaria (Akanbi, Odaibo, Afolabi, & Ademowo, 2005). Elsewhere, self-medication with specific drugs like antibiotics has been shown to be highly prevalent in developing countries, with the exception of a few developed countries (Donkor et al., 2012). Figueiras et al. (2000) in a study of socio-demographic factors associated with self-medication in Spain also associated self-medication with women, people living in large cities, and people who live alone.

The prevalence of self-medication is informed by a variety of factors that may differ from country to country. On the whole however, self-medication in more developed countries may be as a result of the increasing de-regulation of previously restricted drugs. This is because, a wide variety of drugs are now available over the counter for the treatment of a variety of health challenges (Blenkinsopp & Bradley, 1996; Bradley & Blenkinsopp, 1996). On the other hand, self-medication in developing countries may be as a result of a variety of factors including the higher cost involved in seeking professional care in hospitals; poverty; the considerable long time spent in hospitals in order to seek health care; cultural beliefs in the efficacy of other traditional methods; as well as poor regulation and easy availability of drugs outside formal and regulated environments (Afolabi, 2008; Donkor et al., 2012; Figueiras et al., 2000).

The negative effects of self-medication are diverse and may include effects such as treatment failures, drug toxicity, and increase in treatment cost, prolonged hospitalization periods and increase in morbidity. What makes self-medication more dangerous in developing countries is that the basic knowledge concerning the pharmacological properties of these drugs and how they may

affect those who practice it are not well known (Abasiubong et al 2012). The adverse effects of self-medication become more serious when the self-medicating person is a pregnant woman (Abasiubong et al 2012). Self-medication by pregnant women especially in the first trimester of pregnancy can cause some serious effects to the unborn baby and the mother. These effects may include malformation of children, or hindrance in normal growth of the baby, defects in the development of the reproductive organs, urinary retention, intersex, undescended testis and other problems with the urethral (Abasiubong et al 2012).

Like other developing countries, self-medication is a major health concern in Ghana and has become increasingly common since 1985 when health facility user fees were introduced, making people to self-medicate in order to avoid paying consultation fees and transport costs (Salisu and Prinz, 2009). Nonetheless, there remains very little research on self-medication among pregnant women. In the light of the foregoing, this research used quantitative research techniques to determine the various self-medication practices among pregnant women in Ghana and explore the knowledge of pregnant women on the adverse effects self-medication may have on them, the unborn child and the country as a whole.

1.1 PROBLEM STATEMENT

Van Den Boom, Nsowah-Nuamah, & Overbosch, (2008) and Donkor et al. (2012) indicate that there are difficulties in accessing medical care in several places in Ghana. Consequently, selfmedication (including traditional and herbal medicines) is a common practice among Ghanaians especially among the poor. Self-medication using traditional or herbal medicines is also common. Salisu and Prinz (2009) also argue that it is common for Ghanaians, when ill, to

self-medicate first instead of seeking professional medical support from health personnel and health centres. This behaviour among the general Ghanaian populace is mainly to reduce cost of consultation and the cost of transportation to and from the hospitals or health care facilities especially for the rural areas where residents have to travel for considerable distances to access health facilities (Salisu and Prince, 2009). Consequently, difficulties and inconveniences in accessibility to and use of professional health care is a significant challenge for the government of Ghana to overcome. This includes the challenge of reducing self-medication and promoting good health seeking behaviour among the general Ghanaian populace (Van Den Boom et al., 2008).

Self-medication is one of the most significant social attitudes that negatively affect the health of pregnant women in Ghana. In a report on Ghana's Millennium Development Goals (MDGs), the National Development Planning Commission of Ghana (NDPC) revealed that one of the main challenges that Ghana has faced in achieving the goal of improving maternal health has been poor health seeking behaviours especially among the poor (NDPC, 2010). These poor health seeking behaviours include choosing to self-medicate and also self-medicating with traditional herbal medicines instead of attending a health facility to be diagnosed and treated accordingly. The Ghana Maternal Health Survey (GMHS) and the Ghana Statistical Service (GSS) both reveal that when faced with an ailment, some pregnant women prefer to self-medicate first and only seek professional health services when the situation worsens (GMHS and GSS, 2009). This, according to the Ministry of Health (MOH) has led to poor health seeking behaviour among some pregnant women in Ghana, resulting in delays in, and late presentation of health problems (MOH, 2008).

In view of the above, this research investigated and analysed the various reasons and factors underlying self-medication among pregnant women in Ghana; disease conditions for which pregnant women in Ghana usually self-medicate; the knowledge and attitudes of pregnant women regarding the potential negative effect of self-medication; and the socio-economic factors and predictors of self-medication among pregnant women in Ghana. These are all interesting issues, information on which will help to resolve the problem of self-medication among pregnant women and in the process promote maternal and foetal health in Ghana.

1.2 RESEARCH QUESTIONS

The following research questions guided this study:

1. What factors inform the practice of self-medication among pregnant women?
2. Which particular diseases or disease conditions are treated with self-medicated drugs among pregnant women?
3. Which drugs are most often used in self-medication among pregnant women?
4. What do pregnant women know about the possible side effects of self-medication on the pregnant woman and the unborn child?

1.3 OBJECTIVES OF STUDY

Generally, this study sought to explore the phenomenon of self-medication among pregnant women in the Ejisu – Juaben Municipality in Ghana.

Specifically, the study sought to:

1. Explore the factors that inform the practice of self-medication.

2. Ascertain the disease conditions treated with self-medicated drugs.
3. Ascertain the drugs that are most often used in self-medicating among pregnant women
4. Investigate the level of awareness and knowledge of pregnant women about the possible side effects of self-medication on unborn children.

1.4 SIGNIFICANCE OF STUDY

Improving maternal health and reducing infant mortality are two important health related goals of Ghana's Millennium Development Goals (MDGs) (NDPC, 2010). In order to achieve these two important goals, it is essential that all stake holders work together to eliminate the various factors, including self-medication, that work against and hinder the wellbeing of pregnant women in Ghana (NDPC, 2010). Understanding and managing self-medication attitudes and by so doing promoting medication safety among pregnant women will go a long way in achieving both goals. Thus, this study, with its focus on assessing self-medicating attitudes among pregnant women in Ghana is significant, since knowledge and information from the research can be adopted by health professionals and other stake holders in improving the health of the mother and child. This can ultimately reduce the rate of morbidity and mortality among women and children and hence contribute towards the achievement of Ghana's Millennium Development Goals.

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

This chapter reviews literature on self-medication among pregnant women. The review is organized thematically under the following headings: the incidence of self-medication; factors that inform or cause self-medication; disease conditions that are treated with self-medicated drugs; the sources from which self-medicated drugs are obtained; and knowledge and awareness regarding the effects of self-medication on the lives of the people who practice self-medication.

2.1 INCIDENCE OF SELF MEDICATION

Self-medication as a health seeking behaviour has been considered as a potential threat to the health of people who practice it. Nonetheless, in places where access to health facilities are difficult to come by, self-medication is sometimes promoted and encouraged for the treatment of certain conditions (Yussuf and Omarusehe, 2011). However, this can only be successful if people are informed, in their self-medicating practices, of the most effective and harmless way of administering the drugs and the possible side effects (Yussuf and Omarusehe, 2011).

Globally, self-medication is a common phenomenon and has been reported to be on the increase (Arikpo et al. 2010; Jain et al. 2011; Abasiubong et al. 2012). Rahman et al. (2008) reveal that approximately 80% of the population in the world rely on the use of unconventional medicines as the first source of health care. There is always the risk of perceiving self-medication as a phenomenon in the less developed countries. Nonetheless, even in the most advanced countries like the United States, it has been estimated that approximately one third of the population selfmedicate using herbal medicines. This is also similar in countries like Malaysia (Rahman et al. 2008). Togoobaatar et al. (2010) further reiterated that self-medication as a health seeking

behaviour is also present in the United States and in Europe and that it is not a phenomenon in only the developing countries. This is significant, given the fact that these developed countries are perceived to have better health facilities, with their citizens having easy access to health facilities and professionals.

In developing countries in Africa and in Asia, self-medication, including the use of herbal remedies as a primary form of health care is very common among the population (Oreagba et al. 2010). Arikpo et al. (2010), indicate that self-medication, especially in rural Africa is so high that they describe it as being in a „crisis state“ of affairs. In a research conducted in Ghana, Van Den Boom et al., (2008) revealed that self-medication was the most common means by which Ghanaians coped with diseases. The authors further explained that an estimated one out of every two Ghanaians self-medicate, especially in the rural areas. Similarly, Arikpo et al. (2010) in their study of 552 respondents in Nigeria revealed that 99.4% of respondents indicated that they always resorted to self-medication. To this extent, Abasiubong et al. (2012) emphasise that selfmedication has become a normal attitude in Nigeria. Self-medication is also a very popular form of health care and on the increase in other Asian countries like Mongolia and in Vietnam (Togoobaatar et al. 2010; Tabatabaee, 2011). Thus, self-medication is present in both developing countries in Africa and in Asia.

In addition to its incidence in both developed and developing countries, some research evidence suggests that certain groups of people are more likely to self-medicate or are more prone to selfmedication than others. For instance, Figueiras et al. (2000), in a study of the socio-demographic characteristics associated with self-medication in Spain found a high incidence of

self-medication among women, single people and those living alone, the aged, and the unemployed. The authors also revealed that, based on their study, the likelihood of self-medication increases with the size of a person's household. In addition, they found out that self-medication was high among those who ended their education at the age of 16 and persons 43 years and over.

The incidence of self-medication among women, which has been found to be particularly high compared to the incidence among men, has been attributed to the physiological stress that women usually experience for instance during menstruation, and the higher tendency of women towards self-care (Figueiras et al. 2000). For a lot of women, menstrual periods are associated with a lot of pain, stress and discomfort which are often treated with home-made remedies or over the counter medications (Figueiras et al. 2000). Once these symptoms are presented a few times at the hospital and they receive the same medications for them, some women may feel it unnecessary to go to the hospital again with similar symptoms (Van Den Boom et al., 2008). On the contrary, they are more likely to purchase an over the counter medication as a result of perceived familiarity with the treatment for that particular condition (Van Den Boom et al., 2008). In addition to the above, the socio-cultural expectation and requirement for women to take care of themselves physically has also been used to explain the high incidence of self-medication among women (Figueiras et al. 2000).

The high incidence of self-medication among women becomes more serious when the woman in question is a pregnant woman. Yussuf and Omarusehe (2011) argue that the fact that pregnancy is usually associated with several minor ailments (headache, nausea, heartburn, back pain); coupled with the general unwillingness of people to suffer; to the „stress“ associated with seeking medical

care, may explain the high incidence of self-medication among pregnant women. To further illustrate their argument, Yussuf and Omarusehe, (2011) reveal that for most pregnant women in Nigeria, self-medication using various forms of drugs is the first response to perceived ill health. The authors further argue that the tendency for pregnant women to self-medicate increases during the third trimester of pregnancy, when pregnant women experience increased abdominal and waist pains and other discomforts (Yusuf and Omarusehe, 2011). Thus, during this period, these experiences are quite regular and so a bit inconvenient for pregnant women to present them, each time they occur at the health facilities. They are more likely to purchase over the counter drugs to cure perceived waste pains than to present it to a health professional in a health facility (Yusuf and Omarusehe, 2011).

With regards to single people and people living alone, the incidence of self-medication has been attributed to their increased sense of autonomy and desire to maintain such autonomy over their health, and subsequently their lower tendency to visit the doctor (Figueiras et al. 1999).

2.2 FACTORS OR CAUSES OF SELF MEDICATION

The increase in the incidence of self-medication among different groups of people in different parts of the world can be attributed to various reasons or factors. For the purpose of this review, these factors have been grouped under two major categories: Macro Factors and Micro Factors. The macro factors have to do with the actions or inactions of governments and state authorities that directly or indirectly induce people to engage in the practice of self-medication. On the other hand, micro factors are personal reasons and belief systems that promote self-medication.

2.2.1 MACRO FACTORS AFFECTING SELF-MEDICATION

The actions and inactions of governments as well as the health structures and health policies existing in different countries can affect the health seeking attitudes among people in different parts of the world. The World Health Organisation (WHO) for instance revealed that more than 50% of all countries do not implement basic policies that will help promote better health seeking behaviours among its citizens (WHO, 2010). The WHO revealed that more than 60% of patients in the public sector and 70% in the private sector do not receive health treatment according to laid down and appropriate clinical guidelines. As a consequence, these people resort to poor health seeking behaviours, including self-medication (WHO, 2010). Thus, the policies, actions and inactions of governments and state authorities have directly and sometimes indirectly resulted in the increase in self-medication as a health seeking behaviour among people in different parts of the world.

Some governments openly implement policies that will make self-medication more popular among its populace. For instance Blenkinsopp and Bradley (1996) writing on self-medication in the United Kingdom reveals that some governments see self-medication as a way of making consumers share in the cost of health care, and subsequently relieving pressure on the health insurance scheme. By so doing, governments aim to shift some of the responsibility and cost of health care to consumers in their respective countries. This is achieved when previously „prescription only“ drugs are reclassified so that they are allowed to be sold as „over the counter“ drugs (Blenkinsopp and Bradley, 1996). This makes a large variety of drugs for treating a large variety of disease conditions available to consumers than they were previously. When this happens,

some consumers are less likely to suffer the inconvenience of attending a health facility, especially when the illness is perceived as non-serious and rather resort to using over the counter medication.

According to Blenkinsopp and Bradley (1996), the influence of corporate stakeholders in reclassifying drugs that were previously „prescription only“ cannot be discounted when discussing the macro factors affecting self-medication. For instance the influence of big pharmaceutical companies who, increasingly, can and do lobby governments to reclassify an increasing number of „prescription only“ drugs as over the counter drugs so that they can increase their profits can be cited as one example (Blenkinsopp and Bradley, 1996). Furthermore, the high or vigorous media advertisements pursued by the major pharmaceutical companies are perceived as one of the main causes of self-medication in many developed countries (Figueiras et al. 199; Okumura et al, 2002). In places like Vietnam, available research has suggested that the introduction of a free market economy, which caused an increase in the establishment of private pharmaceutical companies and subsequently an increase in the number of pharmaceutical drugs like antibiotics, has caused an increase in the incidence of self-medication (Okumura et al. 2002). Togoobaatar et al. (2010) further reiterates that in countries that were previously socialist like Mongol and Vietnam, the introduction of free market economies has led to a rapid increase in the number of private pharmacies making drugs available to individuals without prescription

(Togoobaatar et al. 2010).

In addition to the influence of corporate pharmaceutical companies, Okumura et al. (2002) and Abasiubon et al. (2012) have argued that the failure of several governments and state authorities to enforce existing drug regulations and subsequently control the sale of drugs (including expired and counterfeit drugs) is another major cause of self-medication since it has made it possible for

urban residents especially to access all types of pharmaceutical products over the counter. In developing countries, the incidence of self-medication is worsened by poor regulation, distribution, and sale of prescription drugs (Togoobaatar et al. 2010). This lack of control, coupled with the fact that there is high costs of health care, and that self-medicated drugs are often affordable, has been cited as some of the causes of self-medication (Togoobaatar et al. 2010).

In sub-Saharan Africa, the incidence of self-medication is particularly high because of widespread poverty and inadequate health care systems and facilities (Arikpo et al. 2010). Van den Boom et al. (2008), investigating self-medication in Ghana argued that access to health care is still very biased and oriented towards health care provision in the urban areas to the detriment of the rural areas. The authors argue that the Ghana government's health policies have placed very little emphasis on providing preventive health care for rural residents but rather on curative health care, and that there is less emphasis on the provision of basic health care for rural residents (Van Den Boom et al., 2008). In addition to other challenges, these, according to the authors have a tendency to increase the incidence or cause self-medication among a higher number of residents in Ghana. Other factors that account for the high incidence of selfmedication are poverty, ignorance and lack of education, and inadequate health care facilities (Jain et al. 2011).

In sum, policies, systems and structures at the state and structural level influences and informs the health seeking behaviour of people and can be perceived as some of the causes of the increasing incidence of self-medication.

2.2.2 MICRO FACTORS AFFECTING SELF-MEDICATION

The beliefs and perceptions that people have of the existing health systems as well as of their own diseases and conditions inform their health seeking behaviours, including self-medication.

Sometimes, traditionally held beliefs and myths inform or influence self-medicating attitudes. Thus, people self-medicate because of traditionally held belief or perception. In a research on the self-medication attitudes among pregnant women in Nigeria for instance, Abasiubong et al. (2012) found that respondents had a perception that some herbal products originated from the gods and thus they preferred to treat themselves with herbal drugs than to seek conventional medical care.

Regarding herbal medicines one of the main factors influencing the self-medication of these among pregnant women is their perception. For some pregnant women herbal medicines are more effective in curing diseases especially since they are of nature (natural) and thus is perceived to be much safer during pregnancy (Fakeye et al 2009). Some research conducted in Canada and Italy revealed that some pregnant women preferred herbal medications because they perceived herbal medications to be safer than conventional pharmaceutical drugs. They perceived them to be simpler, safer, natural with fewer side effects and more familiar (Tabatabaee, 2011). In addition, herbal medicines are often cheaper compared to other conventional medicines and so attract low income consumers who may be unable to finance conventional medical treatments (Fakeye et al 2009).

In addition to the reasons provided above, there are other reasons given for self-medication that linked with the traditional and religious beliefs held by people in different parts of the world. In some places, herbal medicines for instance are believed to prevent a woman's pregnancy from

aborting before its due date (miscarriage) and also protect mother and foetus from witches (Abasiubong et al. 2012). These perceptions are part of strongly held traditional belief systems that inform the health seeking behaviours of people, including pregnant women. Malan and Neuba, (2011) indicated that in some areas of Africa for instance, herbal medicines are used in order to help pregnant mothers have a „beautiful baby“ and/or to facilitate smooth delivery. There are other traditional beliefs and reasons for self-medicating with herbal medicines. Among some pregnant women in Cote d’Ivoire for instance, pregnant women have cited reasons such as the desire to have babies that are cheerful and dark in complexion (Malan and Neuba, 2011). Drugs and herbs are self-medicated to make beautiful babies, to facilitate easy labour, and to prevent miscarriages (Malan and Neuba, 2011). Even though these beliefs may sound strange to many, they do have important implications, and they influence the health seeking behaviour of people in different parts of the world, both educated and uneducated.

Aside the traditional and religious beliefs held by people, the perception people have of the existing formal health systems, and of their disease conditions also inform the practice of self-medication. Jain et al. (2011) argue that the incidence of self-medication is related to the perception of people regarding the quality of a country’s health care system. The authors argue that people desire greater control over issues concerning their health and thus people are increasingly resorting to self-medication rather than suffer the inconvenience that are usually associated with visiting the hospital and or health care facility and consulting with a health professional (Jain et al. 2011). The dissatisfaction of patients regarding the type of services received at the public health facilities and from health personnel is one of the major causes of self-medication worldwide (Yussuf and Omarusehe, 2011). That is to say that a patient’s anticipation of the services that will be received

at various health centres is enough to deter the patient from seeking formal conventional health services and to resort to self-medication.

Van den Boom et al. (2008) further explain that sometimes people feel or perceive that they are very familiar with the symptoms and treatment procedure of some of the most common diseases or disease conditions and so they wouldn't need to go to the hospital but to treat themselves when that happens. The authors further related self-medication to the perceived severity that people have of their disease conditions. This perception of severity, coupled with the perceived severity of the condition and the easy availability of health facilities may together help explain the attitude of self-medication among people (van den Boom et al. 2008). Thus, where people feel familiar with their disease conditions, and feel that the disease conditions are not severe enough to deserve the attention of medical personal, they are more likely to resort to selfmedication. This is worsened when the person, based on prior experience is dissatisfied with available health services. Together, these increase the possibility of the person resorting to selfmedication rather than visiting a health facility. Thus, perceived familiarity with, and severity of the disease condition, coupled with past experience with health systems determine and cause self-medication as a health behaviour.

Sometimes people simply have a misconception about the efficacy of a particular drug or medication. Among parents in American, European, and Asian countries for instance, misconceptions regarding the efficacy of antibiotics are a major factor that has increased selfmedication (Togoobaatar, et al. 2010).

In sum, several factors including personal beliefs and perceptions have great influence on the health seeking behaviours of people, including self-medication.

2.3 DRUGS THAT ARE OFTEN SELF MEDICATED

Across different continents and among different cultures of the world, different varieties of drugs are self-medicated and sometimes abused. There are some drugs that, throughout the world are common as self-medicated drugs. Antibiotic abuse for instance is quite common world-wide (Okumura et al. 2002). In a study of 605 mothers in Vietnam for instance, Okumura et al. (2002) found that 96 different varieties of antibiotics were kept in 76 different households and that 84 of these antibiotics had been purchased without prescription. Togoobaatar et al. (2010) also reiterates that approximately 50% of antibiotic use world-wide is privately bought without prescription. The high use of antibiotics globally could be explained by its perceived efficacy against some of the most common disease conditions like colds and flu, coughs, and diarrhoea. Since these disease conditions are common and generally perceived to be less serious, they are more likely to be treated with drugs like antibiotics, which can easily be purchased over the counter.

In addition to antibiotics, other studies have found that some of the most commonly selfmedicated drugs are those drugs for the treatment of cough and colds, flu, allergies, and throat infections. Some of these drugs are analgesics like paracetamol, cough syrups, vitamins, and steroids (Segall, 1990; Figueiras et al. 2000; Shanker et al. 2002; Okumura et al. 2002; Jain et al. 2011). In addition to the above, Arikpo et al. (2010) reports that in addition to the conventional medicines that are self-medicated, some people consume other substances to treat their ailments. Kerosene with sugar, brake fluid, and petrol are some of the substances that have been abused as drugs. In explaining this phenomenon, Abasiubong et al. (2012) suggests that the level of education of a person may also influence whether that person will self-medicate conventional drugs or unconventional drugs.

People with low levels of education are argued to be more likely to abuse unconventional medications than those with high levels of education.

Herbs and herbal drugs are among the most self-medicated drug groups the world over. Tabatabaee (2011) suggests that a significant number of people world-wide now have tried at least one herbal product before. Leaves, barks, roots, fruits, and stems of different trees are used in various combinations to treat different illnesses in different parts of the world (Malan and Neuba 2011). Coconut oil, seeds, berries, and flowers are also used as herbs to treat various ailments in different parts of the world (Rahman et al. 2008; Oreagba et al. 2011).

Among pregnant women, herbal medicines are among the drugs that are often self-medicated (Okonbi et al 2005, Fakeye et al 2009; Rahman et al. 2009). Traditional medications and herbs of various combinations and mixtures have been abused by pregnant women often without adequate knowledge of the potential effects of these medications (Abasiubong et al. 2012). Preference for herbal medicines have been linked to religious and traditional beliefs and perceptions of illness (Tabatabaee, 2011), as well as the perception among pregnant women that traditional medicines are safer, work faster and are more effective (Yussuf and Omarusehe, 2011).

Available literature reveals that in Africa, the use of herbs during pregnancy is common practice (Malan and Neuba, 2011), common in Cote d'Ivoire, Ghana, Nigeria and other African states (Fakeye et al 2009). This is not unlike the situation in other parts of the world as Fakeye et al (2009) reveals that research evidence shows self-medication of herbal medicines to be common among pregnant women in Finland, Australia and United States. In addition self-medication with

herbal medicines has been widely reported among pregnant women especially in Africa (Yussuf and Omarusehe, 2011).

2.4 SOURCES OF DRUGS AND DRUG INFORMATION

The sources from which drugs, often used in self-medication, are secured are diverse and may vary from place to place.

There is evidence to suggest that in Africa, persons who self-medicate receive their drugs as well as information on these drugs from non-pharmacists and non-trained personnel (Yussuf and Omarusehe, 2011). Quack pharmacists and drug peddlers are quite a common sight and a source of information for self-medicated drugs in developing countries (Salisu and Prinz, 2009). These quack pharmacists and drug peddlers often operate in and around large markets and parked vehicle stations and often target unsuspecting travellers (Salisu and Prinz, 2009). Unlike these quack pharmacists and drug peddlers, licensed chemical sellers, who even though may be more qualified and more informed than drug peddlers, and can provide crucial services to citizens, may nonetheless, be unable to provide health seekers with the drug related knowledge that they may need to make informed decisions on how to appropriately take the medication (Salisu and Prinz, 2009). Consequently, Abasiubong et al. (2012) argues that, the sources of the drugs, the quality of the drugs purchased from these sources and the accuracy of the drug related information received from these sources are themselves questionable (Abasiubong et al. 2012).

Aside the sources of drugs and drug information discussed above, there are other more informal sources of drugs for self-medication. Such sources include from friends, family among others (Arikpo et al. 2010). For instance, older generations like parents, in-laws, and other relatives are

important sources of drugs and drug information for self-medication, suggesting possible drug treatments for family members on some occasions (Rahman et al. 2008; Oreagba et al. 2011; Yussuf and Omarusehe, 2011). These older family members are perceived as experienced and therefore an accurate source of information on drugs. Not only do older family members serve as a source of information on drugs, they also serve as a source of drugs themselves. Sometimes, these family members go to the extent of sharing leftover prescription drugs with other family members (Segall, 1990).

Left over drugs are an important source of drugs for self-medication, where people sometimes keep these drugs in anticipation of future ailments and diseases (Okumura et al. 2002). In some communities also, elderly persons in the community as well as other local persons considered as knowledgeable in drug issues are referred to for information on drugs and as a source of drugs per se (Malan and Neuba 2011). In his study, Segall (1990) found that respondents, who believed in the efficacy of herbal medications, expressed a willingness to recommend it to others (Segall, 1990). Thus, people who have a prior experience with self-medicated drugs are also a source of information on these drugs for others since they are perceived as experts of sorts on selfmedication.

With regards to herbal medicines, people in developing countries often have unregulated access to them since they can be sourced from backyard gardens, trees and from flowers (Fakeye et al 2009).

2.5 DISEASE CONDITIONS FOR WHICH DRUGS ARE SELF MEDICATED

Self-medication is very common among persons living in high malaria prevalent areas (Okanbi et al 2005). Consequently, malaria is one of the main disease conditions for which pregnant women

self-medicate drugs (Okanbi et al 2005). In addition, since pregnancy is usually accompanied by nausea, vomiting, back and waist pain, pregnant women often self-medicate to treat these ailments as well (Yussuf and Omarusehe, 2011). Chisolm et al (2010) also join the argument that pregnant women mostly self-administer drugs to cure a condition known as depression. According to these researchers, evidence regarding the relative benefits of antidepressant use during pregnancy is growing.

The decision to prescribe an antidepressant medication to a pregnant woman is complex and requires an individualized appraisal of risk to the fetus of medication exposure, risks to the mother, fetus, and neonates approximately 4–11% of women are exposed to at least one prescribed psychotropic medication. Many depressed women, in consultation with their physicians, proactively decide to take an antidepressant during pregnancy. In addition to selfmedicating drugs to treat depression, other disease conditions for which drugs are self-medicated include fever; body pains; indigestions; and diarrhea (Jain et al. 2011). Stomach upset, bowel irregularity and difficulty sleeping at night are other conditions usually treated with selfmedication (Segall, 1990).

Togoobaatar et al. 2010 in their study of mothers in Mongolia also found a high incidence of antibiotic use for respiratory tract infections and for non-specific diarrhoea or sore throats.

2.6 KNOWLEDGE AND AWARENESS OF THE RAMIFICATIONS OF THESE DRUGS ON THEIR LIVES

Knowledge of the effects of self-medication is vital for remedying it. Unfortunately, many people continue to use drugs without realizing the dangers involved for themselves, or they underestimate the effects or dangers for themselves (King, 1997). This is similar among pregnant women, where

the awareness of the effects of self-medication on both the mother and the foetus appear to be considerably low (Abasiubong et al. 2012).

Research conducted in American, Asian and European countries confirm that parents' knowledge of the drugs they self-medicate, and especially antibiotics are misconceived and wrong (Togoobaatar et al. 2010). Togoobaatar et al. (2010) for instance found that the 605 parents in their study had poor knowledge about the appropriate use of antibiotics even for colds, flu, cough, and sore throat. 96% had incorrect notions of the causes of the disease conditions they were treating with self-medication and also on how to effectively administer the drugs.

With regards to herbal medicines Tabatabaee et al. (2011) in their study found that pregnant women appear to have wrong perceptions about them. They found a predominant perception among pregnant women that, since herbal medicines were purely natural products, they were safe to be consumed. Even on those occasions when mothers demonstrated accurate knowledge of the side effects of self-medication, as in Okumura et al.'s (2002) study, their behaviours in practice were contrary to what they knew to be true, their knowledge did not change their tendency to self-medicate or to take herbal medications without prescription.

2.7 EFFECTS OF SELF-MEDICATION

The effects of self-medication can be on the individual or can be on the state as a whole.

In general, using drugs in the wrong way can cause what has been termed as drug resistance (Okumura et al. 2002; Arikpo et al. 2010). This is a phenomenon where the over use of a particular drug makes it ineffective against particular diseases (WHO, 2010). The WHO (2010) reports for

instance of an anti-microbial resistance to antibiotics in the world which is resulting from an increasing over use of antibiotics and thus making these antibiotics ineffective against diseases. Under such circumstances, the disease condition and the bacteria involved develops a resistance to the drug, which ultimately prolongs illness and under some circumstances causes death (WHO, 2010).

When these drug resistant strains spread globally, they negatively affect the ability of governments and national health systems to treat some of the most common infectious diseases and people may die as a result (WHO, 2014). Togoobaatar et al. (2010) confirms this by arguing that irrational use of antibiotic drugs is causing drug resistant strains of bacteria which is difficult to treat. This means that drug A, which used to be able to treat a particular disease condition may no longer be able to because of the emergence of new strains which will require different medications. As already indicated, where this is not resolved efficiently, it can lead to death. WHO (2014) warns that unless urgent action is taken, the world will enter a time in which treatable common infections can no longer be treated and can subsequently cause death. When this happens, it creates financial burden on the state in various ways, especially when state purchased drugs go waste and the state need to use more resources to research and develop new drugs that will be effective against the new drug resistant strains (WHO, 2010).

In addition to drug resistance, one other effect of self-medication can be the onset of adverse drug reactions (WHO, 2010). Thus, the drug self-medicated may cause harmful or allergic reactions which can ultimately increase illness. The WHO reports that these adverse drug reactions cause millions of dollars each year to treat (WHO, 2010).

Fakeye et al. (2009) report that for specific groups like pregnant women, the effects of self-medication are diverse and may depend on the type of drug self-medicated and the stage of the pregnancy. Vomiting, dizziness, headache, malaise, rashes and diarrhoea are more prevalent and common adverse effects of self-medication of herbal medicines among pregnant women (Fakeye et al. 2009). The negative effects of self-medication may especially be felt by the foetus primarily, if self-medication occurs in the first 12 weeks of pregnancy (Yussuf and Omarusehe, 2011).

2.8 THE GHANAIAN CONTEXT

Although some research has been conducted on self-medication among the general Ghanaian populace, there remains very little research on self-medication among pregnant women in Ghana. Available literature for instance does not provide sufficient insight on which groups of pregnant women are more likely to self-medicate, which drugs are often used in self-medication, the socio-economic factors influencing self-medicating attitudes of pregnant women, the knowledge and awareness of pregnant women on the possible negative effects of self-medication and the reasons given by self-medicating pregnant women for their behaviour. For instance the Ghana Maternal Health Survey (GSS, 2009); the Ghana Living Standards Survey (GSS 2008); and the Ghana Demographic Health Survey (GSS, 2009) do not directly address the issue of self-medication and its potential effect on the health of pregnant women and their foetuses. This clearly signifies a major gap and weakness in literature which this research seeks to address.

CHAPTER THREE

METHODS OF DATA COLLECTION

3.0 INTRODUCTION

This section discusses the research design, population for the study, the sample size, sampling techniques and methods of data collection. The unit of analysis and how data collected was analysed are also discussed here.

3.1 RESEARCH DESIGN

The cross sectional survey design was used for this research. A social survey is a process whereby quantitative facts are collected about the social aspects of a community's life and activities. It is a method of collecting facts by putting questions to people (Kumekpor, 2002).

The stress on „social“ indicates that information thus obtained is about some aspects of the way people live as social beings (Kumekpor, 2002). In a survey research, the researcher asks many people numerous questions in a short time period. A survey researcher typically uses a sample or a smaller group of selected people but generalises the results to a larger group from which the smaller group was chosen (Neuman, 2007).

As a research design therefore, the social survey enabled the researcher to investigate and explore the views of numerous respondents regarding self-medication over a relatively short period of time. Since social surveys are appropriate for and useful in describing the characteristics of a large sample of respondents (Creswell, 2009), such a design was appropriate for this study given the size of the study area and the greater number of respondents in this study.

In addition, because of the nature of the objectives chosen for this study, a large number of respondents within a survey design were crucial in investigating and fully exploring these objectives. Again, since a social survey design is effective in investigating the opinions, attitudes, characteristics, and behaviours of a larger sample (Neuman, 2007), its use in this study allowed the researcher to explore the demographic characteristics of pregnant women, and their attitudes and perceptions on a range of issues related to self-medication.

3.2 STUDY AREA

The Ejisu Juaben Municipality is one of the 30 districts in the Ashanti region. Its capital is Ejisu. It covers an area of about 637.2 km² with a total population of 143 762 as reported by Ghana's Population and Housing Census in 2010 (Ejisu-Juaben Municipal Assembly 2006). There are about 26 towns with four urban settlements namely: Ejisu, Juaben, Besease and Bonwire (EjisuJuaben Municipal Assembly 2006).

The municipal has 30 health facilities comprising district hospitals, clinics, maternity homes and other hospitals. The average distance and travel time covered by residents to access health facilities is 3.7km and 42.8 minutes respectively (Ejisu-Juaben Municipal Assembly 2006). About 80.3% of

the population use the services of the public health facilities whilst the remaining 19.7% patronise private health facilities (Ejisu-Juaben Municipal Assembly 2006). The low cost and proximity of public health facilities is a major attraction for residents. Of those who patronise public health facilities, majority visits the district hospitals, followed by clinics, drug stores and then maternity homes in that order (Ejisu-Juaben Municipal Assembly 2006). Table 1 below depicts the percentage usage of the different health facilities within the municipality.

Table 3.1: Percentage Usage of Health Facilities

HEALTH FACILITY	PERCENTAGE
District hospital	67.6%
Clinics	27.1%
Drugs stores	2.3%
Maternity homes	2.0%
Traditional healers	0.7%
Health posts	0.3%
TOTAL	100%

Despite the high patronage of public health facilities by residents, there are yet several factors that hinder the effective delivery and access of health services in the municipality. In addition to a poor road network; inadequate working equipment and instruments (for instance ultrasound scan equipment); limited skilled staff; and inadequate infrastructure are some of the challenges facing health care provision and delivery in the municipality (Ejisu-Juaben Municipal Assembly 2006).

3.3 TARGET POPULATION

The target population, or the population from which respondents for the study were specifically selected were pregnant women. Thus, all pregnant women in the Ejisu-Juaben municipality formed the target population for the study.

3.4 SAMPLING TECHNIQUE

Non-probability sampling techniques were used in this research. In the first place, purposive sampling techniques were used to select two District Hospitals (Ejisu government hospital and Juaben government hospital), from which pregnant women were sampled. These hospitals were purposively selected mainly because they serve as the main health facilities for a large number of the pregnant women in the municipality.

After the District Hospitals had been identified, convenient sampling techniques were used to select the pregnant women from these facilities to be included in the study. Convenient sampling was appropriate for the hospital (maternity) setting given the busy nature of the setting and the fact that some pregnant women may be feeling unwell and uncomfortable and so may not be willing to respond even if they had been selected through probability sampling. In addition, because of the transient nature of the pregnant women on any clinic day, pregnant women selected through probability sampling techniques (based on a sampling frame of pregnant women reporting on that particular day) like simple random and systematic sampling, may already have been seen and left by the time the sampling was completed. Finally non probability sampling techniques were used since the primary aim of this research was not to generalise to the larger population of pregnant

women but rather to capture and to understand the diversity of views, opinions and perceptions of different groups of pregnant women regarding self-medication.

3.5 SAMPLE SIZE

Social surveys do not normally cover every individual in the group being investigated. Resources of time and finance are crucial in determining the coverage of social surveys. Only a carefully selected part (sample) of the target total population is therefore covered in such studies. It is possible, by careful sampling procedures, to select a sample to represent or reflect the most important characteristics of the population being investigated (Neuman, 2007). Since the two district hospitals did not possess an updated list of pregnant women who attended their facilities, and given the fact that different pregnant women attend the facility on different days, this research relied on estimates from hospital personnel to calculate an appropriate sample size for the study. It was estimated that an average of 35 and 65 pregnant women attended the Ejisu and Juaben government hospitals respectively on a daily basis. Thus, a total daily number of 100 pregnant women was multiplied by the 10 days the researcher spent on the field to provide an estimated sample frame of 1000 pregnant women available for the study. In order to deduce an appropriate sample size from this population, Slovin's formula (Tejada & Punzalan, 2012) was

used:
$$n = \frac{N}{1+N (0.05^2)}$$

Where n is the samples size, N is the estimated population and 0.05² is the margin of error. By this formula, an estimated samples size of 286 was derived. This figure was rounded up to a sample size of 300 pregnant women for this study.

3.6 SOURCES OF DATA

This study made use of data from both primary and secondary sources. Primary sources of data were sourced through field survey and data collection. Secondary sources of information and data were sourced through an extensive search and review of literature.

3.7 APPROVAL TO CONDUCT STUDY

In order to gain access to the district hospitals, a formal letter of introduction, introducing the researcher, the research objective, and who the research was likely to involve was sent to the District Health Directorate in the Ejisu Juaben municipality. Subsequently, the director of the Ejisu –Juaben Health Directorate provided a letter of introduction, introducing the researcher, to the chosen district hospitals. The Administrators of each of the district hospitals in turn introduced the researcher to the head of the maternity units of their respective hospitals who facilitated the researcher's access to the respondents of the study. The nurses and ward assistants thus introduced the researcher and the research on each day to the pregnant women present, emphasising the voluntary nature of the exercise and the fact that the information was to be used mainly for academic purposes.

3.8 ETHICAL ISSUES

A letter of introduction was sent to the Ejisu-Juaben Health Directorate. Permission to conduct the research was also obtained from the director of health of the respective health facilities before proceeding with data collection. Furthermore, this research sought the consent of respondents throughout the research period. Respondents were made aware of the objectives of the research project, and they were assured of the anonymity and confidentiality for all information they

provided. Respondents were also assured that at any point during the data collection they had every right to withdraw without any consequences to their person, image or self-esteem, or the medical treatment they will receive at the health facility. Subsequently, consent forms were also filled by the respondents, indicating that respondents were voluntarily participating in the research.

3.9 INSTRUMENTS OF DATA COLLECTION

This research made use of the questionnaire as the main instrument for collecting data. The questionnaire contained both open and close ended questions, and the questions were organised thematically under the main research objectives for this study. After the questionnaire had been developed, it was piloted with 15 pregnant women at a clinic, other than the two selected to be included in this survey. By piloting, the researcher was able to assess respondents' level of understanding of the questionnaire items and to make adjustments to wording and sentence structure accordingly.

The respondents had the opportunity to fill the questionnaires on their own and at their own pace and time. Nonetheless, where the situation demanded (for instance illiteracy of respondents), the researcher administered the questionnaires in the form of an interview to the respondents (researcher administered questionnaire). The use of the questionnaire was appropriate because it is an efficient method for reaching many respondents within a short period of time. It is also cost effective.

3.10 DATA ORGANISATION, ENTRY, AND ANALYSIS

Data collected from the field in the form of 300 completed questionnaires were numbered (1300) in order to facilitate the data's entry into the SPSS and to avoid recording information from the

same questionnaire twice. After this numbering, the variables and the variable details were defined in the variable view of the SPSS and thus prepared for data entry. Thus, the raw data collected from the field with the questionnaires were coded into the SPSS package. After the data had been entered, univariate descriptive analysis, using frequency tables, bar graphs and pie charts were derived. The analysis was guided by the key objectives and research questions and the analysis was done in relation to the literature reviewed. Attempts were made to draw relations as to whether a particular finding was supported by the reviewed literature or not. The responses provided for particular open ended questions were grouped, organised and different or divergent responses explored and discussed in addition to the quantitative findings.

3.11 LIMITATIONS OF STUDY

The findings from this research must be considered within the context of the following limitations.

Firstly, there is always the possibility of biased responses from the researcher administered questionnaire, given the hospital setting within which the data was collected and the fact that respondents may potentially want to deny ever having self-medicated and thus create a good impression of themselves for the researcher. This may have had implications for the accuracy of responses regarding the incidence of self-medication among respondents.

Secondly, the 300 pregnant women sampled for this study is not representative, in terms of numbers of all the pregnant women in the Municipality. In addition, the study excluded pregnant women who do not attend ante natal clinic since the research was hospital based. The research also

excluded other public health facilities and only focused on district hospitals, clinics and maternity homes. Thus, pregnant women in communities and in other rural communities within the municipality were excluded. This will affect the ability to generalise from the results to all pregnant women within the Ejisu-Juaben Municipal area.

CHAPTER FOUR

RESULTS

4.0 INTRODUCTION

This chapter outlines the results of the study. It focuses on the presentation of the responses of respondents sampled for the study. It is divided into two sections, 4.1 and 4.2. The first section (4.1) presents findings on the general socio-demographic characteristics of respondents. Subsequently, the second section (4.2) presents findings related to the specific objectives and research questions that guided this study. In other words, specific findings are organised under corresponding research questions and objectives in section 4.2. Finally, this section ends with a summary of all the findings.

4.1 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

This section presents data results on the distribution of the 300 women who participated in the survey in terms of their background characteristics. The background variables (sociodemographic) measured included: age, religion, education, marital status, occupation, place of residence, duration of pregnancy and number of children. The distribution of respondents with respect to these background variables are presented below:

4.1.1 AGE OF RESPONDENTS

From table 4.1a below, out of a total of 300 respondents, the highest number of respondents fell between the ages of 21-30, which constituted 51.7% (155) of the total number of respondents. In addition, 97 of the respondents, representing 32.3% were between the ages of 31-40 year group. Women between the ages of 15-20 constituted 12% (36) of the respondents, while only one respondent representing 0.3% of the respondents were below the age of 15.

Table 4.1a: Age Range of Respondents

Age Range	N	%
<= 15	1	.3
15 – 20	36	12.0
21 – 30	155	51.7
31 – 40	97	32.3
41 – 50	11	3.7
TOTAL	300	100

Source: Author's Field Survey, December 2013

4.1.2 RELIGIOUS AFFILIATION OF RESPONDENTS

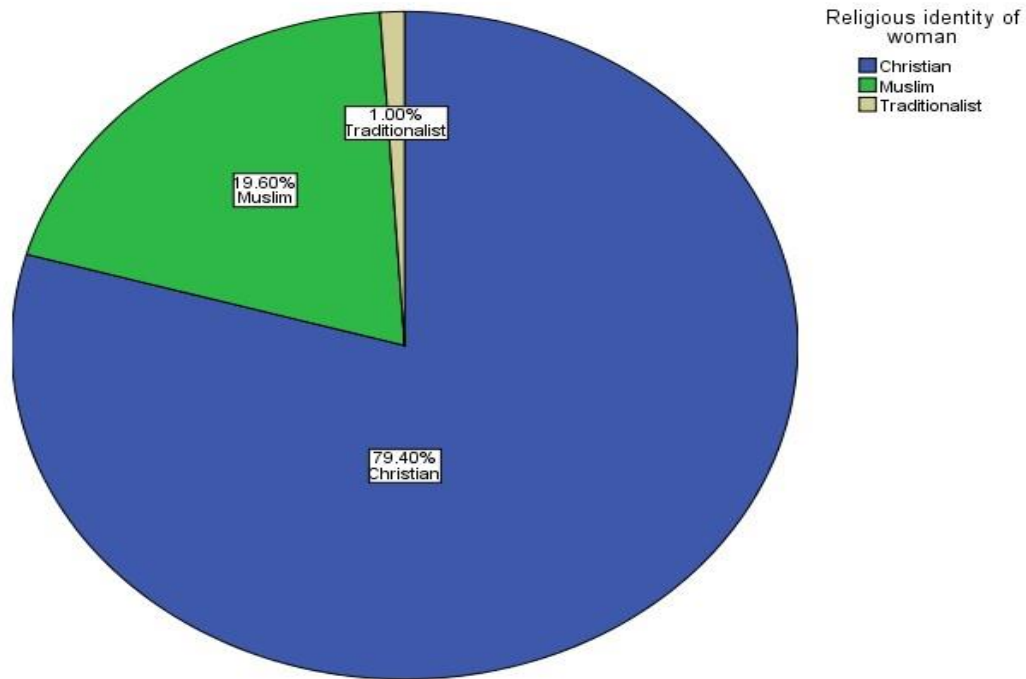


Figure 4.1a Religious Affiliation of Respondents

Figure 4.1a above demonstrates that out of the total of 300 respondents, three main religions were dominant. It is revealed that majority of respondents (N=238, 79.4%) were Christians, followed by Muslims (N=59, 19.6%), and then Traditionalists (N=3, 1.0%).

4.1.3 EDUCATIONAL LEVEL OF RESPONDENTS

Figure 4.1b below shows that of the 300 respondents, majority of them (N=120, 40.2%) had completed secondary education, followed by 88 (29.2%) who had completed primary education. About 47, representing 15.6% of the respondents had attained tertiary level education, while 34, representing 11.3% had attained JHS education. A few of the respondents (N=11, 3.7%) were illiterates with no formal education at all.

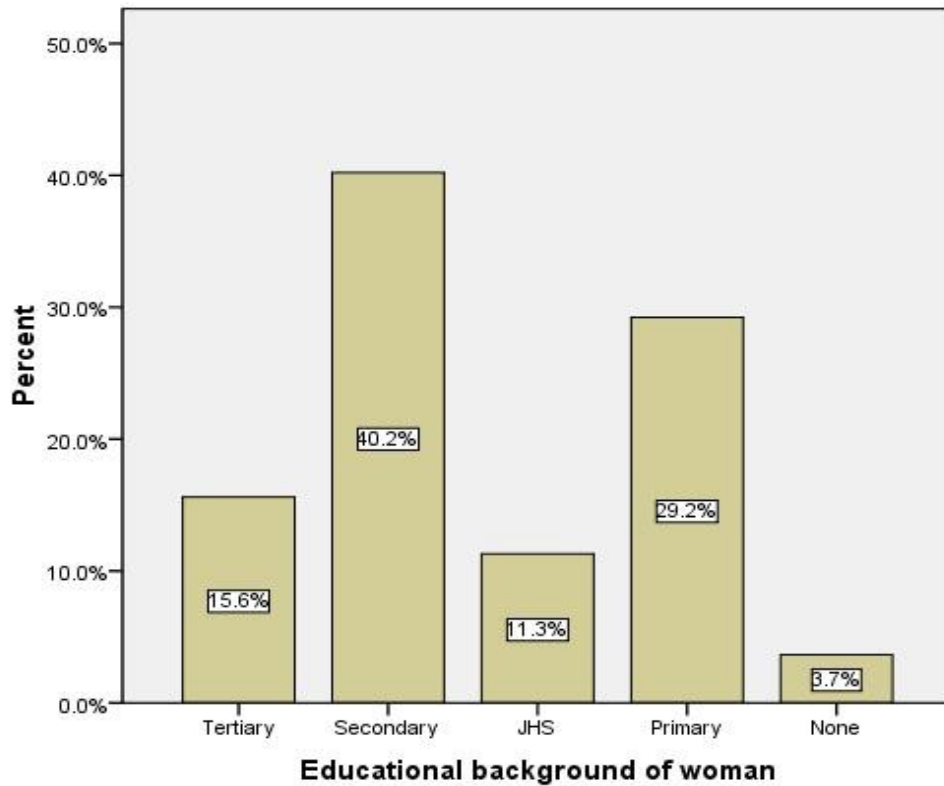


Figure 4.1b Educational Background of Respondents (Source: Author's Field Survey, December 2013)

4.1.4 MARITAL STATUS OF RESPONDENTS

Table 4.1b Marital Status of Respondents

Marital Status	N	%
Single	57	19.0
Married	223	74.3
Divorced	3	1.0
Separated	4	1.3
Cohabiting	13	4.3
TOTAL	300	100

Source: Author's Field Survey, December 2013

Table 4.1b above reveals that majority of the respondents were married (N=223, 74.3%), followed by respondents who were single (N=57, 19%). Thirteen of the respondents, representing (4.3%) indicated that they were cohabiting while 1.3% (4) and 1% (3) were separated and single respectively.

4.1.5 OCCUPATIONAL STATUS OF RESPONDENTS

Table 4.1c Occupational Status of Respondents

Categories	N	%
Student	26	8.7
Self employed	170	56.7
Government employee	22	7.3
Private business	55	18.3
Unemployed	27	9.0
TOTAL	300	100

Source: Author's Field Survey, December 2013

From table 4.1c above, it is revealed that a higher number of respondents (N=170, 56.7%) were self-employed, followed by respondents engaged in private businesses (N=55, 18.3%), and respondents who were unemployed (N=27, 9%). Students represented 8.7% (26) of respondents while Government employees were the least number of respondents (N=22, 7.3%).

4.1.6 PLACE OF RESIDENCE OF RESPONDENTS

Table 4.1d below reveals that while 160 respondents, representing 53.3% lived in rented accommodations, 97 representing 32.3% lived in their own apartments. However, 43 (14.3%) of the respondents indicated that they were still living with their parents.

Table 4.1(d): Place of Residence of Respondents

Categories	N	%
Own apartment	97	32.3
Rented	160	53.3
Living with parents	43	14.3
TOTAL	300	100

Source: Author's Field Survey, December 2013

4.1.7 DURATION OF PREGNANCY

Table 4.1e Duration of Pregnancy

Categories	N	%
First Trimester	47	15.7
Second Trimester	79	26.3
Third Trimester	174	58.0
TOTAL	300	100

Source: Author's Field Survey, December 2013

As is evident in table 4.1e above, most of the respondents interviewed as part of this study (N=174, 58%) were in their third trimester of pregnancy, followed by those in the second trimester (N=79, 26.3%), and then the first trimester (N=47, 15.7%).

4.1.8 NUMBER OF CHILDREN OF RESPONDENTS

Table 4.1f below reveals that out of the 300 respondents included in this study, 68.4% (205) of them had a child or more while 31.7% (95) had no children.

Table 4.1f Number of Children of Respondents

Characteristic	N	%
None	95	31.7

1	69	23.0
2	68	22.7
3+	68	22.7
TOTAL	300	100

Source: Author's Field Survey, December 2013

4.1.9 LIFE TIME EVER USE OF SELF-MEDICATED DRUGS Table 2.1(g): Life Time Ever Use of Self-Medicated Drugs

Categories	N	%
No	95	31.7
Yes	205	68.3
TOTAL	300	100

Source: Field Survey, December, 2013

Table 4.1(g) above reveals that majority of respondents (N=205, 68.3%) indicated to having used un-prescribed drugs during pregnancy in the course of their lives while 31.7% (95) denied ever using un-prescribed drugs during pregnancy before.

4.2 FINDINGS IN RELATION TO SPECIFIC OBJECTIVES

This section reveals findings from this study in relation to the specific objectives and research questions that guided this study. Frequency tables are used to illustrate the responses of respondents in relation to each specific objective.

4.2.1 FACTORS THAT INFORM THE PRACTICE OF SELF-MEDICATION AMONG PREGNANT WOMEN

This section presents findings on the objective: To explore the factors that inform the practice of self-medication among pregnant women.

Table 4.2a: Reasons for self-medication

Reason	N	%
Less expensive	85	25.1
Disease not serious	126	37.3
Previous experience with the drug	77	22.8
Inconveniences at the clinic	39	11.5
No idea	11	3.3
Total	338*	100.0

Source: Field Survey, December, 2013

*Multiple response

From table 4.2a above, when asked what factors pre-dispose pregnant women to self-medicate during pregnancy or why pregnant women resort to self-medication during pregnancy, it was revealed that perceived non-seriousness of the disease condition suffered was the most common reason why self-medication was resorted to (N=126, 37.3%). Nonetheless, the cost of self-medicated drugs as well as previous experiences with these drugs also featured prominently as important predisposing factors. Thus, while 25.1% (85) of respondents cited the less expensiveness of self-medicated drugs as a possible reason, 22.8% (77) indicated past experiences and familiarity with the self-medicated drugs as a potential or pre-disposing factor. In addition, inconveniences at

clinics and health facilities were cited by 11.5% of respondents while 3.3% offered no reason for self-medication among pregnant women.

4.2.2 DISEASE CONDITIONS TREATED WITH SELF-MEDICATED DRUGS AMONG PREGNANT WOMEN

This section presents findings on the objective: to determine the disease conditions treated with self-medicated drugs.

As depicted in table 4.2b below, when asked what illness prompted the use of unprescribed medications during pregnancy, majority of the respondents (N=152, 44.8%) indicated that they self medicated during pregnancy because of headaches while 17.7% (60) and 14.2% (48) selfmedicated during pregnancy because of cold and flu and stomach problems respectively. General body pains was also a reason for self medication among 10.9% (37) of respondents, while only 5.3% (18) of respondents cited malaria as the illness that prompted self medication. For 7.1% (24) of respondents, self medication was mainly prompted by sexually transmitted infections.

Table 4.2b below depicts the frequency distribution regarding the disease conditions that prompted self-medication attitudes among pregnant women.

Table 4.2b Disease Conditions Prompting Self-Medication

DISEASE	N	%
Headache	152	44.8
Cold and Flu	60	17.7
Stomach problems	48	14.2

Sexually transmitted infections	24	7.1
Malaria	18	5.3
Body pains	37	10.9
TOTAL	339*	100

Source: Field Survey, December, 2013

***Multiple response**

Given the option to add onto the pre-determined responses already provided in the questionnaire, respondents revealed additional conditions for which drugs were self-medicated. These fell into three main categories: existing, anticipated, and enhancement categories. Respondents indicated in the existing category, already existing diseases like dizziness, diarrhoea, asthma and anaemia as the disease conditions for which drugs were self-medicated.

However, it is not always that drugs were self medicated for existing disease conditions. On the contrary, respondents revealed that sometimes drugs were self medicated to prevent an anticipated disease condition. Thus, within the anticipated category respondents indicated that they self medicate in anticipation of a disease condition locally referred to as “Asram”. Finally, the third category, enhancement is where drugs are self medicated not necessarily to treat a disease condition but rather to enhance the pregnancy in some way. For instance drugs are selfmedicated to enhance the baby’s strength or to help deliver a strong baby, to enhance or promote easy delivery, and to help deliver a beautiful baby.

4.2.3 DRUGS MOST OFTEN USED IN SELF-MEDICATION AMONG PREGNANT WOMEN

This section presents findings on the objective: to determine the drugs that are most often used in self-medicating among pregnant women. Responses are presented on four variables namely: types of drugs that are commonly self-medicated; source of information on drugs; mode of request of drugs; and knowledge of drug indications and effects.

Table 4.2c below reveals information about the use of drugs among respondents of the study. It is revealed that among respondents of this study, analgesics were the most commonly selfmedicated drug (N=136, 46.4%). This was followed by herbal drugs (N=69, 23.5%), antibiotics (N=54, 18.4%), and finally antacids (N=34, 11.6%) which was the least self-medicated drug among respondents. Family members were the main sources of information on these commonly self-medicated drugs for a majority of these respondents. 46.2% of the respondents indicated that their main source of information on self-medicated drugs were family members, while 25.9% (65) of respondents got their information from public adverts. A comparatively fewer number of respondents relied on health professionals as their source of information on self-medicated drugs (N=36, 14.3%) while only 13.5% (34) used the labels or leaflets provided on the drug.

Table 4.2c Information on Drug Use among Pregnant Women

Variable	Categories	N	%
Types of drugs Self-Medicated	Antibiotics	54	18.4
	Analgesics	136	46.4
	Antacids	34	11.6
	Herbal drugs	69	23.5
	Labels or leaflets	34	13.5

Source of information on drugs

Family members	116	46.2
Public adverts	65	25.9
Health professionals	36	14.3

Mode of request

By mentioning name of drug	97	35.1
Telling symptoms of illness	81	29.3
Showing an old sample	54	19.6
Presenting a sheet of paper	44	15.9

Knowledge on drugs requested

Name of drug	132	41.1
Indication	82	25.5
How to use it	79	24.6
Frequency	20	6.2
Didn't know anything	8	2.5

Source: Field Survey, December, 2013

Respondents indicated that on visiting pharmacy shops, they usually requested the drugs by mentioning the name (N=97, 35.1%), or by telling the symptoms of their ailments (N=81, 29.3%). Showing an old sample of the drug was also reported by 19.6% (54) of respondents as a way of requesting the drug. Finally, 15.9% (44) requested the medications or drugs by presenting a sheet of paper.

The extent of most of the respondent's knowledge of the drugs requested and used for self-medication was limited to the name of the drug (N=132, 41.1%), 25.5% (82) and 24.6% (79) had knowledge of the drug indication and how to use the drug respectively. In addition, the knowledge of a few of the respondents (N=20, 6.2%) regarding the drugs requested and self-medicated was limited to how often the drug could be administered or the frequency of use. 2.5%

(8) of the respondents did not know anything about the drugs requested and self-medicated.

4.2.4 KNOWLEDGE OF PREGNANT WOMEN REGARDING THE EFFECTS OF SELF-MEDICATION

This section presents findings on the objective: to investigate the level of awareness and knowledge of pregnant women about the possible side effects of self-medication on both pregnant women and on unborn children. Respondents were asked to indicate by answering „yes or no“, whether they thought self-medication could harm the pregnant mother and the fetus, and this is presented in the form of a pie chart. Subsequently, those who answered yes were asked to indicate some of the side effects of self-medication, in an open ended question format. The responses are presented in a descriptive form in this section as well.

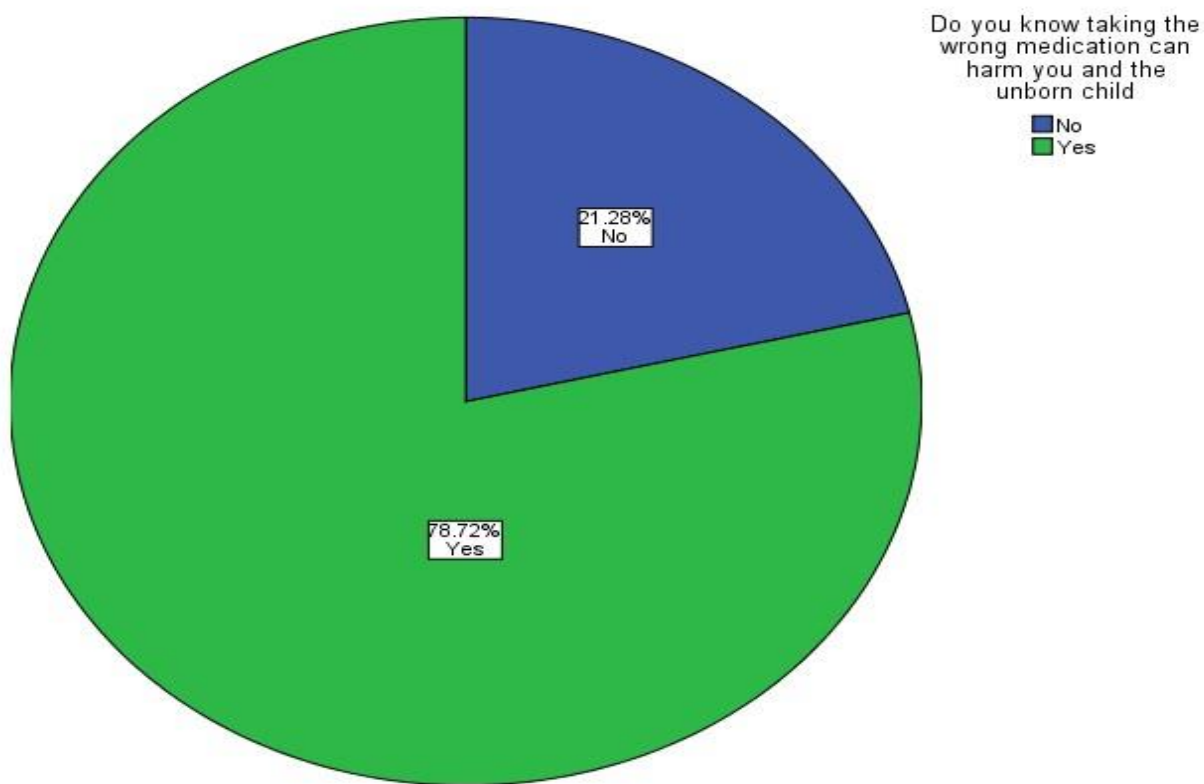


Figure 4.2a Knowledge of the effects of self-medication on the unborn child and mother

Source: Field Survey, December, 2013

Figure, 4.2a above reveals that while a higher percentage of respondents (78.7%) agreed that self-medication could harm a pregnant woman and the unborn baby, some (21.3%) were of the opinion that self-medicating could not harm pregnant women or the fetuses they carry.

Of those who indicated that self-medication could harm the unborn baby and the mother, open ended questions were asked, requiring respondents to indicate what they thought could be the effects of self-medication on both the mother and the fetus. The emphasis here was not so much on the frequency of particular responses or on which responses appeared most often. On the

contrary, the emphasis was more to assess the depth and extent of the knowledge of respondents of the effects of self-medication on the foetus.

With regards to the mother, death was a common effect indicated by respondents as one of the potential side effects of self-medication. In addition to death, respondents indicated some possible side effects including spontaneous delivery and bleeding. This appeared to be common knowledge among some of the respondents. Other conditions indicated by some but a few of the respondents as possible side effects of self-medication were infertility, bareness, and complications during delivery, drug reactions, and allergies.

Unlike the effects of self-medication on the mother, a large number of respondents indicated deformities, both mental and physical as some of the main risks or side effects of self-medication for the foetus. Some of these deformities mentioned include blindness and deafness for the physical deformities, and Down's syndrome for the mental deformities. Other disease conditions indicated here included epilepsy and an unhealthy foetus.

CHAPTER FIVE

DISCUSSION

5.0 INTRODUCTION

This chapter discusses the results from the research as detailed in chapter four above. An overview of the socio-demographic characteristics of respondents will be presented. After this, the chapter is divided into five sections with each section focusing and discussing a separate aspect of the research findings. The first section discusses the findings relating to life time ever use of drugs. Subsequently, section two discusses the findings relating the factors that inform self-medication while section three focuses on the findings regarding the disease conditions that are most often treated with self-medication among respondents. Section four discusses findings on the drugs that are most often used for self-medication among pregnant women and section five explores the knowledge of respondents regarding the side effects of self-medication on the mother and the unborn foetus.

5.1 DEMOGRAPHIC CHARACTERISTICS

5.1.1 RELIGION

The research revealed that 79.3% of respondents were Christians while Muslims constituted 19.7%. This finding is in line with the religious distribution of the Ashanti region in general where approximately 78% of the population are Christians and 15% are Muslims (GSS, 2012). Given this high percentage of Christians and Muslims in the sample therefore, it is not surprising that 74.3% of the pregnant women interviewed indicated that they were married. This is because both religions (Christianity and Islam) frown on pre-marital sex, as well as getting pregnant out of wed-lock (Cline 2014). The research also revealed that 96% of the respondents were between the ages of 15 and 40. This reflects the age of fertility for women in Ghana which, according to the Ghana Living Standards Survey is between the ages of 15-49yrs (GLSS, 2008).

5.1.2 USE OF SELF MEDICATION

Majority of respondents from this research (68.3%) reported having ever self-medicated. This finding is similar to other research studies conducted among pregnant women in Africa (Banda et al., 2007; Afolabi, 2008) which indicate a high incidence of self-medication among pregnant women. This finding could be explained using some of the socio-demographic characteristics of respondents like the educational level.

5.1.3 EDUCATIONAL LEVEL

This research revealed that 55.7% of respondents had at least secondary education. This is similar to findings from Abasiubong et al. (2012) and Okumura et al. (2002), both of whom revealed that majority of the pregnant women in their research had secondary education. The educational level of respondents is significant since some studies have suggested a link between education and the probability for self-medication. Figueiras, Camano, & Gestal-Otero (2000) explains that higher education is related with more knowledge of medicine and drugs, less confidence in the doctor, and a greater desire for autonomy or independence over one's health decisions. Okumura, Wakai, & Umenai, (2002) also argues that higher education increases self confidence about accurate drug use and with it the probability of self medication.

5.1.4 OCCUPATIONAL STATUS

The research found that 75% of respondents in this study were either self employed or private business owners. This finding could also explain the high incidence of self medication among the respondents of this study. There has been studies to suggest a relationship between selfmedication and people who are self-employed. Self employed people are often independent and are used to

making autonomous decisions about their lives including their health (Figueiras et al., 1999). This independence, in addition to the fact that self employed people may be unwilling to leave their businesses unattended and visit the hospitals, especially when the disease condition is considered as not so serious may also have contributed to the high incidence of self-medication within this sample of respondents.

5.1.5 STAGE OF PREGNANCY

The data revealed that majority of respondents 58.3% were in their third trimester. This may be significant in explaining the high incidence of self-medication within this sample. This is because, the third trimester of pregnancy is often associated with several disease conditions including nausea, waist pains, headaches, among others (Yusuf and Omarusehe, 2011). Consequently, researchers have associated the third trimester of pregnancy with an increase in self-medication (Yusuf and Omarusehe, 2011).

5.2 FACTORS INFORMING THE PRACTICE OF SELF-MEDICATION

This research revealed that mostly, micro factors or factors at the personal level were mainly the pre-disposing factors that led pregnant women to self-medicate. Even though inconvenience at the medical facility was indicated by 11.5% of respondents, most respondents believed that the perceived non-seriousness of the disease (37.3%), the fact that the drugs were cheap (25.1%) and familiarity with the drug (22.8%) were more important factors. This is very similar to the findings of Togoobaatar et al. (2010) who in a research into the prescribed drug use among mothers in Mongolia revealed that for the majority of respondents, the perceived seriousness of the disease condition and past experience with the drug, were pre-disposing factors for selfmedication.

However, Jain et al. (2011) have argued that self-medication is not only related to a person's past experiences and perceived non-seriousness of the drug but also to the perception people have regarding the existing health system. The study indicated that for 11.5% of respondents, inconveniences at the clinic were one of the main factors that predispose them to self-medicate. This confirms the argument by Yussuf and Omarusehe (2011) that if patients are dissatisfied with services received at public health facilities, they are more likely to use the less seriousness of the disease as justification to self-medicate.

The Ejisu-Juaben Municipality, within which this study was conducted, has a population of about 143, 762 and a corresponding 30 health facilities. In addition, on average people spend about 48 minutes in order to access the hospitals usually on bad road networks. The high number of people in the Municipality without the Health Insurance Scheme suffers high cost per visit to health facilities, and once they get to these health facilities, inconveniences such as long queues, poor attitudes from staff, and inadequate equipment awaits them. Thus it has been argued that a high number of people in the municipality only visit the health facility when their conditions worsens (Ejisu-Juaben Municipal Assembly, 2006). Discussed in this context therefore, one begins to appreciate how these macro factors regarding the accessibility of health facilities may predispose pregnant women to rely on other micro factors as enough justification for selfmedication.

5.3 DISEASE CONDITIONS FOR WHICH DRUGS ARE SELF-MEDICATED

Majority of respondents (77%) indicated that headaches, cold and flu and stomach problems were the main disease conditions that drugs were taken to treat. This is similar to research findings by Tabatabaee (2011) who, in a research of pregnant women in South Iran found that a high percentage

of the women self-medicated or used drugs to prevent disease conditions such as common colds, nausea, and stomach problems. Because these conditions are common in subSaharan Africa and are experienced by a lot of people, these diseases assume some form of normalcy, or become normal disease conditions often treated with self-medicated drugs (Jain et al., 2011).

In addition to these common disease conditions, 7.1% of respondents indicated sexually transmitted diseases as the diseases that they use self-medicated drugs to treat. The stigma attached to sexually transmitted infections in Ghana (Koka, Ahorlu, & Agyeman, 2013; AmoAdjei & Darteh, 2013) may explain why respondents, even married ones are reluctant to present their conditions at health facilities but rather opts to self-medicate in treating sexually transmitted infections. Even though Okanbi et al. (2005) has argued that malaria is one of the main disease conditions for which pregnant women self-medicate, only 5.3% of respondents in this study indicated that they used self-medicated drugs to treat malaria. This could be explained by the fact that in Ghana, according to the Ministry of Health (MOH), the National Malaria Control Program (NMCP) has implemented policies aimed at reducing the incidence of malaria among pregnant women. These policies include the implementation of an Intermittent Preventive Treatment (IPT) program where preventive doses for malaria treatment are administered to pregnant women in at least monthly intervals during pregnancy (MOH, 2009). It could be argued that this and other policies may explain why only a few respondents indicated malaria as the disease condition for which they self-medicate.

Finally, this research also revealed that for some respondents, drugs and herbs were selfmedicated to enhance the baby's strength, to promote easy delivery, and to help deliver a beautiful baby. This

finding is similar to the findings of Malan and Neuba (2011) whose research in Cote d'Ivoire revealed that some herbal medicines are self-medicated to help make babies that are dark in complexion, beautiful and cheerful.

5.4 DRUGS THAT ARE MOSTLY USED IN SELF-MEDICATION AMONG PREGNANT WOMEN

The research findings indicate that 46.4% of respondents, self-medicate analgesics and 23.5% of the respondents self-medicate herbal drugs more than any other drug. This is in line with the fact that the most common disease conditions revealed in this study are headaches, cold and flu. This finding is similar with a research conducted by Rahman et al. (2008) among pregnant women in Malaysia which revealed that the use of herbal medicines like coconut oil was common in order to relieve pain. Other research studies (Segall, 1990; Figueiras et al. 1999; Shanker et al. 2002; Okumura et al. 2002; Jain et al. 2011), conducted in different parts of the world have revealed that herbal medicines, analgesics and pain killers are the drugs that are most commonly selfmedicated. Pregnant women abuse herbs often because they perceive them to be safer than conventional medications (Yussuf and Omarusehe, 2011).

Most respondents in this research revealed that family members (46.2%) and public adverts (25.9%) were the main sources of information for their drugs. This confirms the findings from Tabatabaee's (2011) research that revealed that family members were the main source of selfmedicated drugs like herbs for pregnant women. Similarly, Togoobaatar et al. (2010) in their study revealed family members as the main sources of self-medicated drugs. As indicated in the literature, older and respected family members like in-laws and parents are important sources of

self-medicated drugs (Malan & Neuba, 2011), and sometimes leftover prescriptions are passed on to other family members in this way. These older family members are perceived as experienced, with accurate sources of drugs and drug information (Segall, 1990). In addition, the 25.9% of respondents whose main source of information on drugs were public adverts confirms the fact that locally manufactured drugs are advertised at lorry stations using public address systems, on radios, and through personal advertisements by drug peddlers often at lorry stations in Ghana (Ayimey, Awunyo-Vitor, & Gadawusu, 2013). Thus, these drugs which may or may not have gone through certification by the Food and Drugs Authority, and information on these drugs which may or may not be true are fed to consumers who, based on information from these advertisements purchase the drugs and use them to treat several disease conditions (Goodman et al. 2007; Salisu & Prinz, 2009; Yussuf & Omarusehe, 2011).

The fact that self-medicated drugs and information on them are received from either family members or through public advertisements help to explain why majority of respondents (64%) request drugs simply by mentioning the name of the drug or by telling of symptoms of a disease condition. Furthermore, for most respondents (41%), their knowledge regarding the drugs purchased and self-medicated was found to be mostly limited to the names of the drugs. This shows how little majority of respondents know about the drugs they self-medicate.

5.5 KNOWLEDGE OF PREGNANT WOMEN REGARDING THE EFFECTS OF SELF-MEDICATION

Majority of the respondents (77.7%) in this research acknowledged the potential negative effects of self-medication on the pregnant mother and the foetus and demonstrated accurate knowledge of some of these side effects. This is contrary to the finding and argument made by Abasiubong et al.

(2012) that among pregnant women, awareness of the effects of self-medication on the mother and foetus is usually low. Rather, it confirms the findings in Okumura et al's (2002) research that revealed that mothers were knowledgeable of the effects of self-medication on them and their children, even though such knowledge had very little effect on their actions.

This notwithstanding, those respondents (22.3%) who indicated that they did not think there was any potential side effect of self-medication is significant. This may affirm, to an extent, the assertion made by Togoobaatar et al. (2010) that people have misconceptions about the effects of the drugs they self-medicate. Those respondents who indicated awareness of the potential side effects of self-medication provided a wide array of effects on both the mother and the foetus, from death of the mother and the foetus, to deformities of the foetus and miscarriage, still birth, and bleeding by the mother. While this demonstrates good knowledge by respondents, there was no mention among respondents of drug resistance. Even though it is unclear why this is so, this is a significant omission since drug resistance as a result of self-medication is one of the most serious concerns of health institutions and governments the world over (WHO, 2010). World bodies and national governments for instance are becoming increasingly concerned about the rate at which antibiotics are becoming increasingly resistant to previously effective medications, to the extent that WHO (2014) has warned that if something is not done about it, eventually, common diseases will become untreatable.

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The logo of KNUST (Kwame Nkrumah University of Science and Technology) is centered in the background. It features a yellow eagle with spread wings perched on a green shield. Above the eagle is a black mortar and pestle with a red flame. A yellow banner at the bottom contains the university's motto in Akan: 'Wɔnnan ɔsɔnnan ɔdɔnnan' (We are the people of the land, the land of the people, the people of the land).

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1 CONCLUSION

This research set out to investigate the attitude and behaviour of pregnant women in the EjisuJuaben Municipality of Ghana, regarding self-medication. The results of this research reveal that self-medication was high (68.3%) among the sample of respondents. This research has also revealed that the perceived non-seriousness of the disease condition (37.3%), the low cost of self-medicated drugs (25.1%), previous experience with drugs (22.8%) and inconveniences with

attending hospitals (11.5%) were the main factors informing the practice of self-medication among the sample of respondents.

The main disease conditions for which drugs were self-medicated were headaches (44.8%), colds and flu (17.7%), stomach problems (14.2%), and body pains (10.9%). Accordingly, analgesics (46.4%), herbal medicines (23.5%), antibiotics (18.4%), and antacids (11.6%) were the drugs most often self-medicated, with information on these drugs coming from relatives (46.2%), the media (25.9%), and health professional's (14.3%). Finally, 22.3% of respondents had no knowledge of the side effects of self-medication on the pregnant mother and the foetus, while 77.6% acknowledged that there were some negative side effects of self-medication on the mother and the foetus.

6.2 RECOMMENDATIONS

In line with the findings of this research, the following recommendations are made:

1. Firstly, since family members and relatives have been revealed as important sources of self-medicated drugs and drug information, health education and health promotion programs should, in addition to targeting pregnant women in hospitals, target other stakeholder groups including mothers, relatives and respected people in the community. In addition to the above, the government of Ghana should do more to control the advertisement and sale of herbal medicines in Ghanaian public places. According to the WHO (2010), when these are done in combination, they will be effective in improving the adequate use of medicines

among pregnant women. Emphasis should be placed on the combined education of all stakeholders, the provision of adequate health care, and the control of drug sale. These approaches are less likely to be successful when used individually (WHO, 2010).

2. Secondly, the Ministry of Health and the Ghana Health Service, in collaboration with the Ejisu Juaben Health Directorate must embark on an educational program to educate the public in general and pregnant women specifically of the dangers of self-medicating with herbal drugs, especially since they are perceived by users as safe, even though they can actually have detrimental effects on the pregnant mother and the foetus.
3. Furthermore, since most of the pregnant women in this research were self-employed and private business owners, this research recommends that public health facilities provide appointment based health access services for pregnant but self-employed women. When this is done, pregnant women will not have to resort to self-medication simply because they are reluctant to suffer the inconvenience of attending the hospital and leaving their businesses unattended for much of the day.
4. This research recommends that health education and promotion educational programs must educate the public of the fact that several perceived „non-serious“ diseases could be symptoms of much more serious underlying conditions which can only be revealed and treated in a hospital. This will change the attitude of people regarding self-medication for perceived non-serious diseases.

5. The findings of this research also present various opportunities for researchers to further explore. In view of the fact that most of the respondents in this study were in their third trimesters of pregnancy, future research could be designed to test the hypothesis that pregnant women in their third trimesters are more likely to self-medicate drugs than those in their first and second trimesters of pregnancy.
6. Future research could also be designed to specifically find out which drugs are commonly self-medicated among pregnant women during each stage (trimester) of pregnancy. This will go a long way to inform policy makers in implementing interventions aimed at reducing self-medication among pregnant women in Ghana.
7. Finally, since this research found that herbal medicines were among the most often selfmedicated drugs, future research can explore which particular herbal medicines or combinations of herbal medicines are used by pregnant women to treat which specific conditions.

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