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THE USE OF TRADITIONAL MEDICINE AMONG PREGNANT WOMEN IN AGOTIME-ZIOPE DISTRICT

BY

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DECLARATION

I, Stanley Kofi Alor hereby declare that apart from references to other people's works which have been duly acknowledged, this dissertation is as a result of my own independent work under supervision of Prof. Philip Baba Adongo. I further declare that this dissertation has not been submitted for the award of any degree at this institution or in any other universities elsewhere.

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STANLEY KOFI ALOR DATE……

(STUDENT)

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PROF. PHILIP BABA ADONGO DATE……

(ACADEMIC SUPERVISOR)

DEDICATION

I dedicate this piece of work to Almighty God who granted me admission into this School and wisdom to produce this piece of work, to Lawrencia and to the memory of Lawrence and Rita.

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May God richly bless you all.

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LIST OF ACRONYMS

CAM	Complementary and Alternative Medici
CHPS	Community Based Health Planning and Services
HBM	Health Belief Model
MOH	Ministry Of Health
PHC	Population and Housing Census
TAM	Traditional and Alternative Medicine
TBA	Traditional Birth Attendant
TH	Traditional Healer
TM	Traditional Medicine
TM/CAM	Traditional Medicine/Alternative and Complementary Medicine
TMP	Traditional Medicine Practitioner
UMMC	University of Maryland Medical Centre
UNDP	United Nations Development Programme
UNESCO	United Nations Educational Scientific and Cultural Organization
USA	United State of America
USD	United States Dollar
WHO	World Health Organization
WIPO	World Intellectual Property Rights Organization

ABSTRACT

Treatment with traditional medicine during pregnancy is believed to prevent malaria, miscarriage, ensure proper growth of the foetus and to cure piles, anemia, waist and abdominal pains and to strengthen the womb to accommodate the foetus. The purpose of the study was to determine how pregnant women perceive traditional medicine, prevalence and the types of traditional medicines use during pregnancy among women attending antenatal clinic at Kpetoe and Ziope clinics in Agotime-Ziope district. Structured questionnaires were administered to 202 pregnant women attending antenatal clinics in the two major health facilities within the district, thus Kpetoe and Ziope using simple random sampling techniques to collect data from the participants. The questionnaires were designed in English Language but translated into the local language (Ewe) to help participants who do not understand the English language. Data was collected on demographic characteristics, prevalence and types of traditional medicines used during pregnancy. Descriptive statistics were used initially with chi-square to determine associations if there was any.

Out of 210 eligible pregnant women, 202 (96%) agreed to participate. Fifteen percent of the respondents use at least one traditional medicine during the current pregnancy. Pregnant women in higher income status of Gh₵1, 000 and above (US$255) and pregnant women who were married were more likely to use traditional medicine. The use of traditional medicine among pregnant women in this environment was low. Attention should be given to education of pregnant women and the community as a whole on the potentials if any and side effects of traditional medicine use during pregnancy.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background to the study

Traditional medicine is an important and often underestimated part of health care delivery (WHO, 2014). The 1978 World Health Organization (WHO) conference on Primary Health Care in Alma Ata Pakistan, acknowledged that in many countries there are two health care systems (WHO, 1978). These are traditional health care system and the modern health care system based on conventional medicine and the WHO recommended the co-operation of the two systems in achieving primary health care (WHO, 1978). Individuals all over the world continue to use traditional medicines as principal or complementary bases of health care delivery. Traditional Medicine has a long history of use in health maintenance, disease prevention and treatment. As a result the WHO has put measures in place to support Member States to develop proactive policies on safety, efficacy, quality, access, and rational use and implementing action plans that will strengthen the role Traditional Medicine plays in keeping populations healthy, especially in developing countries (WHO, 2014). Traditional Medicine has maintained its popularity in all regions of the developing world and its uses are rapidly spreading in industrialized countries (WHO, 2008).

The World Medicine Situation Report estimates that about 70 to 95% of the population in developing countries access Traditional Medicine (WHO, 2011). A research report indicates that the use of traditional medicines is well-known in developing countries (Gyasi, Mensah, Osei-Wusu, and Agyemang, 2011). In Ghana, Mali, Nigeria and Zambia, for instance, the first line of treatment for children with high fever resulting from malaria is the use of traditional medicines at home (Sato,

2012). The WHO estimates that in several African countries Traditional Birth Attendants (TBA) assist in the majority of childbirths. Studies have revealed that the majority of Ghanaians depend on traditional therapies for their health care and pregnant women were not exceptions (WHO, 2005). The high consumption rates of Traditional Medicines are mirrored in the speedy progression in the number of Traditional Medicines vents, clinics and hospitals (Bloom and Standing, 2001), and a substantial world market value of an estimated $ 60 billion in 2008 (WHO, 2008).

Traditional medicines play a significant role during pregnancy, delivery and postpartum care in many rural areas of the world. The use of traditional medicines during pregnancy is a common practice in Africa (Malan & Neuba, 2011). Despite the modern western antenatal care which was developed based on the traditional medical practices in ancient Egypt, most pregnant women look forward to traditional medicines to ensure good foetus development and facilitate childbirth (Dove, 2010). Demand for traditional medicines by pregnant women have increased over the years in countries such as Australia, China, India, Taiwan, Cote d' Ivoire, Kenya, Nigeria, South Africa and Zimbabwe (Bodeker, Ong, Grundy, Burford and Shein, 2005). As a result the WHO has encouraged member countries to develop and streamline the traditional medicine use, which was supported by the World Bank in order to meet the health care needs of many including pregnant women (WHO, 2010).

Traditional medicine has become the panacea for many rural pregnant women in the World (Dove, 2010). In Africa the use of traditional medicine is an open secret because it underpinned the history and belief systems of Africans (Tamuno, Omole-Ohonsi and Fadare, 2010). In 2006 president Thabo Mbeki of South Africa met

Professor Herbert Vilakazi who proposed that the use of traditional medicine should be a presidential project in the interest of Africa to reduce pregnancy-related death in our rural areas (Dove, 2010). This underscores the crucial role of traditional medicines in protecting our mothers in performing their natural function of giving birth. The government of Ghana upon recognizing the important roles played by traditional medicines established the Centre for Scientific Research into Plant Medicine at Mampong in the Eastern region of Ghana. The Centre is established to harness the works of the orthodox and traditional medical practices in Ghana.

Despite western modern antenatal care which is free in terms of service delivery in Ghana, pregnant women continue to use traditional medicine to secure foetus, facilitate easy delivery and also to have a beautiful baby. The study, therefore seeks to assess the perceptions of effectiveness, the prevalence of use and to document the various types of traditional medicines available for use by pregnant women in Agotime-Ziope District of Ghana.

1.2 Statement of the Problem

Traditional medicine has been the main and often only available medicine for a greater percentage of the population in the developing countries (WHO, 2008). In Africa about 80% of the people access traditional medicine to meet their health care needs (WHO, 2014).

The global prevalence of Traditional Medicine/Complementary or Alternative Medicine use among pregnant women ranges from 7% to 96%. Few studies on the

pattern of use of traditional medicines during pregnancy showed that more than 10% of pregnant women use traditional medicinal products in Finland, Australia, and United States (Forster, Denning, Wills, Bolger and McCarthy, 2006). In Africa, about 35% of pregnant women in Cote d' Ivoire, 31% of pregnant women in Nigeria, 33% of pregnant women in South Africa and 42% of pregnant women in Tanzania use traditional medicines (Fakeye, Rasaq and Musa, 2009;, Omole-Ohonsi and Fadare, 2010). The use of traditional medicine by Africans has to do with their history and belief systems.

In Ghana, for example, the entire population was reliant on traditional medicine until modern medicines were introduced into the country by British medical officers during colonization (Twumasi, 1979). Ghana has incorporated the use of traditional medicines in the Health care delivery system and pregnant women were no exception. In 1999, the government of Ghana set up the Traditional Medicine Unit in the Ministry of Health (MOH) to streamline the use of traditional medicine alongside orthodox medicines of 2004 (Farnes, Beckstrand and Calliste, 2011). About 70% of Ghanaians depend on traditional medicines for primary health care provided by about 45,000 Traditional Healers (TH) most of them have been licensed variously under the umbrella name of the Ghana Federation of Traditional Medicine Practitioners' Association (Farnes, Beckstrand and Calliste, 2011)

Despite western modern antenatal care service delivery in Ghana, pregnant women continue to use traditional medicine to secure foetus, facilitate easy delivery and also to have a beautiful baby (Tamuno, Omole-Ohonsi and Fadare, 2010). In Agotime-

Ziope District specifically it has been observed that most pregnant women do not attend antenatal clinic and chose to depend on traditional medicines.

The study, therefore seeks to assess the perceptions of effectiveness, the prevalence of use and to document the various types of traditional medicines available for use by pregnant women in Agotime-Ziope District of Ghana.

1.3 The conceptual framework

The study adapted the Health Belief Model which was first developed in the 1950s by social psychologists Godfrey Hochbaum, Irwin Rosenstock and Stephen Kegels (Burns, 1992), working in the U.S. Public Health Services Department. The Health Belief Model is a psychological model of theory that attempts to explain and predict the health behaviour of individuals by focusing on their attitudes and beliefs. The model was developed in response to the failure of a free tuberculosis (TB) screening programme.

The Health Belief Model revealed that behaviour depends only upon two variables. Firstly, the value placed by an individual on a particular goal (desire to avoid illness) and secondly, the individual's estimate of the likelihood that a given action will achieve that goal (the belief that a specific health action will prevent illness). The model has since been adapted to explore a variety of health behaviours. The major variables of the Health Belief Model depends on perceived vulnerability and total benefits and these are; Perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cue for action and self-efficacy (Rosenstock, Strecher and Becker, 1988). Perceived benefits of preventive action minus perceived barriers

to preventive action equal to likelihood of taking recommended preventive health action.

Although the model has six constructs, this study would use only four. This is because the study does not aim at giving information on the use of traditional medicines that would be a cue for action, neither does it aim at checking the efficacy of traditional medicine use among pregnant women which would be self-efficacy.

The adapted Health Belief Model from (Burns, 1992)

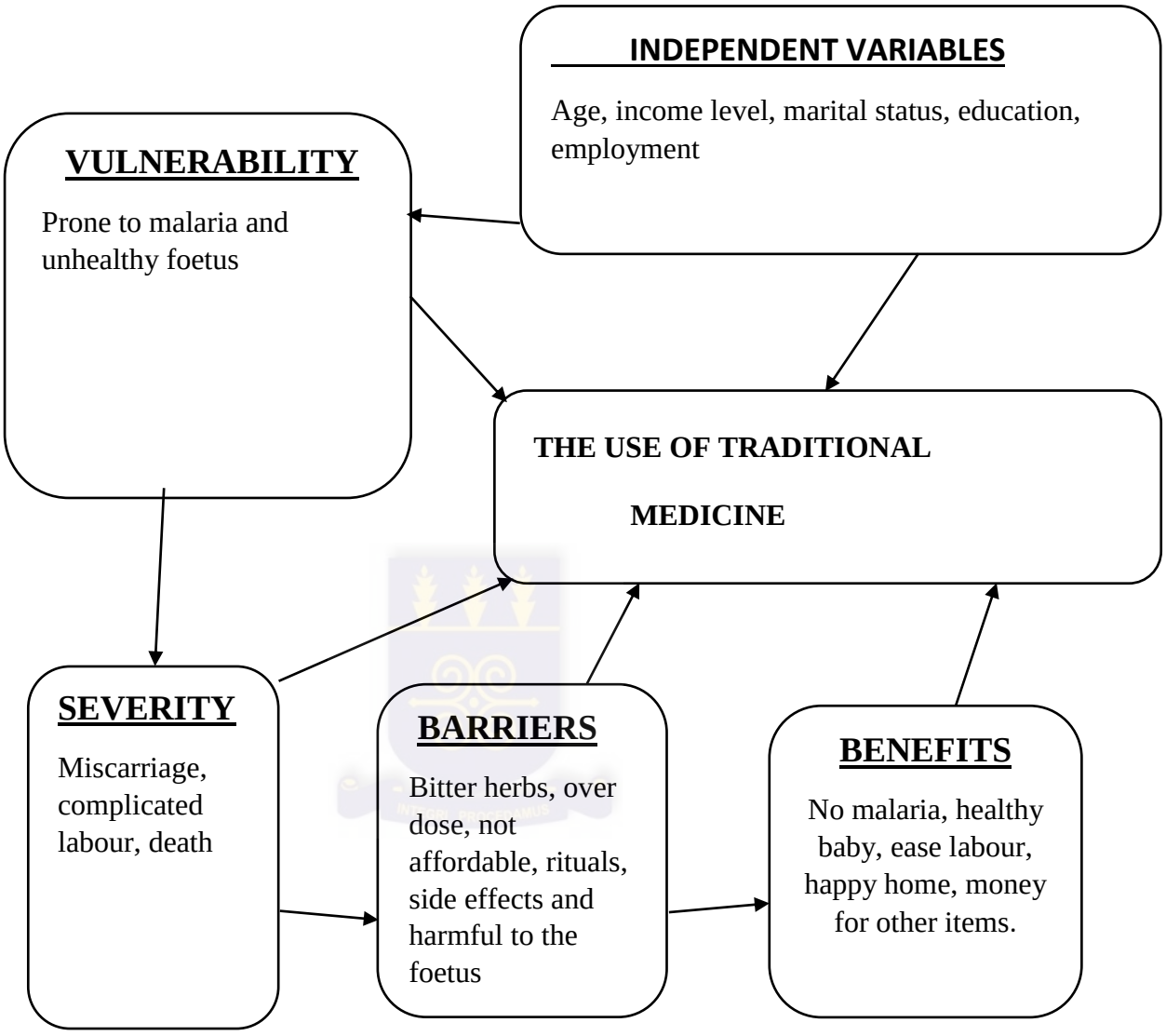

Figure 1: **Conceptual Framework**

The four constructs are the perceived susceptibility to disease, perceived severity, perceived barriers and perceived benefits. The Health Belief Model depends on certain core assumptions. For instance, it is based on the understanding that a pregnant woman will take a health-related action (i.e., Use traditional medicine) if she: (1) feels that a negative health condition (i.e. Malaria and miscarriage) can be

avoided, (2) belief that by taking traditional medicine, she will avoid a negative health condition (i.e., Using traditional medicine would prevent malaria and protect the foetus), and its effects of low birth weight and stillbirth, and (3) believes that she can successfully take a recommended health action (i.e., She can use desired traditional medicine properly).

Perceived susceptibility considers whether one is aware or feels at risk of contracting a health condition. For purposes of this study, perceived susceptibility refers to the perceived risk of malaria, side effects and unhealthy foetus development are important factors explaining the use or nonuse of traditional medicines by pregnant woman. Lack of perceived susceptibility (prone to malaria, side effects and unhealthy foetus development) can lead to risk taking behaviour of not using traditional medicines.

Perceived Severity relates to feelings concerning the seriousness of contracting illness or of leaving it untreated, including evaluations of both medical and social effects. For purposes of this study, does pregnant woman believe that the effects of not using traditional medicines would result in miscarriage and the unhealthy foetus development sufficient enough to use traditional medicines? For example, the fear of miscarriage, side effects and death would encourage the use traditional medicines.

Perceived Barriers are the potential negative consequences that may result from taking particular health actions, including both social and physical environments, psychological, and financial demands. In this study, perceived barriers focus on the

pregnant woman's ability to identify a personal barriers to use of traditional medicine considering side effects, bitter herbals or money to afford the services of traditional healer and find ways to reduce or eliminate these barriers (i.e. Pregnant woman is aware about the availability and affordability of different traditional medicines and side effects is very minimal).

Perceived Benefits are the effectiveness of strategies designed to reduce the threat of illness. Here, perceived benefits relate to whether the pregnant woman believe that the recommended action of using traditional medicines would protect her from malaria, miscarriage and death. For instance, does pregnant woman believe in the effectiveness of traditional medicine? Secondly, whether she believes that the recommended action of using traditional medicines would help her have healthy foetus development and protect her from malaria.

1.4 Justification of the study.

The study is necessary because it enables the researcher to find out exactly the prevalence of traditional medicine usage among pregnant women in the district. The documentation of the perceptions of effectiveness of traditional medicines, the prevalence and the types of traditional medicines used by pregnant women in Agotime-Ziope District will broaden our understanding of traditional medicines used by pregnant women. This will help the policy makers such as the World Health Organization, Ministry of Health, Ghana Health Service and the District Health Directorates to develop a comprehensive strategy on traditional medicine usage among pregnant women in Ghana to ensure that traditional medicine use does not

have any adverse effects on the pregnant woman and the foetus. Also the study is justified because it could serve as a source of knowledge to readers who aspire to delve into the study of traditional medicine in Ghana. Researching into this area of study has become very necessary since it will offer the opportunity to ascertain pregnant women's choice of health care in the district. Judging by the fact that the study area (Agotime-Ziope District) have about twelve CHPS compounds and two clinics, National Health Insurance registration is being promoted every now and then and the free maternal health policy is being implemented.

1.5 Objectives of the Study.

The following are the objectives of the study.

1.5.1 General objective.

The study is to assess the usage of traditional medicine among pregnant women in Agotime-Ziope District of Ghana.

1.5.2 Specific Objectives:

1. To assess the perceptions of the effectiveness of traditional medicine among pregnant women.

2. To determine the prevalence of traditional medicine use among pregnant women.

3. Document the various types of traditional medicine used by pregnant women.

CHAPTER TWO

2.0 LITERATURE REVIEW

Introduction

The literature review discusses opinions and concerns expressed by other researchers. It is basically about existing publications and researches. The idea of reviewing existing literature is to offer a constructive critique of existing literature and to find out the methodologies used. The literature review also seeks to point out whether there are gaps in existing literature for which further research is needed. The literature review is structured to thematically cover topics like; Traditional Medicine, traditional medicine as an informal institution, importance of Traditional Medicine, factors influencing the traditional medicinal use, the Prevalence of traditional medicine use among pregnant women, the types of traditional medicines use and Ghana's policy on traditional medicine use.

2.1 Traditional Medicine

Traditional medicine is the use of resources in diverse ways by a group of people influenced by their culture in seeking and maintaining good health care (WHO, 2014). There are two major forms of Traditional Medicine and these are the medical therapies and non-medical therapies (WHO, 2014). Medical therapies usually involve the use of herbal medicines, animal parts and minerals. Non-medical therapies, on the other hand, include the use of manual and spiritual therapies (WHO, 2014). Traditional medicine is often referred to as "complementary", "alternative" or "non-conventional" medicine. (WHO, 2014). The term "traditional medicine" refers to ways of protecting and restoring health that existed before the coming of modern medicine (Twumasi, 1979). As the term suggests, these methods

to health belong to the traditions of each nation, and have been handed down from generation to generation. China and India, for example, have developed very refined systems such as acupuncture and Ayurveda medicine (WHO, 2014).

The WHO therefore, defines Traditional Medicines as the sum total of the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness (WHO, 2014). Traditional medicine is an encompassed term used for products, practices and practitioners of traditional medicine systems such as traditional Chinese medicine, Indian Ayurveda and Arabic Unani medicine and other forms of indigenous medicines (WHO, 2014).

Traditional medicine is also defined by the UMMC (2009), as the use of plants for medicinal purposes. However, this definition considered only one element of traditional medicine as suggested by WHO. In Ghana the working definition of traditional medicine is diverse health practices of the people based on the traditional knowledge and beliefs incorporating plant, animal, mineral based medicines, spiritual therapies, manual techniques and exercises applied singularly or combination to maintain well-being, diagnose, treat or prevent illness or physical, mental, social and spiritual imbalances (Sato, 2012).

2.2 Perceptions and beliefs of traditional medicine

The people of Africa perceived the use of traditional medicine as essential for the protection of the pregnant women and the unborn baby as a result of African cultural beliefs and practices (Van der Kooi and Theobald, 2006). It is argued that in Africa, ancestors have roles to play when it comes to pregnancy and therefore prayer must be offered to ancestors as a sign of appreciation and also asked for protection for the mother from the witches and other evil spirits (Dove, 2010). However, there is a protracted perception that traditional medicine belongs to those who cannot afford modern medicine (Fakeye, Rasaq and Musa, 2009). This belief was so much the case in some time past, but now people are beginning to appreciate its usefulness, and the fact that governments are now encouraging their use (Malan and Neuba, 2011).

There are varied reasons why society thinks traditional medicine belongs to the poor. One reason is that, most traditional medicines are administered by non-professionals who come very cheap with their services and drugs. Those who are in faith healing sometimes only offer prayers which come even cheaper, so can be patronized by even the poorest. The society also sees the use of traditional medicines as worship of gods and ancestors, especially when it comes to divination and consultation of traditional healers to find out if there will be any complication in the course of the pregnancy so that sacrifices could be made to appease the gods (Tamuno, Omole-Ohonsi and Fadare, 2010).

In the colonial era, traditional medicine was forbidden by colonial administrators. Colonialists saw the traditional medicine as regressive, superstitious and substandard and prohibiting indigenous practices and beliefs and oppressing traditional medicine

(Twumasi, 1979). Also pregnant women are often prohibited from going to market and passing through certain places at night, which were believed to be evils abode (Twumasi, 1979). There are certain foods such as egg, honey and corn flower which were prohibited for pregnant women, which they believed could result in difficulty and prolonged labour (Fakeye, Rasaq and Musa, 2009; Tamuno, Omole-Ohonsi and Fadare, 2010)

Notwithstanding these events, traditional medicine continued to be popular and trusted by many people when it comes to health care delivery. Ironically herbal products like quinine helped relieve colonizers of malaria. Eventually, much of modern medicine is based on traditional medicine products (Malan & Neuba, 2011). Some also argued that the potency of the traditional medicine overrides any other factor, so people's negative comments should not be taken seriously (Sato, 2012).

It is argued that one of the challenging tasks in academia is defining spirituality. There are many different responses to what constitutes spirituality. According to Wane (2002) spirituality to some extent is so personal, distinctive, and individualistic that it cannot be captured in one clear definition. Also in the views of Shahjahan (2005) defining spirituality in different to beliefs and practices, religious theories, is likely to be more varied because in many cases the latter is observable and articulated in sacred texts or scripture. Today, the concept spirituality is treated as a cardinal sin in the education system in Euro-American/Canadian society (Hemminki, Mantyranta, Malin, Koponen, 1991). This is because our minds, to a large extent, have been shaped to accommodate the self as concealed in the Western

fashion, fitness, and career (Hemminki, Mantyranta, Malin, Koponen, 1991). Thus, any new concept which suggests otherwise is looked upon with suspicion. Hemminki, Mantyranta, Malin, Koponen (1991) equally echoes this concern: higher education has become so accommodating to Western economic consequences that there is no spirits in these institutions.

During pregnancy, witch doctors, diviners and traditional healers are engaged in protection from both physical illness and spiritual threats. Spirituality plays a significant role in childbirth-related decisions among Ghanaian women as it does in many cultures (Dove, 2010).

2.3 Importance of Traditional Medicine

According to the World Health Organization, the use of traditional medicines throughout the world exceeds that of conventional drugs by two- to threefold (WHO, 2014). In February 2013, the WHO Director-General, Dr. Margaret Chan, stated that *"*Traditional medicines, of proven quality, safety, and efficacy, contribute to the goal of ensuring that all people have access to care. For many millions of people, herbal medicines, traditional treatments, and traditional practitioners are the main source of health care, and sometimes the only source of care. This is care that is close to home, accessible and affordable. It is also culturally accepted and trusted by large numbers of people. The affordability of most traditional medicines makes them all the more attractive at a time of soaring healthcare costs and nearly universal austerity. Traditional medicine also stands out as a way of coping with the relentless rise of chronic non-communicable diseases" (WHO, 2014, p. 16). Traditional medicine has

become the backbone of about 75–80% of the world population, mostly in developing countries, for primary health care (WHO, 2002). The number of patients seeking alternate and herbal therapy is growing exponentially. A comprehensive explanation of the current and future scenario can be found in a recent study by (WHO, 2008).

Ayurveda is an ancient system of medicine originating in India, and is an extension of yoga. Its two most famous treatises, Charak Samhita and Sushruta provide evidence of a rich tradition of traditional medicine in India. Historical and anthropological studies have repeatedly demonstrated the importance of yoga's 'upanishadic' roots and philosophical basis. The rural population in India is heavily dependent on traditional medical systems (WHO, 2014). In Asia and Latin America, people continue to use TM/CAM due to historical underpinnings and societal beliefs. In china, about forty percent of traditional medicine is used in all health care deliveries (WHO, 2008).

In the United States of America, 158 million of the adult population uses traditional or complementary medicines (WHO, 2014). In the United Kingdom, annual expenditure on traditional medicine is US$ 230 million and in Saudi Arabia, a recent study showed that individuals pay US$560 per annum for traditional medicines (WHO, 2014). The global market for traditional medicines currently stands at over 110 billion US dollars annually and is growing steadily (WHO, 2012). Traditional medicines are used in pregnancy, although there is very little real evidence of safety. According to Fakeye, Rasaq and Musa (2009) respondents who used traditional

medicine during pregnancy had experienced some form of unpleasant effects after using traditional medicine. The side effects experienced included vomiting, dizziness, malaise, headache, rashes, and diarrhoea which may cause teratogenic effects to the foetus as many conventional or allopathic medicines. The findings of Fakeye, Rasaq and Musa (2009) cemented the position of WHO and many other studies in Canada, USA and Australia.

In developed countries like Germany, USA, Australia, Canada, Belgium, France and United Kingdom majority of the population had used a natural remedy at some point in their life resulted in increased number of medical doctors that had undergone special training in natural or traditional medicines (Sato, 2012). In the Lao People's Democratic Republic, the majority of the population lives in rural areas made up of about 9,113 villages and each village has one or two traditional health practitioner (WHO, 2014).

In many developing countries, from 2008 to 2012, annual sales of traditional medicines increased from 3.1 billion US dollars to 8.3 billion US dollars (Sato, 2012). The prevalence and factors associated with its use are largely unknown, although the use is believed to be widespread. Patients and the public have been known to self-prescribed herbal medicines for health maintenance, for the treatment or prevention of minor ailments and also for chronic illnesses (Fakeye, Rasa and Musa, 2009). Besides, traditional medicines were also used at home as the first line of treatment for children with high fever caused by malaria in Ghana, Mali, Nigeria and Zambia (Sato, 2012).

In Africa, the most reason given for the use of traditional medicine during pregnancy were protection from evil spirits to ensure good development of the foetus, to facilitate childbirth, to prevent or cure malaria, a very common disease in the first trimester and culturally acceptable, more accessible than conventional medicine and affordable (Malan and Neuba, 2011). For example, in South Africa, a study done by Van der Kooi and Theobald (2006) indicates that there are many traditional medicines available for use by the pregnant woman especially in Natal among Kwazulu. Some of these include traditional medicines for protection, to promote a favourable course of pregnancy, and to ensure ease labour and vaginal douche during pregnancy. The pregnant women, use of traditional medicine has to do with how pregnancy is viewed culturally in African setting and many pregnant women prefer home base delivery under the Traditional Birth Attendant (TBA) than modern health care delivery system (Tamuno, Omole-Ohonsi and Fadare, 2010). Traditional medicine has been described by the World Health Organization (WHO, 2014) as one of the surest means to achieve total health care coverage of the world‘s population.

2.4 Factors Influencing Traditional Medicine Usage

The majority of people lack access to health care, and even where it is available, the quality is substandard. This circumstance is further aggravated by severe financial restrictions, high debt burden, a speedily growing population, political uncertainty, high inflation rates, decreasing real income and worsening growth rates (WHO, 2000). The modern health care system has never been, and perhaps never will be, sufficiently and fairly provided everywhere in Africa due to financial restrictions related to rapid population growth, political uncertainty and poor economic

performance, to mention only a few (Sato, 2012). For instance the problem of ensuring the equitable distribution of modern health care has become very problematic, as the gap between supply and demand has continued to widen (UNESCO, 1994). Research has shown that alternative medicine is flourishing in African society, neither because users are dissatisfied with orthodox medicine nor because they seek self-control over their health care decisions (Eggleston, 2008). The driving force of the majority of users appears to be the holistic belief that the health of body, mind and spirit are related and that this should be taken into account by whoever cares for their health (WHO, 2000).

It is important to note that even in modern-day rural Africa, there is no doubt about the efficacy of traditional medicine. Many Africans, especially rural people and the urban poor, rely on the use of herbal medicine when they are ill. In fact, many rural communities in Africa still have areas where traditional medicine is the major and in some cases the only source of health care available. Thus, there can be no doubt about the acceptability and efficacy of traditional medicine within African society (WHO, 2002).

However, in many developed countries, traditional medicine is officially recognized. China, for example, is able to provide adequate and constantly improving health care coverage for its vast urban and rural population precisely because it harnesses the traditional medicine (WIPO, 1998). Consequently, the inability of most African countries to develop their own inheritance of traditional medicine, because it is denied official recognition, is partly responsible for the current health care crisis in

the continent. The widespread use of TM in Africa and some developing countries can be attributed to its availability and affordability. For instance, the ratio of traditional healers to population in Africa is 1:500 whereas the ratio of medical doctors to population is 1:40 000 (WHO, 2014). For millions of people in rural areas, native healers therefore remain their health providers (WHO, 2014). In Zimbabwe, for example, exorbitant fees for conventional drugs compelled most pregnant women to use traditional medicine, which suggests that poverty compel most pregnant women to use traditional medicine not because it is officially recognized (Sato, 2012). Others have argued that they choose traditional medicine over conventional ones because they believe their natural base make them more effective in treating certain ailments with fewer or no side effects (Tamuno, Omole-Ohonsi and Fadare, 2010; WHO, 2014).

In Ghana, the Kwame Nkrumah University of Science and Technology is training herbal medical practitioners, one of the seven directorates of the Ministry of Health (MOH) is Traditional and Alternative Medicine (TAM) and traditional medicine units has been established in some government hospitals to promote traditional medicine practice in the country (Sato, 2012).

In several parts of the world, particularly in developing countries access to herbal medicines is largely unrestricted. In contrast to prescription and over the counter medications, herbal products are usually marketed without the benefit of clinical trials to demonstrate either efficacy or safety. Besides, manufacturers and purveyors of herbal medicines usually offer a broad range of therapeutic claims which

constitute powerful temptations for consumers (Tamuno, Omole-Ohonsi and Fadare, 2010)

Despite the efforts of government and its development partners to make modern health services accessible, available and acceptable to all people, most of these institutions are distances away from the communities they serve and the road network system linking some of the communities to the health facilities are mainly inaccessible, especially during the rainy seasons. This and other factors make it difficult to access quality health care and undoubtedly make traditional medicine an obvious choice for the rural people (WHO, 2002)

2.5 Prevalence of traditional medicine usage among pregnant women

This section clearly identifies the incidence of traditional medicine usage among pregnant women in the world. Studies done in Australia, Canada, USA, Cote d' Ivoire, Nigeria, South Africa, Tanzania and other places explain how traditional medicine has become almost the only source of health care for many pregnant women.

Globally, the incidence of traditional medicine usage among pregnant women ranges from 7% to 96% (Fakeye, Rasaq and Musa, 2009; Forster, Denning, Wills, Bolger and Elizabeth McCarthy, 2006; Tamuno, Omole-Ohonsi and Fadare, 2010). The use of traditional medicine among pregnant women in Australia ranged from 10–56% (Forster, Denning, Wills, Bolger and McCarthy, 2006). Few studies on the prevalence of traditional medicines during pregnancy showed that more than 10% of pregnant women use traditional medicinal products in Finland and United States of America

and between 31% and 35% of pregnant women in Cote d' Ivoire, Nigeria and South Africa use traditional medicines (Tamuno, Omole-Ohonsi and Fadare, 2010). It is argued that, data on the extent of traditional medicine usage during pregnancy is scanty especially in sub-Sahara Africa, where the legislation for distribution and purchase of herbal medicines is not as rigid as it is for conventional medicines (Malan and Neuba, 2011).

In Ghana, there are scanty data on the use of traditional medicine among pregnant women. In Australia, for example Forster, Denning, Wills, Bolger and McCarthy (2006) found that invariably, the use of traditional medicine increased as pregnancy progressed. He further argued that, Characteristics of women more likely to use traditional medicine in pregnancy include being older, married and being less educated. However, the use of traditional medicine during pregnancy may be pregnancy non- pregnancy related. For instance, nausea and vomiting, reflux, candidiasis, nutritional, or to prepare for labour or maybe for unrelated health issues such as colds and respiratory illnesses or skin problems (Forster, Denning, Wills, Bolger and McCarthy, 2006).

A study by Byrne, Semple and Coulthard (2002) in Adelaide-Australia, found out that about half of pregnant women used traditional medicine during pregnancy, which was in sharp contrast with the findings of (Henry and Crowther, 2000; Maats and Crowther, 2002) who reported lower rates of traditional medicine usage during pregnancy. However, the three studies on traditional medicine usage by (Henry and Crowther, 2000; Maats and Crowther, 2002) confirmed the use of similar traditional medicines in Australia. Similarly, the use of traditional medicine among pregnant

women was 12% as reported by Pinn and Pallet (2002) in Australia, but in different location confirmed the findings of (Henry and Crowther, 2000) but inverse to Byre, Semple and Crowther). Based on the findings, 3.6% and 4% in the two studies conducted by Hemminki, Mantyranta, Malin, Koponen (1991), we can argue that the use of traditional medicine during pregnancy is low in Finland. The pregnant women who reported of nonuse of traditional medicine argued that they cannot guarantee its safety of their babies and themselves. This was the case in Nigeria, where only few pregnant women responded in the affirmative to the use of traditional medicine during pregnancy in a study by Gharoro and Igbafe (2000).

In Norway, the use of traditional medicine during pregnancy is low as indicated by findings of Byrne, Semple and Crowther (2002). Although, WHO (2002) reported high prevalence use of traditional medicine in the United State of America (USA), the findings of Gibson, Powrie, Star (2001); Tsui, Dennehy and Tsourounis (2001); Hepner, Harnett, Segal, Camann, Bader, Tsen (2002) says otherwise. They reported relatively a few numbers of pregnant women using traditional medicine during pregnancy. However, similar to traditional medicines were used by the pregnant women as those used in Finland and Australia. The respondents cited adverse effects, the alien of traditional medicine to them and believe that traditional medicine is for the poor for nonuse.

However, findings in Canada indicate the high prevalence rate of traditional medicine usage among pregnant women with the belief that it is natural, safer and more accessible than the conventional medicine in treating nausea and vomiting

during pregnancy as reported by Hollyer, Boon, Georgousis, Smith, Einarson (2002); Westfall (2004). These findings were inconsistent with the findings in Nigeria, which reported a lower usage of traditional medicine among pregnant women as documented by Fakeye, Rasaq and Musa (2009). The pregnant women confirmed that traditional medicine is accessible, convenient, natural, safe and culturally acceptable to use. Similarly, Tamuno, Omole-Ohonsi and Fadare (2010) also reported 31% of traditional medicine use among pregnant women in Nigeria to validate what was reported by Fakeye, Rasaq and Musa (2009). In relation to Cote d' Ivoire and South Africa, Malan and Neuba (2011) and Maputle, Mothiba and Maliwichi (2015) reported high prevalence use of traditional medicine during pregnancy citing its naturalness, safety, accessibility, affordability, cultural acceptability and convenience of use as the reasons for usage apart from to prevent malaria, promote good development of the foetus, prevent miscarriage, ensure ease labour and to have beautiful babies. All these findings confirmed the incidence of traditional medicine usage among pregnant women with lower rate of use in developing countries (WHO, 2014)

2.6 Types of traditional medicine used by pregnant women

There are two major types of traditional medicines. The medical therapies and non-medical therapies. The medical therapies include herbal medicines (the use of leaves, roots, fruits, vegetables, stems, flowers and woods for medicine), animal parts (the use of meat and bone for medicine) and minerals (the use of sand and stone for medicine) and the non-medical therapies include manual such as massages, and bone setting and the spiritual which includes divination, faith healers, rituals (Fakeye, Rasaq and Musa, 2009; Sato, 2012)

Garlic, ginger, primrose oil, raspberry, Echinacea and cranberry are some of the commonly used traditional medical therapies. A study conducted in Norway by Nordeng and Havnen (2005) listed Echinacea, ginger, chamomile, cranberry, aloe, black elderberry and wheat germ oil as traditional medical therapies used by pregnant women. This was similar to the findings of Hepner, Harnett, Segal, Camann, Bader, Tsen, (2002) and Westfall (2004) but added ephedra, gingko biloba, ginseng, primrose, raspberry, peppermint and cannabis. In Nigeria and Cote d' Ivoire, pregnant women have used forever living, Tianshi, Golden Neo-life and those prepared by traditional medical practitioners as reported by (Fakeye, Rasaq and Musa, 2009). These findings indicate that most pregnant women use traditional medical therapies more than the traditional non-medical therapies.

2.7 Ghana's Policy on Traditional Medicine

In Ghana, the policy on Traditional Medicine was issued in 2002. Laws and regulations on TM were issued in 1992, and the national programme begins in 2000. The national office on Traditional medicine was established in 1999 under the auspices Ministry of Health (MOH). A committee to work on the establishment was inaugurated the same year. A National Research Institute on herbal medicines was established in 1975 (WHO, 2005). Herbal regulation in Ghana began in 1992 through the Food and Drugs Law, which also institutes regulations on conventional medicines. Herbal medicines are not allowed to be sold as over the counter medicines. By law, medical, health and nutrient content claims may be made (WHO, 2005). Regulatory requirements for manufacturing of herbal medicines was the same as the Goods Manufacturing Practice (GMP) rules that apply to conventional pharmaceuticals. Implementation of the manufacturing requirements is ensured

through annual inspections. “Safety assessment requirements include traditional use without demonstrating harmful effects, reference to documented scientific research on similar products and phytochemical analysis. Compliance with these requirements is ensured through the pharmacy vigilance centre” (WHO, 2005).

There are 340 registered herbal medicines in Ghana but none is included on the National essential drug list. The post marketing surveillance system has included adverse effect monitoring of herbal medicines since 2000. Herbal medicines are sold in pharmacies as over the counter medicines, in special outlets and by licensed practitioners (Adapted from National Policy on Traditional Medicine and Regulation of Herbal Medicines Report of a WHO Global Survey, 2005).

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

Introduction

This chapter describes the methodology employed in this study. Issues covered in this chapter include the research design, study area, study population, sample size, sampling techniques, data collection and data analysis techniques.

3.1 Research Design

It was a cross-sectional, and descriptive in design and employed quantitative data collection approach. The choice of this design was due to its advantage to facilitate the collection of original data necessary to address the research objectives. It is useful in collecting data that can be quantified for reporting the true picture of the situation in the district**.**

3.2 Study Area

The Volta Region located in the southeastern part of the country is the fifth largest of the 10 administrative regions in terms of area. The area under discussion in this research focused on the Agotime-Ziope District one of the newly created districts which was carved from the former Adaklu Anyigbe district. Agotime-Ziope District is bordered by the Republic of Togo to the East; Akatsi North and Central Tongu Districts to the South and the Adaklu District to the West and North. The population of the district, according to 2010 PHC was 64,404. The District covers a total land area of about Six Hundred and Thirty-Seven kilometres square (637km2). The

district is made up of two traditional areas; The Agotime and Ziope traditional areas. The district is made up of one hundred and five (105) communities. The community members in the district have three main occupations namely; farming, Kente weaving and trading. The district has two markets; the Kpetoe and Ziope Markets which serve the people of the district. The district experiences two main climatic conditions which were the dry and rainy seasons. The two major festivals celebrated by the residents are Agbamevorza (by the Agotime traditional area) and Agbleza (by the Ziope traditional area). The district has two clinics, Kpetoe and Ziope, and twelve CHPS compounds. The twelve CHPS compounds are Afegame, Agbesia, Akpokope, Dorglobo, Ebe, Honugo, Keyime, Kpetoe, Sarakope, Wudzekede, Yevi and Ziope. These Healthcare facilities also offer services to people of the Republic of Togo.

3.3 Variables

The variables assessed and measured included the following:

Dependent variable

Traditional Medicine use

Independent Variable

Age, education, occupation, income, marital status and religion

3.4 Study Population

The study population includes all pregnant women within the district. Per the records at the District Health Directorate, the district recorded about 1,300 (16%) of the

proportion of women in the reproductive age of 16 to 49 years who got pregnant in 2013. This figure was used as the population for the study. This implies that, the study population is 1,300 pregnant women in the Agotime- Ziope District. The study in this population is necessary because of increasing decline in the antenatal attendance among pregnant women in the district as reported by the Health Directorates. It is reported that only half of the pregnant women attend antenatal clinics in the District. In selecting respondents for this study, contacts were first made with the District Health Directorate for approval. The District Health Directorate gave the approval and an introduction letter to the two clinics, Kpetoe and Ziope clinics.

3.5 Sample size determination

The proportion of pregnant women in the district, according to the district health directorate is 1,300 (16%) of the women in the reproductive age of 16 to 49 years since 2013. In determining the sample size, a 95% confidence interval and a 5% margin of error were applied. Based on the proportion of the population of 16%, the calculation of the sample size for the study using the formula that follows.

$n = Z^2PQ/\mathcal{E}^2$

Where **n**= minimum sample size

Z= Standard Normal Deviation normally set at 1.96 which corresponds to 95% confidence Interval

P= Prevalence of Traditional medicine is used during pregnancy, which in this case was noted to be 16%

Q= 1-P

$\mathcal{E}$= Marginal error estimated to be 5%

Then **$n = 1.96^2 \times 0.16\ (0.84) / 0.05^2 = 206$**

This figure was rounded to **210.**

3.6 Sampling method

In selecting the participants, the simple random sample technique was used. A total of the 202 participants were selected from Agotime and Ziope traditional areas in simple random sampling. The two major clinics within the two traditional areas were purposively selected, Kpetoe and Ziope. This helps to select pregnant women equally from the two traditional areas so that the outcome of the study would fairly represent the views of the pregnant women in the district. Simple random sampling was used in selecting pregnant women from the two major clinics selected within the district for the study. The antenatal attendance cards of the pregnant women were arranged in the order in which the pregnant women came to the clinics and was picked at random by numbering the cards. Cards bearing the odd numbers that are one, three, and five in that order were picked until the day was over. The daily attendance ranges from two to ten pregnant women. This was repeated in the Kpetoe and Ziope clinics selected in the district to collect data on 202 participants.

3.7 Validity and reliability

The questionnaire was piloted among the pregnant women at the Keyime Health Center, one of the Health care centres in the district which was not part of the research site. The questionnaires were fine-tuned based on the responses from the pilot prior to the main data collection.

3.8 Data collection techniques and tool

Structured questionnaire was used to collect data from 202 participants from the two clinics in the district**.** The questionnaires were designed in English, but the questions were asked in the local dialect which is Ewe for better understanding of participants who did not have any formal education**.** The questions focus on age, income, religion, marital status, employment, education, traditional medicine usage in general and in pregnancy, reasons for usage and non-usage of traditional medicine, under what conditions traditional medicines can be use and where these traditional medicines are obtained. The data was collected at Kpetoe and Ziope clinics for a period of one month, thus from 20th May to 20th June, 2015. The questionnaires were administered to participants by the research team in the health facilities.

3.9 Data processing and analysis

The data collected was analyzed using the Statistical Package for Social Science (SPSS) version 16.0 to determine percentages, means and frequencies. The chi-square test was used to test associations between independent variables and the use of traditional medicine during pregnancy with a significant P-value of <0.05.

3.10 Ethical Clearance

Approval was sought from the Ethical Review Board of the Ghana Health Service. Permission was sought from the District Health Director. In addition, permission was sought and obtained from the appropriate authorities at the two clinics before the study commenced. Written consent was sought from participants after a detailed explanation of what the study entailed was rendered. For the purpose of

confidentiality, participants were required to answer questionnaire without their names being written on the questionnaire for honest response. Participation was on a voluntary basis and the pregnant women were told they could terminate answering the questionnaires at any time without any penalty

3.11 Quality Control

In order to achieve this, a well-designed structure questionnaire containing all the details necessary to achieve the set objectives by obtaining the right information from pregnant women was used. Prior to the collection of data, a day's training was organized for field workers who were to help with the collection of data. Supervision was carried out by the principal investigator while research assistants undertook field work. Completed questionnaires were checked for correctness and completeness. Two independent people entered the data with the help of the principal investigator and the output was checked to ensure accuracy. A daily review of work was done and emerging problems immediately addressed

CHAPTER FOUR

4.0 RESULTS

This chapter focuses on the presentation of the findings of the research concerning the use of traditional medicine among pregnant women in Agotime-Ziope district. This is guided by the objectives of the study.

4.1 Socio-Demographic Characteristics of Respondents

The socio-demographic characteristics of the survey respondents provide a clear idea of the respondents of the study. **Table 1** presents information on the socio-demographic characteristics. Few of the women asked to join the study, could or would not participate in the study. The reasons given for not attending were delivered before the administering of the questionnaires and inconvenience. The response rate was approximately 202/210 (96%). A total of 202 respondents of age 16 to 37 years and above participated in the study. Of the total number of respondents the majority (33%) fell within the age group of 26 – 30 years, followed by 27% who fell within 21 - 25years.

In terms of formal education, the majority of respondents (37%) had completed Junior High School (JHS), 29% had completed primary School, 16% had completed Senior High School (SHS), 4% had Diploma and certificates from the Teacher Training Colleges, 2% had obtained Degrees. However, as high as 11% of the respondents never went to school. The majority of respondents were Christians (81%). The rest were believers in Traditional African religion (11%) and 2% were Muslims. However, 5% did not disclose their religion. We observed a comparatively

significant number of Christians (52%) who currently use traditional medicine compared to the other religious groups. With respect to marital status, majority (80%) of respondents were married and 16% were cohabiting. In terms of occupation, 46% were petty traders, 35% were peasant farmers, 4% were teachers, 1% were Kente weavers and 1% were unemployed. However, 13% of the respondents were students who got pregnant and drop out of School. With respect to estimated income per month, the majority of the respondents (65%) earned less than Gh₵100 (USD 25), 18% earned between (Gh₵100-Gh₵300), 4% earned between (Gh₵301-500), 1% earned between (Gh₵701-Gh₵1000), 3% earned Gh₵1000 and above. However, 7% did not disclose their income levels. The majority (65%) of the respondents lives on less than a dollar a day.

Table 4. 1**: Socio-demographic characteristics of women enrolled in the study. Age (years)**

Characteristics	Frequency	Percentages
Age		
16-20years	37	18.0
21-25years	55	27.0
26-30years	65	33.0
31-36years	34	17.0
37years & above	11	5.0
Marital status		
Married	161	80.0
Cohabiting	33	16.0
Widowed	5	2.5
No Response	3	1.5
Employment		
Trading	88	46.0
Farming	68	35.0
Student	25	13.0
Teaching	7	4.0
Weaving	2	1.0
Unemployed	2	1.0
Estimated income per month		
Less than Gh100	131	65.0
Between Gh100-Gh300	37	18.0
Between Gh301-Gh500	9	5.0
Between Gh501-Gh700	1	0.5
Between Gh701- Gh1000	3	1.5
Above Gh1000	6	3.0
Did not disclose	15	7.0
Highest Educational Level Attained		
No formal education	22	11.0
Primary education	58	29.0
Junior high	74	37.0
Senior high	35	17.0
Diploma/certificate	9	4.0
Graduate Degree	4	2.0
Religion		
Christianity	164	81.0
Traditional	23	11.0
Islam	5	3.0
None	10	5.0

4.2 Awareness of healthcare facilities.

The majority of respondents (96%) spoken to acknowledge awareness of modern healthcare facilities in their localities while (4%) of the respondents mention traditional and spiritual centres as other healthcare facilities in their localities. However, 4% of the respondents indicate that pregnant women in the district still use traditional medicine despite the awareness created in the district on the hospitals and clinics.

The main factors that influence health care seeking among pregnant women in the district is the belief in the efficacy of the medication provided, 135 (66%) followed by the affordability of services at the health care facility106 (52%) and the rest 78 (39%), 46 (23%) and 44 (22%) says the confidence in the services provided, responsiveness of the healthcare facility and the proximity of the health care facility respectively.

In all, over (80%) of the respondents associate efficacy of the medicines provided and affordability of healthcare services to modern hospitals and clinics whiles less than one tenth of the respondents associate efficacy of the medicines provided and affordability of healthcare services to traditional medicines.

Table 4. 2**. Factors respondents consider when seeking health care. (Base = 202)**

Factors influencing health seeking	Frequency	Percentage
Efficacy of the medication provided	135	66.0
Affordability of service	106	52.0
Confidence in the service provided	78	39.0
Responsiveness of the center	46	23.0
Proximity of the healthcare center	44	22.0

4.3 Hospital visitation after conception.

The antenatal attendance among pregnant women is very high with (95%) regularly visiting modern health care facilities. The majority of the respondents visit a health care facility for antenatal care within the first three months of pregnancy (65%), followed by 17% of the respondents who visit a health care facility for antenatal care between three to five months of pregnancy. Only 6% of the respondents use health care facilities late when pregnant. However, as high as 7% of the respondents did not state the specific time they use health care facility when pregnant and this is a great concern since it might mean that they do not visit any form of health care facility during pregnancy.

With regards to hospital and clinic visitation, the majority (85%) of the respondents visit hospitals and clinics for antenatal care services once every month and 5.5% of the respondents visit hospitals and clinics once in every two months. However, 3% of the respondents did not respond to the questions. Also a significant number of the respondents interviewed have registered with the National Health Insurance Scheme 186 (97%) while the remainder pointed to lack of money (3%) for their inability to register with the Health Insurance Scheme. Despite registering for National Health Insurance, 133 (69%) made mention of the fact that they make payments ranging from GH₵1. 00 to GH₵35 (Average =GH₵11. 99, S. D=9. 06) for antenatal services at the modern healthcare centres for each visit. The free maternal health care policy in Ghana is not totally free but has helped many pregnant women to have access to hospitals and clinics in the district.

Table 4.3**: When respondents start hospital/clinic visitation after conception (Base=202)**

Hospital Visitation after conception	**Frequency**	**Percentage**
Within 1-3 months after conception	131	65.0
Between 3-5 months after conception	34	17.0
Less than a month after conception	11	5.5
Between 5-7 months after conception	9	4.5
After 7 months	2	1.0
No response	15	7.0
The rate of Hospital/ Clinics Visitation		
Once a month	172	85.0
Once in two months	11	5.5
Once a week	4	2.0
Once every two weeks	4	2.0
Once every three weeks	4	2.0
No specific time	1	0.5
Refused to respond	6	3.0

4.4 The use of traditional medicine during pregnancy.

Out of the 202 respondents in this study, 31 (15%) of the respondents indicated that they use traditional medicine during pregnancy whiles 171 (85%) of the respondents said they do not use traditional medicine during pregnancy.

Table 4.4 **where traditional medicines are obtained and conditions for traditional medicine usage.**

Sources of Traditional Medicine. N =46	**Frequency**	**Percentage**
Obtain it from traditional herbalist	23	74.0
Obtain it from the forest/wild	10	32.0
Obtain it from herb shops	4	13.0
Obtain it form pharmacies	4	13.0
Obtain it form roadside hawkers	3	10.0
From local herb seller in the market	2	6.0
Conditions for traditional medicine usage. N =192		
If it is recommended by a medical doctor	72	42.0
Nothing will make me use traditional medicine	46	27.0
If I do not have any other option	41	24.0
If conventional medicines are not available	16	9.0
If I cannot afford conventional medicines	11	6.0
Recommendation from friends and family	3	2.0
If I believe it is efficient	2	1.0
If conventional medicine fails	1	1.0

With respect to where the respondents obtained the traditional medicines during pregnancy, the majority 23 (74%) of the respondents said from the herbalist, 10 (32%) of the respondents said they prepared their own traditional medicine and the rest of the respondents said from the traditional medicine sellers in the shops, pharmacies, hawkers and from market places. Also, 13% of the respondents said they obtained the traditional medicine from the pharmacy, 10% said from the hawkers and 6% said from the local herbal shops. This indicates that herbalists play significant role in traditional medicine usage among pregnant women since they serve as majority (74%) suppliers of traditional medicine. Again large number (10) of the respondents who use traditional medicine also indicate that they prepare these medicines

themselves. However, only a few of the respondents obtained traditional medicine from the pharmacies and chemical shops.

Even though, 171 (85%) pointed out that they do not use traditional medicine during the current pregnancy, they are more likely to use it despite their reservation under the following conditions. The majority (42%) of the respondents said they are more likely to use it if recommended by a medical doctor, 24% said they are more likely to use traditional medicine during pregnancy if they do not have any other option, 9% of the respondents said they will use it if conventional medicines are not available and 6% of the respondents said they will use traditional medicine if they cannot afford conventional medicines. However, as much as 27% of the respondents state categorically that nothing will make them use traditional medicine during pregnancy. This shows clearly that a large number of the respondents were educated by the health officials in the district on the dangers of traditional medicine usage during pregnancy.

However, users of traditional medicine during current pregnancy were confident of the efficacy of traditional medicines in addressing pregnancy and non-pregnancy related ailments. With regards to the effectiveness of traditional medicines, the overwhelming majority (97%) of the respondents who use traditional medicine during current pregnancy said they have not experienced any side effects as a result of using

traditional medicine even though 3% of the respondents mentioned diarrhea as a side effect they have experienced with the use of traditional medicine during pregnancy.

4.5 Reasons for nonuse, use and frequency of traditional medicine during pregnancy

The majority of the respondents (52.0%) said they do not use traditional medicine during pregnancy because the side effects could be dangerous to their health and the unborn baby. Equally 52.0% of the respondents also stated that it is not safe for pregnant women to use traditional medicine during pregnancy because they cannot guarantee the safety of the unborn baby, and also 31% of the respondents indicated that their family and friends advised them not to use traditional medicine during pregnancy. Further, 11% of the respondents said traditional medicines are not properly processed, and the rest of the respondents said they do not believe in the effectiveness of traditional medicines and the rituals associated with it do not make them to use it during pregnancy. It is clear that some of the respondents are aware of the dire consequences of traditional medicine usage during pregnancy and this has prevented them from using traditional medicine.

Table 4. 5. **Reasons for nonuse, use and frequency of traditional medicine during pregnancy**.

Reasons for nonuse of Traditional Medicine (N=171)	Frequency	Percentages
The side effects could be dangerous	90	52.0
It is not safe for pregnant women	89	52.0
Friends/family have advised me not to use it	53	31.0
It is not properly processed	19	11.0
I do not believe in the effectiveness of traditional medicines	12	7.0
It is because of the spiritual rituals associated with it	9	5.0
Reasons for traditional Medicine use (Base=31)		
Because conventional medicine cannot cure my ailment	16	52.0
It is part of our culture to use it	14	45.0
they are safe to use during pregnancy	11	35.0
I use it together with conventional medicines	11	35.0
They are more effective than conventional medicine	8	26.0
I use when conventional medicine fail	6	19.0
It is always available when I need them	6	19.0
It is cheaper than conventional medicine	5	16.0
Frequency of traditional medicine use (Base=31		
As and when I need it	16	52.0
Three times a day	6	19.0
Once a day	4	13.0
Once a week	2	6.0
Frequently within the month	2	6.0
Once in a month	1	3.0
Types of traditional medicine use (Base=31)		
Crude herbs (Nim tree, mahogany)	17	55.0
Agbeve Tonic	6	19.0
Molasses	4	13.0
Tinshi	3	10.0
Kpakpo Bitters	1	3.0

4.6 Reasons for Traditional medicine usage during pregnancy.

It is only 31 (15%) of the respondents use traditional medicine during current pregnancy. With this 52% said they use traditional medicine if conventional medicines cannot cure the ailment. This indicates that traditional medicine is not the

first source of healthcare delivery for many pregnant women rather conventional medicines are the first choice and until they failed these pregnant women do not use traditional medicines. Also a significant number of respondents (45%) said they use traditional medicine because it is part of their culture to use traditional medicines during pregnancy, 35% of the respondents said they are safe to use during pregnancy and also 35% of the respondents said they use traditional medicines together with conventional medicines. Further, 16% of the respondents said they use traditional medicines because they are cheaper than conventional medicines. This clearly shows that cost is another big issue when it comes to health care seeking among pregnant women. Also, 19% of the respondents said they use traditional medicine because it is always available when they need it. This clearly shows that, unavailability of modern Hospitals and clinics also necessitate the use of traditional medicines among pregnant women and their existence has influenced the result significantly.

4.7 Types and frequency of traditional medicines used during pregnancy and reasons for usage.

Pre-processed and packaged herbs from pharmacies and herbalists (65%) were the main types of traditional medicines used by the respondents. About 19% of the respondents mentioned Agbeve Tonic as the traditional medicine use during pregnancy follow by 13% who mentioned Molasses and the rest mentioned Tinshi and Kpokpa Bitters as a specific example of traditional medicines use during pregnancy. Over half (55%) of the respondents also use crude herbs which they process themselves, specifically roots of Mahogany and the leaves of Nim trees while 29% of the respondents use already packaged dietary supplements.

Ailments respondents said they treated with traditional medicines includes waist pain, anemia, malaria, piles and abdominal pains. Others also believe taking the traditional medicine will make the unborn baby strong.

4.8 Period and frequency of traditional medicine use during pregnancy.

The majority (52%) of the respondents said they do not have any specific periods or defined times that they take traditional medicine but rather "as and when they need it". Also, 19% of the respondents said that they take it on average three times in a given day and 13% of the respondents said they use traditional medicine once in a given day. This indicates that these traditional medicines are abused by the majority (52%) of pregnant women since there is no specific time within which these medicines are taken and therefore use it whenever they feel to do so.

4.9 The use of traditional medicine during pregnancy.

Out of the 202 respondents in this study, 31 (15%) of the respondents indicated that they use traditional medicine during pregnancy whiles 171 (85%) of the respondents said they do not use traditional medicine during pregnancy. This indicates clearly that the majority of the respondents have access to modern health care services where they visit for antenatal care.

Table 4.6 an association of sociodemographic characteristics with herbal medicine use during pregnancy

		Use of herbal medicine	Chi-square analysis	
		%	X^2	P-value
Age Group				
	Young Females (=<25 yrs)	17.0	0.477	0.490
	Older Females (>25 yrs)	13.5		
Income Level	Less than GH₵ 500	13.0	14.222	0.003
	GH₵ 1000 and above	66.7		
Religion	Christianity	12.2	12.326	0.470
	Traditional	39.1		
Marital Status	Married	14.6	0.825	0.02
	Cohabiting	19.4		
Employment Status	Employed	15.5	0.247	0.619
	Unemployed	11.1		
Education	Higher education	9.5	1.306	0.253
	Lower education	16.7		

Across the demographic characteristics, we observed that there was no statistical significant association (p=0. 490 and 0.470) between a particular age group, religion, employment and education and the traditional medicine usage. This indicates that age, religion, employment and education do not influence traditional medicine usage among pregnant women in Agotime-Ziope district. However, there was a statistical significant association (p< 0.003 and p< 0.02) between income, and marital status and the traditional medicine usage among pregnant women in the Agotime-Ziope district. This indicates that income level and marital status of the pregnant women in Agotime-Ziope district influence traditional medicine usage significantly. From the

table above it is clear that those pregnant women with higher income status (GhȻ1000. 00 and above) turned to use traditional medicine more than their counterparts in lower income status. With regards to marital status, pregnant women cohabiting tend to use traditional medicine more than pregnant women who are married and widows.

CHAPTER FIVE

5.0 DISCUSSION

The study sought to assess the use of traditional medicine among pregnant women in Agotime-Ziope District is using the health belief model, and guided by the constructs of perceived threats (susceptibility, severity and benefits) and the objectives of the study.

5.1 Demographic characteristics and Traditional Medicine usage.

Across the demographic characteristics, we observed that there was no statistical significant association (p=0. 490 and 0.470) between a particular age, religion, employment, and education and the use of traditional medicine during pregnancy. This indicates that age, religion, employment and education do not influence traditional medicine usage among pregnant women in Agotime-Ziope district. This finding is consistent with the findings of Nordeng and Havnen, (2005) in Norway, where no statistical significant association was found between the women's age and the use of traditional medicine during pregnancy. However, this finding contradicts with the findings of Fakeye, Rasaq and Musa, (2009) in Nigeria, where the age of respondents had a statistical significant association with the use of herbal medicines during pregnancy.

There was a statistical significant association ($p< 0.003$ and $p< 0.02$) between income and marital status and traditional medicine usage among pregnant women. This indicates that income level and marital status of the pregnant women in Agotime-

Ziope district influence traditional medicine usage significantly. It is also clear that pregnant women with higher income status Gh₵1, 000.00 and above (US$255) tend to use traditional medicine more than the pregnant women with lower income status (Gh₵100. 00 and below) and pregnant women cohabiting tend to use traditional medicine more than married women and widows. This finding is consistent with the findings of Fakeye, Rasaq and Musa, (2009) in Nigeria and Nordeng and Havnen, (2005) in Norway where there was a statistical significant association between income and traditional medicine usage during pregnancy. In spite of this consistency in the findings, income level of these pregnant women varies across the study sites. However, this finding contradicts with the findings of Tamuno, Omole-Ohonsi, and Fadare, (2010) in a tertiary hospital in northern Nigeria, where pregnant women with lower income status tend to use traditional medicine more than pregnant women with higher income status.

With regards to marital status, pregnant women cohabiting tend to use traditional medicine more than pregnant women who were married and widows. This finding is consistent with the findings of Fakeye, Rasaq and Musa, (2009) in Nigeria where there was a significant association between marital status and the use of traditional medicine during pregnancy.

5.2 The Health Belief Model and Traditional Medicine Usage.

Perceived susceptibility relates to the respondents' subjective perception of risk of side effects to the foetus and themselves during pregnancy. Where respondents feel that they are very much at risk of losing their babies, then they are more likely to take

an action to prevent it. Where the perception of risk is low, the likelihood of taking an action to avoid the undesirable threat will also be low. Reasons for use and nonuse of traditional medicine during pregnancy were sought. The respondents said side effects, ineffectiveness and being harmful to the foetus as the reasons for not using traditional medicine during current pregnancy.

In Kenya, the findings of Mothupi, (2014) and in Nigeria, the findings of Gharoro and Igbafe, 2000; Fakeye, Rasaq and Musa, (2009) reported similar findings of higher perception of susceptibility to side effects of traditional medicine usage during pregnancy and this have influenced the findings were only few pregnant women use it. Similar findings from another study in Finland Hemminki, Mantyranta, Malin, Koponen, (1991) showed that respondents who reported of nonuse of traditional medicine during pregnancy argued that they cannot guarantee its safety of their babies and themselves. In this study, (85%) of the respondents do not use traditional medicine during current pregnancy due to perception of adverse effects to their babies and themselves. The rest (15%) of the respondents who use traditional medicine during current pregnancy in this study believe that traditional medicines have no side effect, but protect their babies and cure them of malaria, anaemia, pile, waist pain and also as a food supplement.

This clearly show that pregnant women with higher susceptibility where the 85% who do not use traditional medicine during current pregnancy and the rest 15% of the respondents who use traditional medicine during current pregnancy have a lower susceptibility of traditional medicine. This finding agrees with the findings in South

Africa in Maputle, Mothiba and Maliwichi, (2015) where the majority of respondents said that traditional medicine usage during pregnancy is perceived to be harmful while few of the respondents said it prevent miscarriage, ensure proper growth of the foetus, strengthen them for labour and it have natural base which make them safer as compared to conventional medicines which has chemical base. Also, this finding is consistent with findings in Zimbabwe Mureyi, Monera and Maponga, (2012) and in Nigeria Tamuno, Omole-Ohonsi and Fadare, (2010) where the respondents said they use traditional medicine because it is natural, safe, cure malaria and protect their unborn babies. This shows that they have a lower susceptibility of traditional medicine usage during pregnancy.

The Health Believe Model assumes that the more serious a health problem is viewed (perceived severity), the more likely one will take preventive action against it. For example, in this study if pregnant women believe that using traditional medicine may have a negative impact on their babies and themselves they would likely not use traditional medicine. Again, if they believe that not taking traditional medicine could have a negative impact on them such as losing their babies, then they would be more likely to use traditional medicine during pregnancy. However, in this study majority of the respondents (85%) believe that using traditional medicine would have a negative impact on them and their babies and therefore do not use traditional medicine during pregnancy. The rest (15%) believe that traditional medicine would not have any side effects on their babies and therefore use traditional medicine during current pregnancy.

According to the model, before taking preventive health actions, people weigh the perceived benefits of the health action against the cost of taking the proposed actions. On the perceived benefits, 15% of pregnant women who used traditional medicine said they use traditional medicine to help make their babies strong and also cure them of malaria, anaemia, and the pile. The perceived barriers to traditional medicine usage. Barriers to traditional medicine usage mentioned by those who had ever used traditional medicine as well as those who never used showed that perceived barriers were important. Overall, 52.0% of respondents mentioned side effects as a reason for nonuse of traditional medicine and equally 52.0% also mentioned that they cannot guarantee the safety of their unborn babies. About 31.0% of those who ever used traditional medicine mentioned that their families and friends has advised them against the use of traditional medicine. Whereas it is definite that non users were expressing their perception, one may not be so sure whether the ever users reported actual side effects they experienced or anticipated fear of side effects in continuous use because 42.0% of the respondents pointed out that despite their reservations about traditional medicine, they are more likely to use it if recommended by a medical doctor and 24.0% also said they would use it if there was no other alternative health care in their locality. However, 27.0% of the respondents said nothing will make them use traditional medicine during pregnancy because of the perceived threat. This finding is consistent with several other study results in Nigeria Gharoro and Igbafe, (2000); Fakeye, Rasaq and Musa, (2009) and United States of America Gibson, Powrie and Star, (2001); Tsui, Dennehy and Tsourounis, (2001); Hepner, Harnett, Segal, Camann, Bader, Tsen, (2002) where the respondents said they cannot guarantee the safety of their unborn babies. In Nigeria, one of the key reasons documented by Gharoro and Igbafe, (2000) and fakeye, Rasaq and Musa, (2009) for

norms of traditional medicine is the fear of side effects. It is interesting to know that about 70% of Ghanaians use traditional medicines, but not a single traditional medicine is on the essential drugs listed of Ghana (Sato, 2012).

5.3 Perception about safety and effectiveness of traditional medicine

Users of traditional medicine are confident of the efficacy of traditional medicines in addressing their ailments. With regards to the effectiveness of traditional medicine, (97%) of users said they have not experienced any side effects, it is safe, natural and more effective than conventional medicine. Although (3%) of the pregnant women mentioned diarrhoea as a side effect they have experienced with the use. This finding is consistent with the findings in Nigeria (Tamuno, Omole-Ohonsi and Fadare, 2010) where they report higher prevalence of herbal medicine use in that environment among pregnant women can be adduced to its longstanding integration into the culture of the people, effectiveness and perception of traditional medicine as their indigenous medicine. Also, this is similar to the findings of (Fakeye, Rasaq and Musa, 2009) where about 30% of the respondents using herbal medicine at the time of the study believed that the use of herbal medicines during pregnancy is safer than conventional medicines. Respondents' reasons for taking traditional medicines were herbs have better efficacy than conventional medicines, they are natural, safe to use during pregnancy than conventional medicines

However, 6.0% of non-users in this study indicated they do not believe in the effectiveness and efficacy of traditional medicine usage during pregnancy. Their main concerns for not using traditional medicines during pregnancy are; the side effects

could be dangerous and they cannot guarantee the safety of their unborn babies. This finding is consistent with the result reported by (Mothupi, 2014) in Kenya, where the respondents were of the opinion that adverse/side effects of some herbal medicines could be dangerous.

5.4 Prevalence of traditional medicine usage among pregnant women.

The study confirms the impression that Ghanaian women use traditional medicine when pregnant. The prevalence of traditional medicine usage in pregnancy reported by respondents in the study in the Agotime-Ziope District in Volta Region is 15%. Low traditional medicine usage was reported among respondents. This finding is consistent with several other study results in developed countries such as Australia and United State of America and in Sub Sahara Africa is consistent with findings in Nigeria and Kenya. For instance, in the developed countries such as Australia, (Pinn and Pallet, 2002) reported that 12% of the respondents said they use traditional medicine during pregnancy and United State of America (Gibson, Powrie, Star, 2001; Tsui, Dennehy and Tsourounis, 2001; Hepner, Harnett, Sega, Camann, Bader, Tsen, 2002) all reported that 13% of the respondents use traditional medicine during pregnancy.

In sub-Sahara Africa (Gharoro and Igbafe, 2000) reported that 12% of the respondents use traditional medicine during pregnancy in Nigeria and (Mothupi, 2014) also reported that 12% of the respondents use traditional medicine during pregnancy in Kenya. However, as much as 85% of the respondents said they do not use traditional medicine during the current pregnancy in Agotime-Ziope district. This

finding is inconsistent with the study reports in Cote D'Ivoire, Nigeria, South Africa and Zimbabwe, where higher traditional medicine usage was reported. For instead, in Cote d' Ivoire (Malan and Neuba, 2011) reported that 35% of the respondents in the study use traditional medicine during pregnancy. Also in Nigeria, a study by (Fakeye, Rasaq and Musa, 2009) reported that 30% of the respondents use traditional medicine during pregnancy and in South Africa (Maputle, Mothiba and Maliwichi, 2015) reported in a study that as high as 33% of the respondents use traditional medicine and in Zimbabwe (Mureyi, Monroe and Maponga, 2012) reported that as much as 55% of the respondents use traditional medicine during pregnancy which were higher than the current findings. Again, this contradicts the findings of (WHO, 2014) where it reported that traditional medicine usage is higher among pregnant women and the poor in the developing countries.

We can attribute this to accessible and affordable modern health care services available to pregnant women in the hospitals, clinics and CHPS compounds as a result of Ghana's policy on free maternal health, the National Health Insurance Scheme and the CHPS concept despite the marginal (3%) who have raised concerns about payments they made at the hospitals and clinics they have visited. However, this may not be the case in some countries in Sub Saharan Africa leading to the increase use of traditional medicine during pregnancy. This finding is consistent with findings in Kenya (Mothupi, 2014) where the respondents in the study had high rates of antenatal care attendance, which indicates relatively high use of public healthcare facilities during pregnancy. The high use of public healthcare facilities presents an opportunity to discuss the use of traditional medicine with pregnant women while attending antenatal care in the Agotime-Ziope district.

5.5 Factors Influences the use and nonuse Traditional Medicine.

Respondents in this study had high rates of antenatal care attendance, which indicates relatively high use of modern health care services during pregnancy, and it confirms other statistics, where an increase in access to modern health care services reduces the prevalence of traditional medicine usage. The National Health Insurance Scheme has given the opportunity to pregnant women to seek healthcare from Hospitals and Clinics than traditional centers in Ghana. A study conducted in South Africa (Van der Kooi and Theobald, 2006) indicates that women were turning to medical professionals, particularly nurses, as sources of knowledge about pregnancy, birth and infant care rather than to traditional sources of such information because the modern western health care is available and affordable. The pregnant women who reported of non-use of traditional medicine argued that they cannot guarantee its safety of their babies and themselves. This was the case in Nigeria, where only few pregnant women responded in the affirmative to the use of traditional medicine (Gharoro and Igbafe, 2000). As the findings indicated, traditional medicine use during pregnancy should be considered not only in terms of pregnancy-related conditions, but also other common illnesses such as piles, anemia and malaria.

Family and friends represent the social and cultural environment in which the pregnant woman lives and significantly influence health seeking behaviour during pregnancy. This study found that family and friends were very important motivation for traditional medicine usage as was the findings in Kazeroon, south of Iran **(**Tabatabaee, 2011) where 87% of the respondents reported to have been recommended herbal drug use by family and friends during pregnancy. The users also trusted the benefits of use by themselves. Study results of (Bloom and Standing,

2008) support this finding as they argued that in developing countries personal and social links influence health care provider choice. Women with no formal education and primary education comparatively used traditional medicine more than women with secondary or higher education. This finding is consistent with the findings of (Forster, Denning, Wills, Bolger and McCarthy, 2006) who reported that pregnant women who use herbal medicine during pregnancy have no formal education or are less educated. The highest educational attainment in this study may explain the lower prevalence of traditional medicine used during pregnancy because they are likely to know the side effects of traditional medicine usage during pregnancy. Findings of another study in Nigeria indicated that educational status is an important determinant factor in the use of traditional medicine and other alternative systems of health care delivery (Tamuno, Omole-Ohonsi and Fadare, 2010).

5.6 Types of traditional medicine used during pregnancy.

Respondents mentioned Agbeve Tonic, Molasses, Tianshi and Kpokpa Bitters as a specific example of traditional medicine use during pregnancy. The respondents also mentioned crude herbs which they process themselves, specifically roots of Mahogany and Nim tree while others also said they use already packaged dietary supplements. The preparation of herbs by the pregnant women and their families indicate that the use of traditional medicine is part of their culture. However, this type of traditional medicines uses during pregnancy in this study contradict with the types of traditional medicines use in Nigeria (Tamuno, Omole-Ohonsi and Fadare, 2010) where the respondents said they use ginger, Forever Living, Golden Neo-Life Drugs, nutritional supplements and in South Africa (Van der Kooi and Theobald, 2006) reported *kgaba* as the traditional medicinal use during pregnancy. This finding

indicates that pregnant women use medical therapies than non-medical therapies. About 60% of respondents reported the use of medical therapies during pregnancy, which is the use of herbal medicines (the use of leaves, roots, fruits, vegetables, stems, flowers, meat, bone, wood, sand and stone for medicine) and 40% mentioned the non-medical therapies such as faith healers and ritual healers. This finding agrees with several other studies in Nigeria (Fakeye, Rasaq and Musa, 2009) and Norway (Nordeng and Havnen, 2005) where the respondents reported the use of medical therapies than non-medical therapies. However, the herbal medicines differ from place to place as the herbal medicines use in Norway were not the same use in Nigeria, which indicated that the environment also influence the type of traditional medicine used by pregnant women.

Ailments respondents treated with traditional medicine includes waist pain, anemia, malaria, piles and abdominal pains. Others also believe taking the traditional medicine will make the unborn baby strong. This finding was consistent with the findings in Nigeria (Fakeye, Rasaq and Musa, 2009) where the respondents reported treatment of malaria and to make their babies strong as ailment treated with traditional medicines. This contradicts with the ailments treated in Norway (Nordeng and Havnen, 2005) were the most commonly reported indications for using traditional medicine during pregnancy by respondents were cold and respiratory tract illness, nutritional supplement, skin problems, pregnancy-related problems, urinary tract infections, and central nervous system disorders. In South Africa, Van der Kooi and Theobald (2006) also reported that pregnant women use traditional medicine for abortion, breast cancer, contraception, irregular or painful menstruation and

conception, orally on a regular basis as a tonic clean the womb to attain an easy and quick delivery and in order to protect the child from evil and to have a healthy child.

Pregnancy-related problems reported were ‘nausea’ and ‘to increase uterus tonus. The majority of users (52%) said they do not have specific periods or defined times they take traditional medicine during pregnancy, but rather “as and when they need it”. Also, 19% of the users also said they take traditional medicine averagely three times in a given day. This indicates that these traditional medicines are abused by pregnant women and contradict the findings in South Africa (Van der Kooi and Theobald, 2006) where the respondents informed the health professionals on how to use these traditional medicines to avoid abuse of traditional medicine.

5.7 Limitation of the study.

The study sets out to interview 210 respondents, but ended up interviewing 202 respondents and therefore limited the number of respondents in the study. Some women seemed to fear admitting the use of traditional medicine in pregnancy. This is due to the fact that traditional medicines are very often perceived negatively by the health workers. To reduce this problem, emphasize that the study was not aiming at judging anybody but rather finding the magnitude at which traditional medicines are used during pregnancy and associated factors was made. They were told that the main objective was to improve maternal health and to protect the unborn baby. After this explanation they freely answered the questions and shared their experience without any worry.

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATION

6.1 Key findings

1. Fifteen percent of the respondents use traditional medicine in current pregnancy, which indicate that a majority (85%) of the pregnant women do not use traditional medicine during pregnancy. This is as a result of government policy on free maternal health, National Health Insurance Scheme and CHPS concepts which make antenatal care services at the hospitals and clinics accessible and affordable and also the fear of side effects and inability to guarantee the safety of the unborn baby prevent the majority of the respondents from using traditional medicine during pregnancy.

2. About 85.0% of the respondents said they do not use traditional medicine during pregnancy because of possible side effects and they cannot guarantee its safety to the foetus. However, regarding respondents' perception of the effectiveness of traditional medicine use during pregnancy, the majority of respondents (97%) said they perceived traditional medicine to be effective and have no side effects.

3. Forty-two percent of the non-users of traditional medicine in the current pregnancy said despite their reservation about traditional medicine, they are more likely to use it if it is recommended by a medical doctor.

4. The family and friends were influential in the use and nonuse of traditional medicine during pregnancy.

5. The respondents said they use Agbeve Tonic, Molasses, Kpokpa Bitters as specific traditional medicines use and crude herbs of the field such as roots of mahogany and nim tree.

6.2 Conclusion

The study set out to assess the use of traditional medicine among pregnant women in Agotime-Ziope district. The objectives were to assess the community perceptions of effectiveness of traditional medicines, to determine the prevalence of traditional medicine usage among pregnant women and to document the various types of traditional medicines used by pregnant women. The study was guided by the Health Belief Model (HBM) which assumes that persons weigh the perceived benefits of a health action against the cost of taking the proposed actions.

Regarding respondents perception on the effectiveness of traditional medicine usage, the findings showed that the majority of respondents (97%) of users said they have not experienced any side effects although (3%) of the pregnant women mentioned diarrhea as a side effect they have experienced with the use. This study found that family and friends (81%) were very important motivation for traditional medicine use and (74%) users also tended to trust the benefits of use by themselves. About 85% of the respondents currently do not use traditional medicine and 15% use traditional medicine currently. Generally ever used for traditional medicines among the study participants was almost half of the respondents (49%). The main barriers to nonuse include side effects and adverse impact on the unborn babies.

The major conclusions that can be drawn from the findings of the study is that the Health Belief Model is beneficial in helping to assess motivation among pregnant women for either use or nonuse of traditional medicines. Clinicians and caregivers should have knowledge of the traditional medicines commonly used by pregnant women and the potentials for toxicity. Attention should be given to enlightenment of

pregnant women and the community on the side effects of traditional medicines use during pregnancy.

6.3 Recommendations.

1. Tailored message should be developed to help pregnant women have high perceptions of risk to reduce the desire for traditional medicine use. The families and friends are major sources of motivations in the use of traditional medicine. It is therefore important to promote disinterest in the use of traditional medicine through the media and women's groups. The District Health Directorate should consider these issues when designing interventions for mothers and pregnant women.

6.4 Areas for further research

A recommendation is made for further research on a pharmacological study focusing on local commonly used herbal medicines. This should be carried out to identify the exact pharmacological compounds of the herbs and to evaluate the effects of these compounds to the foetus and the pregnant women.

REFERENCES

Bloom, G., & Standing, H. (2001). Pluralism and marketization in the health sector*: Meeting needs in contexts of social change in low and middle-income countries.*

Bodeker, G., Ong, C. K., Grundy, C., Burford, G., & Shein, K. (2005). Its Global Atlas of Traditional, Complementary and Alternative Medicine. *Kobe: Centre for Health Development*

Burns, A. C. (1992). The Expanded Health Belief Model as a basis for enlightened preventive health care practice and research. *Journal of Health Care Marketing, 12*(3), 32-45.

Byrne M, Semple S, Coulthard K (2002). Complementary medicine use during pregnancy. *Australian Pharmacist*, 21:954-959.

DeJong, J. (1991). Traditional Medicine in sub Saharan Africa*:* its importance and potential policy options. *Washington DC: World Bank*

Della A. Forster, Angela Denning, Gemma Wills, Melissa Bolger and Elizabeth McCarthy (2006). Herbal medicine use during pregnancy in a group of Australian Women. *BMCPregChildbirth.* http://www.biomedcentral.com/1471-2393/6/21

Djah F Malan and Danho FR Neuba (2011). Traditional Practices and Medicinal Plants Use during Pregnancy by Anyi-Ndenye Women (Eastern Côte d'Ivoire) (pp. 85-93). *African Journal Reproductive Health Volume 15 No 1.*

Eggleston, K. (2011). Prescribing institutions: Explaining the evolution of physician dispensing. *Journal of Institutional Economics.*

Fakeye TO, Onyemadu O (2008). Evaluation of knowledge base of hospital pharmacists and physicians on herbal medicines in Southwestern Nigeria. *Pharm Pract*, 6(2):88-92.

Farnes C., Beckstrand R.L. & Calliste R L.C. (2011). Health-seeking behaviours in childbearing women in Ghana, West Africa. *International Nursing Review* 58, 491–497

Gharoro EP, Igbafe AA (2000). Pattern of drug use amongst antenatal patients in Benin City, Nigeria. *Med Sci Monit*, 6:84-87.

Gibson P, Powrie R, Star J. (2001). Herbal and alternative medicine use during pregnancy. A cross sectional survey. *Obstetrics and Gynecology*, 97:s44-s45.

Gyasi, R.M.., Mensah, C.M., Osei-Wusu, P.A. and Agyemang, S (2011). Public Perceptions of the Role of Traditional Medicine in the Health Care Delivery System in Ghana. *Global Journal of Health Science Vol. 3, No. 2;*

Hedvig Nordeng and Gro C. Havnen. (2005). Impact of socio-demographic factors, knowledge and attitude on the use of herbal drugs in pregnancy. *Acta Obstet Gynecol Scand* 2005; 84: 26–33.

Hemminki E, Mantyranta T, Malin M, Koponen P. (1991). A survey on the use of alternative drugs during pregnancy. *Scand J Soc Med* 1991, *19:199-204*.

Henry A, Crowther C (2000). Patterns of medication use during and prior to pregnancy: the MAP study. *Aust N Z J. Obstet Gynaecol, 40(2):165-172.*

Hepner DL, Harnett M, Segal S, Camann W, Bader A, Tsen L. (2002). Herbal use in parturient. *Anesth Analg, 94:690-693*.

Hollyer T, Boon H, Georgousis A, Smith M, Einarson A (2002). The use of CAM by women suffering from nausea and vomiting during pregnancy. *BMC Complementary and Alternative Medicine.*

Maats F, Crowther C (2002). Patterns of vitamin, mineral and herbal supplement use prior to and during pregnancy. *Aust N Z J Obstet Gynaecol, 42:494-496.*

Mamothena Carol Mothupi. (2014). Use of herbal medicine during pregnancy among women with access to public healthcare in Nairobi, Kenya: a cross-sectional survey. *BMC Complementary and Alternative Medicine 14:432. http://www.biomedcentral.com/1472-6882/14/432*

Mureyi DD, Monera TG, Maponga CC. (2012). Prevalence and patterns of prenatal use of traditional medicine among women at selected Harare clinics. A cross-sectional study. *BMC Complement Altern Med. 2012 Sep 27; 12:164. doi: 10.1186/1472-6882-12-164.*

Nah Dove :(2010). A Return to Traditional Health Care Practices: A Ghanaian Study. *Journal of Black Studies Vol. 40, No. 5, pp. 823-834.*

Nordeng H, Havnen G. (2004). Use of herbal drugs in pregnancy. A survey among 400 Norwegian women. *Pharmacoepidemiology and drug safety*, 13:371-380.

Pinn G, Pallett L (2002). Herbal medicine in pregnancy. Complementary therapies in nursing and midwifery. *Political and Social Science, 583:173-176.*

Rolanda van der Kooi and Sally Theobald (2006). Traditional Medicine in Late Pregnancy and Labour: Perceptions of Kgaba Remedies amongst the Tswana in South Africa. *African Journal. Traditional, Complementary and Alternative Medicines Vol. 3, Num. 1, pp.11-22*

Rosenstock, I. M., Strecher, V. J., & Becker, M. H. (1988). Social Learning Theory and the Health Belief Model. *Health Education Behavior, 15*(2), 175-183.

Sato, A. (2012). Revealing the popularity of traditional medicine in light of multiple recourses and outcome measurements from a user's perspective: a study from

two regions in Ghana. *Health Policy and Planning*. *doi:10.1093/heapol/czs010.*

Shahjahan, R. (2005). Spirituality in the academy: reclaiming from the margins. *Social Science and Medicine, 13B* (4), 349-356.

Sonto M. Maputle, Tebogo M. Mothiba and Lucy Maliwichi. (2015). Traditional medicine and pregnancy management: Perceptions of traditional health practitioners in Capricorn district, Limpopo province, South Africa. *Ethno Med, 9(1): 67-75.* sonto.maputle@univen.ac.za.

Stekelenburg, J., Jager, B. E., Kolk, P. R., Westen, E. H. M. N., van der Kwaak, A., & Wolffers, I. N. (2005). Health care seeking behaviour and utilization of traditional healers in Kalabo, Zambia. *Health Policy, 71*(1), 67-81.

Tabatabaee M. (2011). Use of Herbal Medicine among Pregnant Women Referring to Valiasr Hospital in Kazeroon, Fars, South of Iran. *Journal of Medicinal Plants Volume 10, No. 37.*

Tamuno A Omole-Ohonsi, J Fadare (2010). Use of Herbal Medicine among Pregnant Women Attending a Tertiary Hospital in Northern Nigeria. *The Internet Journal of Gynecology and Obstetrics. Volume 15 Number 2.a*

Tsui B, Dennehy C, Tsourounis C (2001). A survey of dietary supplement use during pregnancy at an academic medical center. *American Journal of Obstetrics and Gynecology*, 185:433-437.

Twumasi, P. A. (1979). A social history of the Ghanaian pluralistic medical system. *Soc Sci Med Med Anthropol. 1979 Dec; 13B (4):349-56.*

UNESCO. (1994). Traditional knowledge into the twenty-first century. *Nature and Resources, Volume 30, No. 2, UNESCO, Paris.*

University of Maryland Medical Centre. (2009).What is Herbal Medicine. http://umm.edu/health/medical/altmed.

Wane, N. (2006). Is decolonization possible? In G.J. S. Dei & a Kempt (Ed.), *In Anti- colonialism and Education: the politics of resistance, edited by* G.J.S Dei & A. Kempf (eds).

Westfall RE (2004). Use of anti-emetic herbs in pregnancy: women's choices, and the question of safety and efficacy. *Complementary therapies in nursing and midwifery*, 10:30-36.

World Health Organization (2000). Promoting the Role of Traditional Medicine in Health Systems: a Strategy for the African Region 2001–2010. Harare, WHO AFR/RC50/Doc.9/R).

World Health Organization (2005). National Policy on Traditional Medicine and Regulation of Herbal Medicines. *Report of a WHO Global Survey, Geneva.*

World Health Organization. (1978). Declaration of Alma Ata. http://www.who.int/hpr/NPH/docs/declaration_almaata.pdf

World Health Organization. (2002). WHO traditional medicines strategy 2002-2005. *Geneva: WHO*.

World Health Organization. (2014). WHO traditional medicines strategy 2014-2023. *Geneva: WHO.*

World Health Organization. (2005). National Policy on Traditional Medicine and Regulation of Herbal Medicines. *Report of a WHO Global Survey*. *Geneva: WHO.*

World Health Organization. (2008). Traditional medicine. *Factsheet No 134* http://www.who.int/mediacentre/factsheets/fs134/en/

World Health Organization. (2010). Medicines: rational use of medicines. *Factsheet No 338* http://www.who.int/mediacentre/factsheets/fs338/en/index.html.

World Health Organization. (2011). the World Medicines Situation 2011. *Geneva: WHO.*

World Intellectual Property Rights Organization. (1998). Asian Regional Seminar on Intellectual Property Issues in the Field of Traditional Medicines, *New Delhi.*

APPENDICES

Appendix 1: Informed Consent form for Respondents.

General Information.

This study seeks to assess the use of traditional medicine among pregnant women in the Agotime-Ziope district. The study is a quantitative one. The study participants will include all pregnant women aged 16 years and above in the district to help find out why they use it and why they don't use and how they perceived the use of traditional medicine and pregnancy.

Duration of the study. The study is expected to commence in February, 2015 with data collection, processing and coding, data analysis, report writing and dissemination of findings to the community in July, 2015.

Possible Risk and Discomfort. Some questions related to the perceptions and the factors influences traditional medicine may possibly seem sensitive and uncomfortable to some respondents.

Description of measures to minimized risk. The risk involved would be explained to everybody before consenting to participate. Any person who feels uncomfortable to any question may decline to answer that question and discontinue the entire process. However, participants would be encouraged to speak their minds on the paper.

Possible benefits of the study. Although there is no direct benefit to the respondents and the community, the findings of the study would help health providers to improve upon their service delivery to the pregnant women and the community.

Data Security: All data collected would be under the supervision of the main investigator under lock and key. Data would be accessible to only the research team. Data would be entered in SPSS software by the research team.

Participation is voluntary. Participation in this study is entirely voluntary and declining to answer any question or discontinue answering the questions in the questionnaires has **no** negative consequences on the respondents.

TITLE OF THE STUDY:

THE USE OF TRADITIONAL MEDICINE AMONG PREGNANT WOMEN IN AGOTIME –ZIOPE DISTRICT.

ADDRESS OF THE PRINCIPAL INVESTIGATOR:

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For further clarification, contact the Administrator, Ghana Health Service Ethical Review Committee Hanna Frinpomg on 0243235225.

I…… have read the foregoing information, or has been thoroughly briefed on the entire methodology, the process and the significance of an ongoing study being conducted by Stanley Kofi Alor a student of the School of Public Health, College of Health Sciences, University of Ghana, Legon. I consent voluntarily to participate in this study and I have the right to discontinue the study at

any time I feel to do so without any negative effects. I am doing this on condition that, under no circumstance should reference be made to my actual identity, my name or the responds I give.

Respondent's Signature/thumb print ---------- Date----------

Researcher's Signature ----------Date----------

Appendix 2: Questionnaire

I am a student of School of Public Health, University of Ghana, Legon, conducting a study on the Traditional Medicine usage among pregnant women in Agotime-Ziope District. All information provided will be treated with maximum confidentiality and will be used for academic purposes only

	DEMOGRAPHIC CHARACTERISTICS	
Q1. What is your marital status	Married	1
	Cohabiting	2
	Divorced	3
	Other (specify)	4
Q2. Age of Respondent :	16-20yrs.....1 21-25yrs……..2 26-30yrs……3 31-36yrs……4 37yrs and above……..5	
Q3. Number of months pregnant (Gestation):		
Q4. Occupation of respondent :	Teaching…..1 Nursing….2 Trading….3 Farming….4 Weaving….5 Other (specify)……6	
Q5. Income Level	Less than Gh¢ 100	1
	Between Gh¢100- Gh¢300	2
	Between Gh¢301- Gh¢500	3
	Between Gh¢501- Gh¢700	4
	Between Gh¢701- Gh¢1000	5
	Above Gh¢1000	6
Q6. Highest Education : **[Interviewer select only one option]**	No formal education	1
	Primary Education	2
	Junior High	3
	Senior High	4
	Diploma/ Certificate	5
	Graduate Degree	6
	Post Graduate Degree	7

Q7. Religion	Christianity	1
	Islam	2
	Traditional	3
	Other (specify)	4

AWARENESS AND USAGE OF HEALTH CARE CENTERS

Q8. Which type of health care do you generally have access to? [Aided multiple responses]

Q9. Which of these health care centers have you sought health care from since your pregnancy?

	Q8	Q9
Modern hospitals	1	1
Traditional medical practitioners	2	2
Birth attendants	3	3
Faith/spiritual healers	4	4
Other (specify)	5	5

Q10. What factors do you consider most when seeking health care? [Multiple responses]

Proximity to the health center	1
Affordability of service	2
Responsiveness of the center	3
Efficacy of the medication provided	4
Confidence in the services provided	5
Other (specify)	6

Q11. Which of the health care centers do you perceive best fits the attribute you have mentioned?

[Aided single response]

Modern Hospitals	1
Traditional Medical Practitioners	2
Traditional Birth Attendants	3
Faith/Spiritual healers	4
Others (specify)	5

USAGE OF MODERN HEALTH CARE CENTERS

Q12. Have you registered with the National Health Insurance Scheme?	
Yes	1……Go to Q13
No	2 Continue to Q14
14. do you have a valid NHIS card Yes, seen valid Yes, seen invalid	 1 2

Q15. Why have you not registered with the National Health Insurance Authority? ***[Interviewer probe for reasons why respondent has not registered]***

Q16. Have you visited any modern hospital for your antenatal care? ***[Single Response]***	
Yes	1 SKIP TO Q18
No	2 CONTINUE TO Q17
[Interviewer note: Modern hospital does not include herbal or spiritual healers]	

Q17. Why have you not visited a modern health care center for your ante natal care?
Interviewer Skip to Q28 if respondent has never visited a modern health care center before

Q18. When did you start visiting the hospital after conception for antenatal care? ***[Single Response]***	
Less than a month after conception	1
Within 1-3 months after conception	2
Between 3-5 months after conception	3
Between 5-7 months after conception	4
After 7 months	5

Q19. How frequently do you visit the hospital for your check-up? ***[Single Response]***	
Once a week	1
Once every two weeks	2

Once every three weeks	3
Once a month	4
Once in two months	5
No specific time, as and when I need to	6
Other (specify)	7

Q20. Has your medical doctor ever referred you to herbal medicine unit during your pregnancy? ***[Single Response]***	
Yes	1 CONTINUE TO Q21
No	2 SKIP TO Q22

Q21. If Yes, please specify the ailment you reported to the herbal unit and the herbal medicine prescribed to you

Ailment	**Herbal medicine prescribed**
1	
2	
3	
4	
5	

Q22. Do you make payments when you go for antenatal services at the Hospital/Clinic? ***[Single Response]***	
Yes	1 GO TO Q23
No	2 SKIP TO Q24

Q23. Please specify payments you make at the modern hospital;

Q24. Have you had any side effects with the conventional medicines prescribed by your medical doctor to you during the current pregnancy?	
Yes	1 GO TO Q25
No	2 SKIP TO Q26

Q25. If yes please specify the ailment, the drugs prescribed and the side-effects you experience.

Ailment	**Conventional drug prescribed**	**Side effect experienced**
1		
2		

3		

AWARENESS AND USAGE OF TRADITIONAL MEDICINES & HERBS

Q26. Have you ever used any herbal medicine prior to your pregnancy?	
Yes	1
No	2
Can't recall	3

Q27. Do you currently use herbal medicine?	
Yes	1 SKIP TO Q30
No	2 CONTINUE TO Q28

Q28. Why do you not use herbal medicines during your pregnancy? [Multiple responses]	
The side effects could be dangerous	1
It is not safe for pregnant women	2
I do not believe in the effectiveness of herbal medicines	3
It is not properly processed	4
Friends/family have advised me not to use it	5
It is because of the spiritual rituals associated with it	6
Other (Specify)	7
Other (Specify)	8

Q29. Under what conditions would you use herbal medicine?	
If it is recommended by a medical doctor	1
If I don't have any other option	2
If conventional medicines are not available	3
If I cannot afford conventional medicines	4
Other (Specify)	5
Other (Specify)	6
Interviewer Thank respondent and end survey	

Q30. What influenced your decision to use the herbal medicine? **[Interviewer read out options to respondent, you can select more than one response]**	
Recommendation from friend/family	1
Recommendation from herbalists	2
Advertisement on TV	3
Advertisement on Radio	4
Advertisement on Billboards	5
Recommendation by medical doctor	6
Decision by self to use the herbs	7
Other (specify)	8

Q31. At what frequency do you use herbal medication? **[Single Response]**	
Once a week	1
Once in two weeks	2
Once in three weeks	3
Once in a month	4
Frequently within the month	5
As and when I need to	6
Other (specify)	7

Q32. How would you describe the type of herbal medicine you use? [Aided responses]	
Crude herbs which I process myself	1
Pre-processed/packaged herbs from pharmacy/herbalist	2
Packaged dietary/nutritional supplements	3
Animal parts	4
Charms and Amulets from herbalists	5
Other (specify)	6

Q33. From where do you obtain the herbal medicine?	
Local herb sellers in the market	1
Obtain it from the forest/wild	2
Obtain it from traditional herbalists	3
Obtain it from roadside hawkers	4
Obtain it from herb shops	5
Obtain it from pharmacies	6
Other (specify)	7

Q34. For which ailments do you use herbal medicines? Q35. Which herbal medicines do you administer for the stated ailment?	
Q34.Ailment	**Q35.Herbs used**
1	
2	
3	
4	
5	

Q36. What are your reasons for using herbal medicines? [aided multiple responses]	
They are more effective than conventional medicine	1
Because of the type of illness experienced	2
They are safe to use during pregnancy	3
I use it when conventional medicines fail	4
It is part of our culture to use it	5
It is cheaper than conventional medicine	6
It is always available when I need them	7

I use it together with conventional medicines	8
Because of the spiritual features of it	
Other (Specify)	9
Other (Specify)	10

Q37. Have you had any side effects in your use of herbal medicine?	
Yes	1 CONTINUE TO Q38
No	2 END SURVEY

Q38. What side effects have you experienced since you began using the traditional medicine? [unaided multiple responses]	
Vomiting	1
Dizziness	2
Malaise	3
Headache	4
Rashes	5
Diarrhea	6
Other (Specify)	7
Other (Specify)	8
Other (Specify)	9

THANK YOU