

**ENSIGN COLLEGE OF PUBLIC HEALTH, KPONG EASTERN
REGION, GHANA**

**INTEGRATING TRADITIONAL MEDICINE INTO ORTHODOX
PRACTICE: A CASE STUDY OF LEKMA HOSPITAL IN ACCRA, GHANA**

by

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**A Thesis submitted to the Department of Community Health in the Faculty of
Public Health in partial fulfillment of the requirements for the degree**

MASTER OF PUBLIC HEALTH

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DECLARATION

I hereby certify that except for reference to other people work, which I have duly cited, this Project submitted to the Department of Community Health, Ensign College of Public Health, Kpong is the result of my own investigation, and has not been presented for any other degree elsewhere.

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ABSTRACT

Introduction: The Government of Ghana is promoting the integration of traditional and orthodox medical practice. Towards this end, the Ghana Health Service has instituted the policy of having a traditional medicine (TM) unit at each of its hospital-level facilities. Traditional medicine practitioners are also being trained and certified by public universities in the country. The Ledzokuku Krowor Municipal Assembly (LEKMA) hospital in Accra is an example of a facility which has established a TM unit since 2010. This study examined how integration has been implemented in this hospital and the challenges that have been associated with the process.

Methods and Procedures: Two approaches to data collection were used. First was in-depth interviews with patients, orthodox and TM practitioners and other health professionals in the hospital. All interviews were recorded, transcribed and analyzed manually under various themes of interest. Findings are presented under the various themes with relevant and pertinent quotes from the participants. The second approach was structured observations of clinical consultations at the TM unit. This was done to identify the extent of discussions about the complementary nature of the two forms of practices. Confidentiality and anonymity of the participants were ensured through the non-use of patient identifiers.

Results: Practitioners were complimentary of the practice on either side. Orthodox practitioners generally tended to be less enthusiastic. There was however no formal platform for practitioners on both sides to meet and discuss cases or the process of integration. Patronage of TM services was often for chronic ailments such as hypertension

and diabetes, and tended to be by older people. Herbal medicines were the most patronized as acupuncture was considered to be a service for the affluent. Patients often requested TM treatment and medication even after they had been seen by orthodox medical (OM) practitioner. Such care was often offered without recourse to what had been given by the OM practitioner. A major concern of TM patients and practitioners was the fact that traditional medicines were not covered under the National Health Insurance Scheme (NHIS).

Conclusion: There is structural integration of TM and orthodox practice at the LEKMA hospital in terms of proximity. There is however very little functional integration as the two practices worked independent of each other. Patients go between the two forms of care without the exchange of clinical information between the two sides. Care is therefore more supplementary than complementary. The issue of NHS cover for drugs bought as part of TM care needs to be addressed.

DEDICATION

This work is dedicated to God Almighty whose faithfulness has brought me this far.

Also to my parents, children, siblings and my loved one.

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I am indebted to a number of people for the completion of this thesis. First, I will like to thank the Almighty God for all the blessings he showered on me as I undertook the MPH programme and thesis. May His name be praised now and forever.

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ABBREVIATIONS

CAM:	Complementary and Alternative Medicine
FDA:	Food and Drug Authority
LEKMA:	Ledzokuku Krowor Municipal Assembly
GHS	Ghana Health Service
MOH:	Ministry of Health
MPH:	Master of Public Health
NHIS:	National Health Insurance Scheme
OM :	Orthodox Medicine/Medical
TM :	Traditional Medicine/Medical
WHO:	World Health Organization

CHAPTER ONE

INTRODUCTION

1.0 Overview

This section details the following: background to the study, statement of the problem, objectives of the study, research questions, justification, scope of the study and the structure of the thesis.

1.1 Background to the Study

The World Health Organization (WHO) through its World Medicines Situation report (WHO, 2011) estimates that between 70 and 95% of the population in developing countries consume traditional medicine (TM). It is estimated that the TM has a world market share worth about \$83 billion (WHO, 2011). From an international perspective, the percentage of the population that used TM at least once in Canada, France, USA and Belgium stands at 70% , 75%, 42% and 38% respectively (WHO, 2002). In Africa, the percentage of the population that uses TM ranges from 90% in Burundi and Ethiopia, to 80% in Burkina Faso, the Democratic Republic of Congo and South Africa; 70% in Benin, Cote d'Ivoire, Ghana (TAMD, 2006), Mali, Rwanda and Sudan; and 60% in Tanzania and Uganda (WHO, 2000).

TM is very important to a large section of the world's population. It plays a significant role in ensuring sustainable economic development in a number of countries by reducing the cost of health care (WHO, 2013), promoting availability and accessibility to health services (Lachowycz and Jones, 2013; Nwaiwu, 2012; Aghion, 2010).

1.1.1 Forms of traditional medicine

TM exists in four major categories viz: nature healing (bone setting, hydrotherapy, use of air, fire and hypnotism etc.), natural healing (telepathy prayers, incantations, hypnotism etc.), herbal healing (use of leaves, branches, fruits, stem bark, roots, whole plants); spiritual healing (involving spirits such as demons, witchcraft, water mermaid etc.) (Nigerian Tribune, September, 2010). It can be referred to as non-conventional medicine. Complementary and alternative medicine or therapies (Bodeker, 2005) have existed in developing countries especially Africa long before colonization which was also responsible for the introduction of orthodox medicine (OM) which came to overshadow TM. However, immediately after some African countries gained independence they were faced with economic challenges which affected the importation of medicines and techniques thus they reverted to the use of TM and practices (Pretorius, 1991). However, for several decades, traditional healing practices were considered as inferior medical care to OM because of lack of evidence based effectiveness, set rules and standards, and no formalized training, and its practice was recognized by industrialized health care professionals as cultural customs (Helman, 2007). In addition, OM is fully backed by the state hence considered as the official model for health care with well-developed human resources and infrastructure that provides high cost of service to users, and puts a strain on government budget.

TM adopts non-rational, non-scientific, non-technical, holistic philosophies unlike orthodox or modern medicine that is based on rational scientific discourse, accredited knowledge, and standard ethical regulations (Kottow, 1992 cited from Worley, 2011 p. 11). It uses a holistic approach to prevention, diagnosis and treatment of social, mental and physical ailments of different origins (Kottow, 1992 cited from Worley, 2011 p. 12; WHO, 2004) of the patient. In contrast, the OM, diagnose ailments using high technology and providing medication leaving other factors that will help improve the health of their patients (Worley, 2011). TM has no particular definition due to its varied characteristics, which form the bases of TM definitions. Hence it has been defined based on the functions, processes, activities, and services that adopt traditional philosophies using African techniques and principles to solve all manner of health issues. Therefore Muweh (2011) defines TM 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 illnesses. “The sum total of all the knowledge and practices, whether explicable or not, used in diagnosis, prevention and elimination of physical, mental and social imbalance and relying exclusively on practical experience and observation handed down from generation to generation, whether verbally or in writing” (WHO, 1976; WHO, 2013; 2011).

So far, it is evident that health care delivery in Ghana is pluralistic consisting of conventional and non-conventional (Tabi et al, 2006; Anyinam, 1989a; Havi, 1989) systems. Thus their integration in terms of techniques, knowledge, philosophies,

theories, adaptation, consumer and institutional integration will enhance patient compliance; reduce infrastructural cost to government; improve accessibility; and train TM practitioners to become community health workers to fill the shortage gap of medical practitioners (Van der Geest, 1997). For example the proportions of people advocating for the inclusion of TM into the National Health Service in the Netherlands is 60%, and the United Kingdom is 74%. However, there is the lingering problem of integrating TM into the orthodox medicine.

Most developing countries including Ghana are facing the challenge of how to provide comprehensive universal health care for their citizens. It is in an attempt to address this challenge that Ghana has operated (TM) alongside the scientific or orthodox medicine since the early 19th century (Twumasi, 1975 cited from Asante & Avornyo, 2013 p. 256). This underlines the policy of the Government of Ghana to integrate TM in orthodox practice.

Although state funding and organization of orthodox medicine has been very visible, services face severe constraints in many parts of the country. These include inadequate personnel, insufficient levels of in-service training, geographical and cultural inaccessibility, high cost of drugs and services, inability to treat tropical diseases; facilities for rural folks; lack of capacity, threatening efficacy; increased self-medication; and such weaknesses have increased fake healthcare practitioners and medicines (Baidoo, 2009). The problem of availability, accessibility and utilization (WHO, 2001) has sustained demand for the services of TM practitioners

in primary care settings. Another challenge with the orthodox medicine is that about 70% of doctors are located in the Greater Accra Region, which accommodates only 15.8% of the national population (Senah, 2001). This has reduced the care given to patients in other regions in Ghana. Orthodox medicine is only able to meet the needs of only 30 percent of Ghana's population (Sarpong 2008). The majority of the population are served through TM practice. This is particularly the case among rural dwellers (UNDP, 2007; MOH, 2007b; GSS, 2012; Apt, 2013).

1.2 Statement of the problem

Ghana now has a policy on the integration of TM into orthodox practice. To actualize this policy, the Ghana Health Service (GHS) and quasi-government health facilities have been directed to establish traditional medicinal practice units as part of out-patient services. A formal accredited system for the training and certification of TM practitioners has also been put in place. An evaluation of the implementation of the policy is important to inform a continuous quality improvement process.

Even though Ghana now has a policy on the integration of traditional medicine and orthodox practice, policy implementation evaluation is crucial for continuous quality improvement, but this is lacking leading to an information gap for future development and enhancement of the integration. The information gap has been attributed to many factors including attitude, knowledge and practice of health care workers. Though some research has been conducted on attitude, knowledge and practice of health care workers in other areas, none has been carried out on how these

components affect TM and OM integration and how it contributes to lack of information needed for future enhancement of this regime. Currently very little information exists in this regard.

1.3 Objectives of the Study

1.3.1 Main objectives

To describe integration of traditional and orthodox medicine practice at the LEKMA Hospital in Accra, Ghana:-

1.3.2 Specific objectives

1. To describe the scope of TM services offered at LEKMA Hospital.
2. To describe attendance and the demographic profile of clients.
3. To assess the referral system between TM and OM practices
4. To examine the attitude of TM and OM practitioners toward integration
5. To evaluate the acceptability of TM and OM service integration

1.4 Research questions

- 2.0 What is the scope of services offered by TM?
- 3.0 What are the challenges associated with TM and OM integration?
- 4.0 What are the attitudes of TM and OM practitioners toward integration?
- 5.0 What is the extent of acceptability of TM and OM service integration ?

1.5 Justification for the Study

TM is widely used by 80% of the world's population, a comprehensive TM strategy was launched by WHO in 2002 to improve quality of products and practices, and to

protect biodiversity and traditional knowledge (WHO, 2003); the official professionalization of TM by Dr. Kwame Nkrumah in 1969, the setup of Ghana Federation of Traditional Medicine Practitioners Associations (GHAFTRAM) for capacity building and sharing of information; the addition of a list of herbal drugs under the National Health Insurance Scheme (NHIS) through Traditional Medicine Practice Council (TMPC) (WHO, 2001; MoH, 2004) all suggest that TM and its integration with OM is critical to governments irrespective of the slow acceptance. Therefore, the study outcomes will reveal the lapses and inadequacies associated with the entire integration process affecting TM and OM with respect to attitude, acceptance, services and infrastructure in Ghana.

This study seeks to enhance knowledge on TM and OM practitioners' perception, and knowledge on the importance and benefits of integration.

It will serve as reference point for government and policy makers to prepare suitable laws and activities to promote the integration process of TM and OM.

The outcome also enhances customers' and patients confidence and trust in TM.

Again, it will help build on the body of existing knowledge, as well as provide reference for future researchers.

1.6 Scope of the Study

The study was conducted in one of the ten districts within the Greater Accra Region, of Ghana. There are few hospitals implementing integrated TM and OM; the focus was on LEKMA Hospital to speed up data collection within the time limits of the study. Focus was also on doctors, nurses, pharmacies, patients, and clients who practice and patronize TM and OM at LEKMA Hospital in Ghana.

1.7 Organisation of the study

This study encompassed five chapters which are the (i) introduction, (ii) literature review, (iii) methodology, (iv) results and discussion, and (v) summary of findings, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This section deals with definitions, concepts, theories and empirical studies on the topic in tandem with the objectives of the study.

2.1 Definition and Concept of Traditional Medicine

Traditional medicine (TM) which is the oldest form of healthcare is described by different terms known as ethno-medicine, folk medicine, native healing, or complementary and alternative medicine (CAM). It is an ancient and culture-bound method of healing that humans have used to cope and deal with various diseases that have threatened their existence and survival.

There is no single universally accepted definition for TM because it is broad and diverse. This is because different societies have evolved different forms of indigenous healing methods that are captured under the broad concept of TM, e.g. Chinese, Indian and African traditional medicines.

Notwithstanding, the most acceptable definition of TM provided by the World Health Organisation (WHO) is “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 illnesses” (WHO, 2000). In his study on impacts of TM in the health care delivery services in Ghana Buor (1993) cited in Gyasi, Mensah, Adjei, and Agyeman (2011 p. 41) argues that TM

involves the use by the folk population primarily of unorthodox and unscientific method for curative and prevention of diseases.

TM used to be the dominant medical system available to millions of people in Africa in both rural and urban communities before the introduction of cosmopolitan medicine. It was the only source of medical care for a greater proportion of the population (Romero-Daza, 2002). In Africa, TM is the dominant traditional health care systems used by the majority of the people and even in other parts of the world (Cook, 2009).

In the world of TM, it makes use of traditional healers to treat the sick. Unlike medical doctors who only treat diseases in patients' traditional doctors provide holistic treatment by reconnecting the social and emotional equilibrium of patients based on community rules and relationships (Hillenbrand, 2006).

Somehow, colonialism is believed to be the cause for the shift from indigenous knowledge system (IKS) (Mapara, 2009) especially knowledge of medicine (Feierman, 2002; Konadu, 2008; Millar, 2004; Paul, 1977). In addition there was an outright ban of TM in some cases.

For instance, the South African Medical Association outlawed traditional medical system in South Africa in 1953 (Hassim, et al. 2010).

The ban of TM was partly because of the belief that the conception of disease and illness in Africa was historically embedded in "witchcraft". This conception from the Western knowledge point of view is witchcraft and it reinforces "backwardness", "superstition" and "dark continent".

However, recent studies have shown that etiologies of illnesses in Africa are viewed from both natural and supernatural perspectives (Bello, 2006; Erinosh, 1998, 2005, 2006; Jegede, 1996; Oke, 1995).

However, post-independence Africa has seen concerted efforts being made to recognise TM as an important and integral aspect of the health care delivery system in Africa (WHO, 2001).

Presently this is the major challenge affecting the TM system in Africa. According to Nevin (2001), TM and OM integration is a big challenge because of mistrust between the two parties and difficulties in regulating TM practices.

Generally, the Western-trained physicians appear unwilling to allow TM and their practitioners included in the official system of medical care in Africa (Abdullahi, 2011).

2.1.1 Definition and Concept of Orthodox Medicine

OM just like the TM has several names such as western, modern, biomedical, allopathic, scientific, conventional or cosmopolitan medicine. The terms largely overlap, and all relate to their origin in medical science as received from Western Europe.

2.2 Overview of Ghana's Health System

Since independence all the political administrations have made substantial efforts to improve health care delivery. For example, the National Health Policy was developed in 2007 (MOH, 2007a) followed by the Health Sector Medium Term Development Plan 2010–13 (MOH, 2011).

The development plan can be linked to the attainment of the MDGs, the Ghana Shared Growth and Development Agenda for 2010–13 (NDPC, 2010), and to earlier health sector strategies. The latter grew out of the developmental agenda of Vision 2020 under Ghana’s Growth and Poverty Reduction Strategy I (2003– 05) and II (2006–09) (NDPC, 2003, 2005; IMF, 2006; Saleh, 2013).

The main aim of all of these programmes is to improve the health status of Ghanaians, offer financial protection, and ensure that the system is responsive, efficient, equitable, and sustainable.

Ghana has a complex and multifarious health system. The MOH is the central government institution in charge of sector-wide policy development, financing, regulation, monitoring and evaluation using its agencies including GHS which is an executing agency responsible for health service delivery.

The MOH takes political decisions on health, while the GHS controls the professional aspects of health services in the country and it is headed by the Director-General of GHS.

Health care system in Ghana is categorised into four main sectors: public, private-not-for profit, private-for-profit, and folk/traditional sectors (Ghana Health Service, 1995). Each of these health sectors officially operate under MOH and therefore responsible to it.

However, day-to-day activities, management and administration of all state owned facilities are handled by the GHS apart from the three teaching hospitals (i.e. KATH, Korle-Bu and Tamale Teaching Hospital) and some quasi-government medical institutions.

In Ghana, the public and private sectors jointly provide health care in the country. The public sector is categorised into three tiers and each tier constitutes five levels of care operated from grassroots/community level to national and comprehensive health care level.

The public sector is organised according to national (3 autonomous teaching hospitals), regional (10 regional hospitals), district (281 district public and other hospitals), sub-district (622 public health centres) and about 1,658 Community-based Health Planning and Services (CHPS) and maternity homes at the community level (PPME-GHS, 2005; Sato, 2012d). Whereas the lower levels provide primary health care services those at the top offer secondary care. Also, teaching hospitals focus on tertiary services, specialised clinical and maternity care, academic research and training of medical personnel. The tiers operate in conjunction and are modelled on a referral system that encourages use of bottom levels before higher levels (Fenny et al, 2014; MOH, 2011; Sato, 2012d).

The private-not-for-profit and NGOs, including the Christian Health Association of Ghana (CHAG), provide over 40 per cent of health care in Ghana, especially in the rural and remote areas (Ballou-Aares et al., 2008). The private and mission health facilities are supported by government through enablement of reimbursement under NHIS, provision of personnel, staff emoluments and logistics as well as other significant costs (Medicines Transparency Alliance [MeTA] Ghana, 2010).

However, private-for-profit operators serve wealthier individuals as 'Private Medical and Dental Practitioners' and constitutes smaller privately owned practices, health centres and clinics, and specialist facilities (Sato, 2012d). Approximately 654

facilities are privately owned, but more than half are located in Greater Accra and Ashanti regions (GHS, personal communication, April 2013). At the sub-district level where health centres are the highest health facilities and first line of referral to formal health from the community clinic and maternity homes, over 98 percent of them are public (MOH, 2007a).

Ghana faces acute shortage of health personnel. For instance, in the year 2013, 1,111 Ghanaians shared one hospital bed while one medical doctor attended to 10,023 patients as compared to the WHO recommendation of 1 medical doctor to 7,500 patients for sub-Saharan Africa (World Bank Group, 2014; Saleh, 2013). In addition the health sector is also characterised by persistent exodus of health workers and over the period 1993-2002, 3,157 health workers, representing 31 percent left Ghana for greener pastures. Anecdotal evidence has it that there are more Ghanaian medical doctors in the State of New York of the United States of America alone than the resident doctors of Ghana.

In the area of health care financing, health spending lags behind other equally important sectors such as education and interest payment. Public spending on health care remains one of the less controversial roles of government partly due to its spill-over effect on GDP.

Ghana's health care expenditure in 2013 was estimated at \$2.5 billion representing 5.2 percent of the GDP (\$47.93 billion). Out of this, 39.0 percent was contributed by the public, 63.9 percent out of pocket payments and 0.4 percent was sourced from external resources (World Bank Group, 2014). Although, per capita public health spending has been increasing steadily over the period 2010-2013, it is still below the

levels achieved by sub-Saharan African countries such as Mauritius, Botswana and South Africa.

In 2013, the World Development Indicator reported that Ghana's per capita public health expenditure was US\$96.5 while Mauritius had US\$442.1 (World Bank Group, 2014). It is worth mentioning that the boost in public health spending in Ghana has been fuelled by donor support. For instance, donor support as a proportion of public health spending amounted to 14 percent in 2006 (GHS, 2007). The donor support excludes projects directly initiated and implemented by the donor agencies such as Danish International Development Agency (DANIDA), European Union (EU) and United States Agency for International Development (USAID).

Health care delivery in Ghana is pluralistic consisting of conventional and TM (Tabi et al, 2006; Anyinam, 1989a; Havi, 1989). Alongside the mainstream health system is the traditional medical system which is overlooked and oft-relegated. Traditional medicine is alternatively provided to the modern health care. Traditional medical therapy is quite trendy (Mensah & Gyasi, 2012) and provides medical care for approximately 70 per cent of Ghanaian particularly amongst rural dwellers (UNDP, 2007; MOH, 2007b; GSS, 2012; Apt, 2013).

In this sector, different healers specialise in various forms of healing that are either sacred or secular or both (Buor, 2004). The practitioners entirely operate outside the official national medical system. There is paucity of accurate data on the TM practices though the report from MOH suggests that there are approximately 22,000 registered traditional practitioners and 367 traditional birth attendants (TBA). In

addition, about 200,000 other personnel are employed within the industry through marketing and distribution of herbal products (Ghana Health Service, 2007).

Owing to the informal nature of the sector, irregularity of its activities, lack of record-keeping and reliance on verbal communication, statistics from the sector often times are imaginative, extrapolative, and speculative and in most cases unreliable (Sato, 2012d). It is therefore difficult to pass on the traditional teachings and practices from generation to generation. This poses a threat of extermination to the system.

Self-medication has also been identified as frequently used health care approach in Ghana (van den Boom et al, 2004; Gyasi et al., 2012; 2013). In this popular sector, all therapeutic options are applied without the knowledge and the consent of either a physician or TM practitioner or both (Buor, 2004). The helpless and unsuspecting patient may go to a chemical seller/pharmacy shop/drug peddler/open market without any prescription from authorised health personnel, purchase drugs they think could deal with their medical condition. Likewise, patients in rural areas oftentimes prepare herbal medicines based on their own ideas or advise of a relative through 'try and error' mechanisms. Left-over drugs are also shared and used by family members and friends when illness spells afflict. In addition some these drugs in question have been out-dated the expiry.

Chemical operators, pharmacy shop operators and vendors position themselves and advice patients based on their knowledge and the quest to sell out their products. The activities of 'quack doctors' and practitioners are predominant in the eaves of self-

medication. This practice was evidently pronounced in 1985 during the introduction of ‘cash-and-carry’ system where people were made to pay user fees for consultation, treatment and for drugs (van den Boom et al, 2004; Sowa, 2002). Indeed, self-medication has detrimental health implication which could aggravate the medical conditions and health outcomes of the patient (UNICEF, 2002).

Ghana remains prone to outbreaks of and has become infested with malaria, cerebro-meningitis, cholera and guinea worm coupled with other non-communicable diseases such as hypertension, diabetes and cancers. Maternal mortality has recently been declared a national emergency and is currently a major priority for government, researchers and development partners (Senah, 2001). Health system weaknesses such as insufficient human resources, especially in rural areas with vulnerable populations, poor access to essential medicines and health technology and insufficient financing all constrain the work of TM hence the need to study the role and acceptance of TM in Ghana.

2.3 The Role of Traditional Medicine in Primary Health Care

TM assumes greater importance in the primary health care of individuals and communities in many developing countries and has been popularly recognized and has increased substantially in the 21st century (Hoareau and DaSilva, 1999; Bodeker and Kronenberg, 2002; Pal and Shukla, 2003)

Traditional medicine transcends the physical body into a broader social/emotional, cultural and spiritual context of health and well-being (Vandebroek, 2013).

Its importance can be assessed on affordability, availability and accessibility (Vandebroek, 2013). This is especially true in rural areas where OM is lacking, and the immigrant communities in large urban centres (Pieroni and Vandebroek, 2007) including the urban slums, regardless the increased availability of biomedicine and practice in urban areas.

These shortcomings have led to the increased international trade in herbal medicines (van Andel et al, 2012; Van Andel, and Havinga, 2008) and a significant world market worth an estimated \$83 billion in 2008 (WHO, 2011b).

In addition the challenges have contributed to use of TM as primary health care of the poor in developing countries, as well as countries where conventional medicine is predominant in the national health care system” (WHO, 2000a).

Traditional medicine practice has been a significant part of the history of medicine in Ghana. The contribution of TM to health care in Ghana is tremendous as more and more Ghanaians, especially the poor, underserved and the excluded that are presumably unable to afford OM will solely depend on TM. The acceptance rate of TM is portrayed by the emergence and rapid growth in the number of herbal outlets, herbal clinics and hospitals (Bloom & Standing, 2001; van der Geest & Whyte, 1988) in the sub-Saharan Africa and elsewhere.

TRM practitioners use plant parts such as leaves, stems, roots, seeds, fruits, flowers, and tree barks among others, and other mineral substances which have been found to have essential medicinal properties to cure diseases. These plant parts are made into various forms: fresh, dried, cut-in-pieces, powder, ointment, oil extract, liquid, lotion, etc. to treat ailments (Mensah & Gyasi, 2012).

This has been taking place for so many years before the orthodox medicine found its way to the continent of Africa. Scientifically, the herbs or the medicinal plants in use have proved to be efficacious for the treatment of the various endemic ailments (Addae-Mensah, 1992).

2.4 Prevalence and Growing Demand for Traditional Medicine

The global trend indicates that even in the advanced countries, more people with the most advanced and sophisticated OM system are making headway in TM use to cater for their health care requirements (WHO, 2001).

Studies have shown that, almost 70% of the population in Australia used at least one form of contemporary and alternative medicine (CAM), and 44.1% visited CAM practitioners in 2007. Also, the annual 'out of pocket' expenditure on CAM, nationally, was estimated at US\$ 3.12 billion (Xue et al., 2010).

In the Netherlands, 60%, while in the United Kingdom, 74% of the people are advocating for the inclusion of CAM into the National Health Service.

The percentage of the population which has used CAM at least once in Canada, France, USA and Belgium stands at 70% , 75%, 42% and 38% respectively (WHO, 2002). This confirms that CAM is gaining widespread acceptability in Australia, France and Canada with 46%, 49% and 70% of the population respectively using TM (WHO, 2002a; Amzat & Abdullahi, 2008).

A survey conducted in the member states of the European Union in 1991 revealed that 1,400 herbal drugs were used in the European Economic Community by patients

(WHO, 1996). One-third of American adults have also used alternative treatment and there is a fast growing interest in CAM system in the developed world (WHO, 2001; 1996).

There has been a documented growing demand for TM in Europe, Asia and America. For example, it has been revealed that between 40% and 60% of the population in Western Pacific Region TM is used to treat various diseases (WHO, 2001).

Also it evidence has it that about 60% of the population in Hong Kong has once or more consulted traditional health practitioners.

In the United Kingdom (UK), almost 40% of the physicians make some alternative referrals (WHO, 2002a). The WHO's regional office for Americas' (AMRO/ PAHO) report demonstrates that 71% and 40% of populations in Chile and Colombia respectively have used TM (Amzat & Abdullahi, 2008).

Studies by Zaney (2007) have shown that Canada, the United Kingdom, Germany, Australia, China, Korea and India, have more alternative therapy outlets than in any other African country. This confirms the importance of TM to these countries.

In recent years, research has established that 80 per cent of general practitioners are referring some conditions to complimentary practitioners and 75 percent of patients have indicated that they would prefer to have available both western orthodox and complimentary approaches to enable them to access the benefits of each system (Zaney, 2007).

For example in China, traditional Chinese medicine accounts for 20 per cent of the total health delivery system and generates 55 per cent of total health infrastructure and equipment (Zaney, 2007).

In Africa the population that uses TM ranges from 90% in Burundi and Ethiopia, to 80% in Burkina Faso, the Democratic Republic of Congo and South Africa; 70% in Benin, Cote d'Ivoire, Ghana, Mali, Rwanda and Sudan; and 60% in Tanzania and Uganda (WHO, 2000).

In Ghana, plant medicine abounds in generous quantities and, in many instances, the only treatment option available. Indeed, about 1,000 medicinal plants are known to exist in Ghana, and 80 per cent of which have been identified by baseline studies (Zaney, 2007).

2.5 Approaches to Medical Integration

There are several approaches to medical pluralism which are exclusive, tolerant, inclusive, and integrated (Stepan, 1983). However the focus of medical pluralism in this study is the use of integrated approach.

2.5.1 The integrated approach

This approach entails official promotion of the integration of two or more medical systems within a single recognised health care service. Integrated training of health practitioners is the official policy.

Globally only four countries which are the People's Republic of China, the Democratic Republic of Korea, the Republic of Korea and Vietnam - have integrated traditional medicine into their national health care systems. No country in the WHO

African Region has yet established this integrative system regarding the incorporation of traditional medicine into national health care systems (Muweh, 2011). In addition, Nepal in India was earlier mentioned apart from China to have integrated TM with their official health care system (Stepan, 1983). This was possible for China due to the Chinese political system, and more particularly to its economic policy (Stepan (1983).

TM integration can be referred to as modernity in traditional medicine which implies “marriage” between modern medicine and traditional medicine. It could also be regarded as the transition from the primitive method of traditional medicine to diagnose and treat patients’ ailments with a more scientific-based approach (Mutabazi, 2008).

Integrative health care therefore implies fully recognizing and incorporating TM into all areas of health care delivery including national medicines policy, registration of traditional medicine products, regulation of traditional medicine practice, establishment of traditional medicine hospitals, inclusion of traditional medicine in national insurance schemes as reimbursable items, establishment of relevant research institutions on traditional medicine, and training of traditional medicine practitioners at all levels of education, including universities.

Integration also means visibility of traditional medicine in international health programmes, and its reflection in national planning and budgeting schemes (Muweh, 2011).

The implication of integration means autonomy, training, documentation and Peer Education, Monitoring and Regulation Mutabazi (2008). These serve as the pillars of effective TM and OM integration.

Autonomy in this context implies granting full powers or independence to TM practitioners in order to increase their self-awareness, highlight their central role in society, and enable them to exercise their rights as traditional practitioners and citizens. It further means self-policing, self-management and self-governance, thus not subjecting TM and its practices to the lens and scrutiny of the biomedical health systems but to see them as equal partners in the health care system.

Also training is another factor of modern TM in that trained TM practitioners is expected to improve traditional knowledge systems, practices, capacities and capabilities. Consequently it will improve the quality and efficacy of TM. The training could involve identifying diseases that can be effectively cured by TM, avoid the negative perception by OM practitioners of TM claims as the panacea for all illnesses. Again training will preserve indigenous knowledge.

Documentation is a modern trend required for TM to reach the status of National Health Service. An example of such documentation is the treatment successes and failures of TM remedies; and availability of records on traditional knowledge.

Another is the removal of the myth of the non-scientific nature of TM; records on evidence of efficacy; and systematizing the discourse (Mutabazi 2008).

Documentation has become necessary because most traditional practices in developing countries are not documented hence makes it difficult to be evaluated and counted among the effective drugs for treatment.

Documentation can enhance knowledge through training and education of traditional health practitioners in the basic writing and numerical skills who are mostly illiterates.

According to Muweh (2011), TM practitioners need support, education and cooperation. Olson and Nkiwane (2006) agree with the argument for education of TM practitioners because he observed that traditional health systems are often misunderstood, sometimes to the extent of causing fear. Hence his study has advised that this system of healthcare should be examined with an open mind, further developed and finally integrated with the national healthcare system for it to provide the best healthcare benefits possible.

2.6 Challenges of Traditional and Orthodox Medicine Integration

There are several challenges affecting TM and OM integration which is not exclusive to Ghana. Some of these challenges include the need to understand the chemical nature of complex herbal products and their formulation for human therapeutic use, the importance of translation of basic scientific research to human clinical safety and efficacy, provision of a framework for obtaining the evidence required for validation of traditional herbal medicinal products and defining a regulatory system which allows adequate research funding and protection of resulting intellectual property (Roufogalis, 2015).

For example there is a problem of ethnocentric and medico-centric tendencies of the Western hegemonic mentality that are usually paraded by most stakeholders in modern medicine. It is a general belief in among OM practice that TM defies

scientific procedures in terms of objectivity, measurement, codification and classification. This according to the TM fraternity is not true because, there are indications that the physical aspects of TM (i.e. the physical ingredients) can be scientifically studied and analyzed. However the truth is that while the physical aspects can be subjected to scientific analysis using the conventional scientific methods of investigation, the spiritual realm may not (Oyelakin, 2009). This should not in any way affect the standardization, regulation, and integration of TM in Africa.

However, according to Oyelakin (2009) the scientific proof the spiritual aspect of TM is a major challenge affecting integration. He further adds that even after there have been a scientific proof of the spiritual aspect of TM, the needs to be training of medical doctors under the OM system on the ontology, epistemology and the efficacies of African TM in order to remove the barriers of ethnocentrism.

From another perspective Zubane (2001) suggests that both TM and OM practitioners have to be trained on best practices to enhance the TM. However key barriers to learning and development have been identified by Zubane (2001) as: socio-economic barriers, lack of access to basic services, poverty and underdevelopment, factors which place learners at risk, attitudes, inflexible curriculum, language and communication, inaccessible and unsafe built environment, inappropriate and inadequate provision of support services, lack of enabling and protective legislation policy, lack of parental recognition and involvement, disability, lack of human resource development, and lack of access to traditional medicine. A lengthy discussions of the aforementioned barriers will be presented because; these are the key barriers that exist within the education system as a whole, which can

hinder effective learning and development of learners if they are not prevented, minimized or removed, through the provision of education support services (Needs in Education and Training (NCSNET), and National Committee on Education Support Services (NCESS) (1997 cited in Zubane, 2001 p. 86)

This will delay the integration of TM into the OM health care system hence a major challenge that needs the attention of stakeholders.

In addition there is a problem of who determines the efficacy and effectiveness of TM given the inherent epistemological and ideological characteristic differences of both medicines (Konadu, 2008; Oyelakin, 2009).

Therefore Konadu (2008) and Oyelakin (2009) suggest that TM and OM should be allowed to operate independently.

However, for TM and OM to be integrated or allowed to operate separately will require among others detailed scientific, social, economic and environmental proofs.

In Ghana for example, medical practitioners of OM have not accepted the collaboration with TM practitioners and again they receive much attention from government and behave as superior to TM practitioners.

Again NHIS does not cover TM treatment unlike all the treatments of orthodox medicine. In addition, TM practitioners are considered a lesser profession to orthodox medicine by MOH and GHS.

Furthermore, out of the four major areas of TM only herbal medicine has been accepted as a training programme at KNUST. It is also note included in the curricular of the two medical schools in Ghana and the nursing training colleges in the country.

The orthodox medical practitioners have limited or eliminated competing practices of TM practitioners.

Despite the challenges, the incorporation of traditional and modern evidence-based medicine (EBM) as integral parts of a country's formal health care system is most likely to be achieved and has been demonstrated to be practicable countries, particularly in Asian countries such as China, Japan, Korea, and India, among others (WHO, 2001).

2.7 Scope of Services Offered by TM

TM offers a wide scope of services which include Ayurveda, traditional Chinese medicine, Unani medicine, traditional African medicine, anthroposophic medicine, chiropractic, homeopathy, naturopathy and osteopathy (British Medical Association (BMA) 1993; Muweh, 2011).

For example in China and India, the scope of TM offered to its people are very sophisticated contemporary and alternative medicine systems such as acupuncture and ayurvedic which have been developed and been in use for decades (Addae-Mensah, 2002; Agyare et al, 2006).

The scope of ethno medicine according from the perspective of Jain (1981) cited in Vedavathy (2003 p. 236) is the mother of all other medicines and he confirms such as Ayurveda, Siddha, Unani, Nature cure and even modern medicine.

There are also claims of African and Indian healers offering drugs for conditions such as herpes zoster (OM has no cure), psoriasis, hypertension, bronchial asthma and rheumatism which have been clinically tested. Based on the large scope of TM in

healing several diseases, the World Health Organisation is trying to put together a compendium of medicinal plants for various treatments which can then be adopted by OM practitioners (Vedavathy, 2003).

Other treatment services offered by TM include: headache; stomach ache; ring worm; pimples; venereal diseases, scab and sores; insanity; diabetes; asthma; sharp pains; high blood pressure; stroke; epilepsy; diarrhoea; bewitched people; one with bad luck; women with pregnancy problems; women who cannot produce; lack of strength in body; to be liked at work; prevent thieves from attacking homes, shops and cars; improving child memory for school; promotion; customer attraction; court cases; demand debts; removal of misunderstandings with anybody; to bring back a lost lover, misfortunes; and pains in wombs and bladder (Zubane, 2001) among others.

The widespread demand and use of TM is because of its broad spectrum capacity to simultaneously deal with many diseases. For example among the South African black population, TM “is thought to be desirable and necessary for treating a range of health problems that Western medicine does not treat adequately” (Mander et al., 2007).

Also in Nigeria, effective medicinal plants in management of various diseases have been documented (Aiyeola and Bello, 2006; Blench and Dendo, 2006a, b; Fasola, 2001; Obute, 2005; Ogunshe et al. 2008; Sofowora, 1993; Weintritt, 2007).

Also the widespread use of TM is because of the inaccessibility and affordability challenges especially in Africa (Cameron et al. 2008). Similarly, developed

countries, on the other hand, factors responsible for the widespread use of TM are beyond accessibility, affordability and cultural compatibility (Abdullahi, 2011).

Some authors believe that accessibility of TM can be improved if integrated into mainstream health care services (Erinosho, 1998, 2005, 2006; Obute, 2005; Odebiyi, 1990; Okigbo & Mmeka, 2006).

For various reasons, including affordability, accessibility and effectiveness, many Ghanaians depend on plant medicines for their health care needs. Evidence abounds that certain health problems, particularly communicable and chronic diseases have defied modern orthodox medicine and that where orthodox medicine fails or when it is unable to provide the needed therapy, patients are left to their fate (Zaney, 2007).

2.7.1 Scope of treatments services offered by TM

Ayurveda is an ancient Hindu act of medicine which literally means “the science of life”. It is TM practice commonly used in South Asia especially in Bangladesh, India, Nepal, Pakistan, and Sri Lanka. Ayurveda is a holistic health system, hence considers the human being as an inseparable unity of body, mind and soul. Therefore instead of dealing only with the health or disease of separate organs, the well-being of the whole person is emphasized.

Unani medicine emanates from an ancient Greek theory postulated by Hippocrates a physician who freed medicine from the realm of superstition and magic and gave it a scientific status. Unani medicine is based on the four bodily humours; blood, phlegm, black bile and yellow bile. The idea is that disease is caused by an imbalance in the four bodily humours. Unani medicine is also known as Arabic medicine and it draws

from other systems of traditional medicine practised in China, India, Egypt, Iraq, and Iran among others

Traditional African medicine (TAM) is also another type of TM with its origin and root embedded in the culture and beliefs of the African continent. Ninety percent of TAM is based on herbal therapy. Herbal therapy or medicine include herbs, herbal materials, herbal preparations and finished herbal products, which contain as active ingredients of parts of plants, or other plant materials, or combinations thereof. Africa is blessed with a rich biodiversity estimated to over forty thousand plant species about 6,377 plant and four thousand have medicinal value.

Traditional Chinese medicine (TCM) has been in use in China for over two thousand years. It has its own unique theories for treating disease and to enhance health, (WHO, 2010). TCM can be used to diagnose, treat and cure diseases. Its form of diagnosis and treatment is holistic in nature. TCM involves a range of practices including acupuncture, herbal medicine, manual therapies, exercises and breathing techniques as well as moxibustion; a therapeutic technique that involves the burning of mugwort herb to facilitate healing, (WHO, 2010). TCM is practised in almost every part of the world. The drug Artemisinin that is used to treat malaria is extracted from the plant *Artemisia annua*; a plant that has been used in TCM for centuries, (Biesen, 2010).

Naturopathy is the practice neural therapy, iris diagnosis, acupuncture, homeopathy, chiropractic, phytotherapy, psychotherapy, and ozone therapy (WHO, 2001).

Germany has legalized the practice of traditional healers involved with the activities of naturopathy.

Chiropractic is a magnetic therapy practice that uses joint adjusting procedures, manipulation, massage and other techniques to treat musculo-skeletal complaints (BMA 1993).

Osteopathy on the other hand, is a system of diagnosis and treatment whose main emphasis is on conditions affecting the musculo-skeletal system. It uses predominantly gentle manual and manipulative methods of treatment to restore and maintain proper biomedical function (BMA 1993). They are practiced in the UK, Europe and the US.

Homeopathy is described as the treatment of patients by administering highly diluted forms of natural substances which in a healthy person would bring on symptoms similar to those that the medicine is intended to treat (Bannerman et al., 1983; BMA 1993).

It takes a holistic approach to the sick and treats their disturbances on the physical, emotional and mental levels simultaneously in order to bring back the patient's lost equilibrium by stimulating and strengthening their defence mechanisms. This type of medicine is practiced throughout Europe and the U.K.

Herbalism is the use of herbs and plant to cure sickness and diseases. Plant remedies are now sold in pharmacies and drugstores and, according to the regulation in each country, in supermarkets and health-food stores (Bannerman et al., 1983). This method of medicine is has been adopted by many countries across the world.

2.8 Acceptance of TM Practices by OM Practitioners

The acceptance level of TM practice by to conventional healthcare practitioners depends on the health care model in operation at these facilities. In this respect, there are about four of such models: the monopolistic health care model; the tolerant (co-existence) health care model; parallel (inclusive) or dual health care model; and integrative health care model. However, in this section, the focus is on the integrative health care model.

2.8.1 Factors that inhibit the acceptance of TM and OM integration

The issue of control and competition affects the acceptance of TM and OM integration. For example in their study, Asante and Avornyo (2013) discovered that many attempts have been made by OM practitioners to control or hide relevant documents from other groups including TM to prevent competition in their industry.

Also Hyma and Ramesh (1994) in their study found that institutional integration poses a major challenge in that TM and its practitioners may occupy inferior structures hence lower their positions at the healthcare centres.

In addition, there is the belief that accepting TM modernization will negatively affect their independence which will go to emphasis the superiority of OM over TM (WHO, 1978). This is confirmed by Abdullahi (2011) that a major challenge of TM is the acceptance of Western religion, education, urbanisation and globalization. These are facets of modernization across the world.

For example Feierman (2002) has noted a 'passionate ambivalence' by educated elites towards African TM and plants in some segments of the African populations.

Similarly, Teshome-Bahiru (2006) found out that the process of urbanisation has greatly affected the use of TM in both rural and urban communities of Addis Ababa, Ethiopia, in positive and negative ways.

Also Kiringe (2005) has found that the Western education and religion has impacted on the use of TM.

There is also an attempt to preserve culture hence resistance by TM practitioners for fear of cultural transplantation which may lead to cultural alienation. There are also major differences in concepts of life, health and disease concepts and the underlying philosophies upon which various medicinal systems are founded (WHO, 1978).

2.8.2 Existing relationship between TM and OM practitioners

Acceptance of TM by OM practitioners is based on the traditional knowledge they have which could provide novel approaches and key lessons beneficial for the development of new drugs by pharmaceutical companies research and development process used to cover untapped resources in traditional ethno medicine (Taylor, 2011). But the current existing relationship between TM and OM practitioners according to Taylor (2011) has not been the best hence negatively affecting the acceptance of TM by OM practitioners.

A good relationship between the two parties is critical for trust because it will allow an open dialogue about the efficacy and possible limitations of traditional medicinal practices.

In addition an equally important collaboration needs to be developed between TM and OM providers culminating in feeling respected and revered among TM

practitioners could promote knowledge sharing between OM practitioners' making suggestions regarding possible options in patient care. Also such relationship offers OM practitioners opportunity to learn valuable alternatives to relieve symptoms and can better inform their patients of options in treatment choices (Graz, et al., 2011).

Furthermore shared knowledge among practitioners ensures quality control of the recipes and preparations of medical concoctions and teaches TM practitioners how to enhance trade, effectively regulate and sell their products for economic benefits (Graz, et al., 2011).

On the basis of shared knowledge, collaboration and relationship as a means of describing the acceptance of TM by OM practitioners, an international workshop in Ottawa, Canada, under the auspices of the International Development Research Centre (IDRC), revealed that several relationships exist between TM and OM. The workshop revealed that these relationships can be used to determine the level of acceptance of TM into OM practice. The determinants are: intolerant medical orthodoxy, tolerant medical orthodoxy, parallel development of multiple health systems, the policy of integration and active collaboration between fully recognized health systems. They are defined based on the degree acceptance level given to TM practice (Islam & Wiltshire, 1994 cited in Gyasi, 2014 p. 60).

For example the intolerant OM does not legally accept TM which is the case of Kenya and Ivory Coast. On the other hand, even though tolerant OM have accepted TM to operate alongside modern medicine, it does not allow them TM practitioners to call themselves 'doctors' (Barimah, 2013). According to Islam and Wiltshire

(1994) TM is informally accepted and tolerated under this condition. This is because their existence and significance have virtually been ignored though not entirely.

Also the national health care system is entirely based on allopathic medicine, leaving the TRM to develop on its own without state support and control (WHO, 2000).

The parallel development of multiple health systems legally accepts and regulates the activities of TM practice however it has not been fully integrated into the health system. For example it may not be taught in schools, partially regulated by government, non-involvement of some health care levels, and non-coverage of national health insurance system (IBC, 2012; WHO, 2002). Notwithstanding, there are works on policy, regulation, practice, health insurance coverage, research and education under way. For instance, countries such as Equatorial Guinea, Nigeria and Mali have national policies on TRM, but little or no regulation of TRM products. Countries in the Indian subcontinent and South East Asia may be the best examples of such parallel development (WHO, 2002).

Furthermore Islam and Wiltshire (1994) cited in Gyasi (2014 p. 62) suggest that “active collaboration” exist between TM and OM because both practitioners fully recognize or accept the systems under which each operates hence work together against mistrust.

The medical pluralism method implies a broader spectrum of acceptance TM and the incorporation of effective traditional remedies into the national drug regulations. In the space of varied health care services the individual becomes the victim to the contradictions between respective philosophies, theories and realities of each medical

system. Analysing the plural system from the functional theory perspective (Waxler-Morrison, 1988) suggests that each system is employed for different treatments, diseases or for the ideological, linguistic or social characteristics of the physician. Thus the theory indicates that TM and OM co-exist hence has been accepted by each group of practitioners because they provide distinctly contrasting services (Waxler-Morrison, 1988).

In summary the medical pluralism embraces the employment of more than one medical system or the use of both conventional medicine and TRM/CAM for health and illness (Wade et al, 2008).

Currently in Ghana, both the TM and OM exist simultaneously and/or practised side by side (Anyinam, 1987; Owoahene-Acheampong, 1998; Twumasi, 1975; Good, 1987; Unschuld, 1980; Tabi et al, 2006; Anyinam, 1989a; Havi, 1989).

In addition, Ghana's health care manifests an inclusive system but moves ahead to share unique features such as the availability of national policy on TRM, TRM Department within the MOH, regulation on TRM products, TRM research institution at both national and University levels, TRM not practice at all level of health care, no NHIS coverage for TRM and no official education at University level that cover TRM for doctors, pharmacists and nurses (WHO, 2000).

2.8.3 Extent of TM acceptance by conventional healthcare system

A study by Asante and Avoryno (2013) revealed that although OM practitioners showed interest in integration of the two medical systems, when confronted with possible ways of working with TMPs they showed reluctance to accept them as equal

partners since they perceived their practice as inferior to theirs. This is one of the major concerns of acceptance of TM by OM practitioners.

In conclusion, acceptance of TM by OM practitioners can be evaluated in terms of their relation; from the perspective of inhibitors/barriers or the extent of acceptance.

2.9 Attitude of TM Practitioners and Orthodox Medical Practitioners toward Integration

This section will provide the opportunity to assess the attitude and perception of both practitioners concerning the integration of these two practices.

2.9.1 Attitudes and perceptions of medical practitioners affected by aspects of TM Practices

Research conducted in western countries that assessed medical students, doctors, pharmacy students, pharmacists and nurses attitudes and perceptions regarding CAM which include TM revealed results that indicated that medical and pharmacy students show an increased interest and positive attitude towards TM hence it should be included in their academic curricular (Yeo et al., 2005; Kreitzer et al., 2005; Harris et al., 2006; Tiralongo & Wallis, 2008; Lie & Boker, 2006; Chterji, 2007; Hussain, 2012; Awad, Al-Ajmi, & Waheedi, 2012).

In their studies Mohape and Peltzer (1998) cited from Peltzer and Khoza (2002 p. 37) a total of 77 per cent psychiatric nurses in South Africa among others favoured the integration of complementary medicine and 93 per cent in support of the integration of traditional healing into the national health care system.

On the other hand, Nurses in Botswana were found to be opposed to medical health system (Barbee 1986) while nurses in Malawi, prefer biomedical concept of health and health care (Peltzer 1997 cited from Peltzer and Khoza, 2002 p. 37) hence convinced patients to adopt.

Even though there are low referrals to TM practitioners, in the UK Perkin, Percy and Fraser (1994) cited from Peltzer and Khoza (2002 p. 37) found that 70% of hospital doctors and 93% of general practitioners had, on at least one occasion, suggested a referral for complementary treatment.

Thus to a very large extent, orthodox practitioners in the western countries and Africa have positive attitudes and perceptions towards TM.

2.10 Impact of attendance and the demographic profile of clients' on utilization of TM over OM

In Ghana, about 70% of the population depends primarily on TM (Roberts, 2001). In other words, 17.5 million Ghanaians out of 25 million uses TM thus it is mixture gender.

This section assessed the impact of demographics on utilization of TM over OM. For example Gyasi (2014) revealed that demographic factors such as age and sex influence the utilisation of TM. Based on Gyasi's (2014) argument, Osamor and Owumi (2010) indicate that in urban Nigerian community utilisation of TM by hypertensive patients is influenced by gender, marital status and belief in supernatural causes. Also Ni et al (2002) noted that age, educational level and

income are associated with utilisation of TM. Barker et al. (2001) in a study of found that visits to TM providers and the use of TM products are correlated with gender, education, age, geographic location, race, poorer health status and metabolic disorders. However some authors' findings are not consistent, with some authors arguing that gender and age are not key factors (Schober, 1997; Wiles & Rosenberg, 2001).

Especially in sub-Saharan Africa and several developing countries women consulted TMPs most (Smith, 1979; Stock, 1985; Buor, 2008a). A review of some literature for example Miles and Bisharat (1990) and Vlassoff (1994) cited in Vlassoff (2007 p. 53) suggests that women in developing countries including Ghana are more inclined to traditional medical care while the men prefer OM care. In concurrence with other studies (Ahmed et al., 1999 cited in Gyasi, 2014 p. 82) they found that the majority of those seeking the help of TM practitioners are women. The reason for choice of women is that they are saddled with too much house chores hence does not have enough time on their hands to visit the hospitals. Also it is very affordable and can pay later for the services and the TM practitioners explain everything in a way the women can understand (Miles & Bisharat, 1990; Vlassoff, 1994 cited in Vlassoff, 2007 p. 53)

In another study, it has been identified that children have been the major users of TMs in Nigeria and Ethiopia (Nigeria & Ethiopia Kroeger, 1983 cited in Gyasi, 2014 p. 82).

Other studies did the comparison from the social, national and international structures. Based on this premise, Berhane et al. (2001), claims that the young and educated participants in this urban area consulted TM practitioners more than the old. On the other hand, some other writers assert that TM is mostly used in the rural settings of developing countries due to poor access to OM (Smith, 1979; Stock, 1985; Buor, 2008a).

From the perspective of income, Gyasi et al. (2011) identified that current financial and economic strains partly explain the wholesome utilisation and patronage of TM in developing countries because of its relative cost-effectiveness. For example a group of researchers proved the hypothesis that high income earners attend hospital more often than low income earners (Buor, 2003; Delanyo, 1992; Ensor and Pham-Bich-San, 1996; Pickett and Hanlon, 1990; Habib et al, 1986).

This partly explains why the low income earners prefer the TM to OM because is affordable and very accessible. For example Gyasi et al. (2011) in their study identified that TM is generally affordable and therefore patronized and used by mostly the rural poor who may not be able to afford the orthodox medical care. The relative lower prices of TM according to van den Boom (2008) is because the transaction cost is very minimal to the client. In addition, the TM practitioners do not give flat rates but consider ability to pay and accept different modes of payments which is not the case with OM facilities (Sato, 2012d; Hausmann-Muela, 2000).

From the anthropological perspective using a unique survey to assess the effects of attitudes and beliefs on TM utilization, Sato (2012c) empirically found evidence to suggest that cultural attitudes and beliefs influence the utilisation of TM.

The psychosocial factors on the other hand suggests that some patients use TM because they are dissatisfied and uncomfortable with OM due to the perception of it being ineffective, expensive or have unpleasant side effects (Menniti-Ippolito, 2002; Sutherland, 1994), while others find TM attractive because it resonates with their personal values, religious and health philosophies (Furnham and Forey, 1994; Vincent and Furnham, 1996; Bishop et al, 2007; Moore et al, 1985).

In summary, this section suggests that the use of TM can be found among women, young educated adults in the urban areas, children, and low income earners. Also it asserts that TM from a general perspective has high patronage among folks in the rural areas than the urban areas. Again some authors reveal that there is high patronage for TM over OM because of personal values, religion, health philosophies, belief and cultural attitudes.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

Methodology is the philosophical basis on which a study is founded. It is therefore used to achieve the objective of the study. It provides a detailed account of the process, method and design with which the research was conducted.

The methodology section explains the research design, study area, sample for the study and highlights on the following: instruments, data collection procedure, data analysis, credibility, and ethical considerations.

3.1 Research design

The study was a survey that which adopted a qualitative approach (in-depth interviews) to conduct systematic investigations on the topic in order to elicit rich and real information from participants. It also used explanatory and exploratory designs to enrich the outcomes as well as for making the recommendations applicable to the entire health sector in Ghana. Structured observations of clinical consultations at the TM unit were also conducted.

3.2 Study area

The study was carried out in the Ledzokuku-Krowor Municipality hospital, in the Greater Accra Region of Ghana. The Municipality shares boundaries with La Dade-Kotopon Municipality to the west, Tema Metropolis to the east, Ashaiman Municipality to the north and the Gulf of Guinea to the South, and its capital is Teshie-Nungua. The Hospital, which was established as part of Ghana and China collaboration, is equipped with maternity, laboratory, ear, nose and throat, out-

patients and dermatology departments. It also has a department for the practice of TM.



Figure 2: Geographical location of the study area (LEKMA hospital)

Source: Muftawu (2014)

The LEKMA Hospital has a staff strength of 16. These include medical doctors and nurses. There are 110 health extension workers. The average daily out-patient hospital attendance is 200 clients per day (Muftawu, 2014). The TM department which offers acupuncture, massage and herbal medicines sees an average of 4 patients a day (Head of TM Unit LEKMA, 2017)

3.3 Study population

Sekaran (2001) defines a population as “the entire group of people, events or things of interest that the researcher wishes to investigate.”

The respondents in this study consisted of doctors, nurses, pharmacists, patients, and clients that practice and patronize traditional and orthodox medicine at LEKMA Hospital in Ghana.

3.4 Sample (participants)

A non-probability sampling method was used with direct attention to purposive sampling (Grinnell, 1997). The study employed convenience sampling for patients and clients and purposive sampling for LEKMA Health Service officials. These sampling methods facilitated easy and quick data collection.

The anticipated total sample size for this study was 12. Based on the total sample size, the OM practitioners were expected to be represented by 6 participants (3 medical practitioners; 2 pharmacists and 1 administrator) whiles TM practitioners were to be represented by 3 TM practitioners (2 TM doctors and 1 TM pharmacist). The remaining 3 participants were to be TM patients excluding children below 18 years. These individuals were given to the researcher by management of the hospital after seeking their consent prior to data collection.

3.5 Pretesting

A pilot study was conducted at the Tema General Hospital because it has integrated TM and OM in its health-service delivery. This exercise helped to identify the strengths, weaknesses and validity of the interview guide for further improvement. For example the pre-test findings showed that referrals were mostly done by TM

practitioners unlike OM practitioners. Again even though efforts were being made to ensure integration among TM and OM practice, the main challenges were emanating from the OM practitioners. Thus, the actual study sought to investigate these findings among other objectives to ascertain whether the situation prevails in other hospitals with both practices running concurrently.

3.6 Instruments

In-depth interviews were conducted using a guide that was pre-tested at the Tema General Hospital. All interviews were tape-recorded. Observational notes were also taken during the process. This approach was used because it afforded easier, quicker, and cost-effective data collection within the limitation of time and resources. It offered a context-rich qualitative approach to data collection. Data collection was completed within a period of two weeks.

3.7 Data collection procedure

The use of the in-depth Interviews help to detect and find missing clues that can be put together to fill the gaps (Merriam, 1998). Furthermore, it helps in the observation of the behaviour and perception of participants whilst gathering the data and critically identify the main challenges associated with integration.

It offered interviewees the opportunity to express their views in a manner that adds some new discoveries and understanding to the research investigator's study. The questions asked revolved around the research objectives.

The interviews were conducted in English and the notes were simultaneously collected by the interviewer from participants. Data were recorded and written in the process of the exercise. Since it involved free flow of conversation, it helped

interviewees effectively express their views in a manner that adds some new discoveries and understanding to the study.

The interview guide was developed based on themes directly developed from the objectives of the study. Individual participant's interviews were carried out at their respective offices. The face-to-face exercise helped make it possible to observe the behavior and perception of participants and other situations that directly related to issues raised during the interview. A non-participant observation was also carried out at the hospital premises by the researcher to ascertain the procedures and existing facilities available to cater for the needs of patients, and whether these enhance the integration process. The researcher spent approximately 30 minutes with each interviewee.

Subsequently the data collected were transcribed into meaningful information bringing to the fore the issues, their effects and the necessary recommendations.

Data sorting and transcription took a maximum of 7 days bringing the total period of data collection procedure and analysis to 11 day. Hence the length of time used for the interview was 4 days while that for the analysis was 7 days which brings the total duration for the exercise to a maximum period of approximately 2 weeks.

3.8 Data analysis

Data collected was qualitatively analysed by coding the responses from interviewees in order to give detailed description about the realities and perception of participants on the subject matter. The results were analysed using explanatory research techniques.

Emerging themes were also compared and contrasted with the theories and previous empirical evidence based on the working objectives.

3.9 Clinical observations

After obtaining the consent of patients and TM practitioners, the consultation procedures during four clinical cases were observed. Notes were taken on the amount of explanation offered by the practitioners, the questions asked by the patients, mention of alternative care in orthodox care, mention of side effects of drugs prescribed, assurance of efficacy assessment of the TM drugs prescribed and mention of follow-up care.

3.10 Credibility of the study

The validity and reliability of the project were determined by certain factors. For example the analysis of the interview questions were prepared using similar and past format which had earlier been used to collect data in the petroleum industry. This is because the questions followed a logical format used by earlier researchers in this industry.

Also where the results confirmed earlier findings then there was a high level of consistency hence the outcomes remain valid and hence justified.

Furthermore, the sources of data had knowledge concerning the industry through experience, so the outcomes can be relied upon. Again instruments and procedure used to conduct the research provide high level accuracy, and then the outcomes will be deemed reliable (Cristobel et al., 2007).

3.11 Ethical consideration

Approval was obtained from the Ethical Review Committee of the Ensign College of Public Health. Administrative authorization was obtained from the management of LEKMA Hospital and the clinical staff of the TM department. The researcher also explained in a language that was understood by the potential participants. Lastly participants consent were sought through a letter that was handed to them at the interview site to assure them of strict anonymity and confidentiality. Once they gave their consent, the exercise was carried out.

3.12 Limitations of the study

The study was limited to practices in one public health facility. The findings at LEKMA Hospital may thus not be applicable to private health facilities where similar integrated services are offered. The convenient approach to the sampling of respondents may also have affected the nature of responses obtained. It is possible that those staff who indicated a willingness to be part of the study had characteristics that were different from patients and staff who refused to participate. Another limitation is that the findings cannot be generalized beyond Accra because this study was not a cross-sectional survey. It is limited in the number of interviewees because some of them were no available and also management could not provide the researcher with any larger number of employees.

CHAPTER FOUR

RESULTS

4.0 Introduction

This section analyses and discussed the outcome of the study in tandem with the objectives of the study. In addition, the results were compared with historical research findings in similar areas to ascertain whether the facts have changed or still remain.

4.1 Overview of participants' distribution available for the interview

Demographically, participants interviewed in this study had an age range between 20–58 years and they included 2 men and 7 women. The total expected sample size for this study was 12. The breakdowns for OM staff are as follows: 3 medical practitioners; 2 pharmacists and 1 administrator bringing the expected total of OM practioners to 6 for the study. On the other hand the representation for TM practitioners comprised of 2 doctors and 1 pharmacist making a total of 3 TM practitioners who were involved in this study. Finally the remaining 3 participants represent patients, excluding children below 18 years.

A cumulative percentage of orthodox medical practitioners constituted 50% of the total sample size. However, on the days of data collection, only 3 out of the expected 6 orthodox medical practitioners were available to answer the questions.

On the other hand all 3 TM practitioners who were also purposively selected were fully represented for the interview.

In addition, the expected 3 participants to represent TM patients were available through convenience sampling.

In total n = 9 out of an expected sample size of 12 were available to participate in the interview.

4.2.1 Scope of TM services offered at LEKMA Hospital, Accra

In this section, TM participants were asked the following categories of questions: the kind of TM services LEKMA Hospital offer patients; categories of patients who patronise TM services at LEKMA; gender that shows more interest in the utilization of TM services and products; and the frequent patronage of TM services and products at LEKMA Hospital, Accra.

When the researcher demanded whether the low patronage is because of poor publicity, the response was:

“Yes, in fact from that perspective, I will say our unit has not done well. But we hope to see more improvement in subsequent years”.

[...Dr 1, TM unit]

Fieldworker: Currently what is the scope of services offered to TM patients?.

The response by Dr 1: *“Well for now our scope of services are limited to plant medicine which we refer to as Traditional African Medicine. Apart from that, we offer acupuncture which is mostly used by the affluent”.*

Thus TM services offered at LEKMA Hospital are very limited and hence need further improvement.

Fieldworker: Why is acupuncture an affluent treatment

Dr. 1: *“Well some of the low income earners think they cannot afford it hence do not even ask about it. But I think if we create enough awareness in terms of access and affordability, patients will begin to request for this treatment.*

So I accept that our outfit is not doing much in terms of publicity. But sometimes we go to the surrounding communities around the LEKMA Hospital to sensitize the people about our services, products and where to access us”.

Fieldworker remarks: Then your outfit has much work on its hands this year.”

Dr 1: *“Yes ooo”*

Further findings in this section revealed that gender and age influences patronage of TM services. This result was based on the question: does gender and age influence TM patronage at LEKMA hospital?

The immediate response to the question by Dr. 1 and Dr. 2:

“We mostly have women especially the older ones frequently patronizing our services and products. You know, women tend to take care of their health especially when they are getting older than during their youthful age. I also think they prefer the TM to OM drugs and treatment because of the non-side effects of the traditional medication”.

“So we can say that on average more of the clients we attend to each day are females. In addition most of the folders we have are for older women and few represent sometimes older men.”

“But we sometimes have young female adults patronising our plant medicine occasionally that is if recommended by their peers”.

“Unfortunately the younger male adults hardly patronize our services but it is not the same for the older men who come to our facilities for treatment for certain long term ailments and other common sickness such as prostate and stroke”.

The fieldworker also assessed what factors influences the young adults use of TM at their facility. The response of Dr. 1:

“I have a few young patients who only use our service and products based on recommendations or referrals by OM practitioners. But this is not frequent. The handful I have encountered only come to us for specific treatment like low sperm count and STIs. The STIs are completely treated without side effects unlike some of the OM drugs”

Again the findings shows that young men use TM but for specific treatments such as prostate and early stage stroke. For example this is how Dr 1 responded indicating that some young men use TMs products at LEKMA Hospital.

“I can say that most of the young men that I have encountered at our facility are those seeking lasting solution to prostate and early stage stroke and in some cases diabetes”.

They further indicated that the Hospital had not got any statistics to determine the number of people that use their services in a day however this could be assessed from the records of individual patient’s folder.

The findings revealed that income levels determine choice of service.

“The high and middle income groups usually request for acupuncture treatment than the herbal medicine. I think their choice is influenced by their knowledge and ability to finance such treatment”.

“I hardly hear lower income earners request for acupuncture”.

The findings show that the low patronage for the younger folks due to wrong perception; inadequate awareness; upbringing and in some cases belief systems.

In terms of attendance, participants recounted that it was difficult to tell whether there has been frequent patronage in that there is not much consistency in terms of the day that patients utilized their services and products. According to participants, for some days they experience full capacity and other days, the patients who walk in are very few compared to the expected average.

The findings show that currently there are only two types of services offered by the TM unit at LEKMA Hospital. Again the finding shows that older women; more females and lower income groups usually patronize their services.

Finally the results reveal that there are inconsistencies in frequent patronage this can be assessed by referring to the records of patients' folders. However some medications have had regular patronage such as malaria drug, typhoid, stroke and diabetes medications among others. This could be an indication that TM practice is gaining foothold in the health sector.

Dr 2 and ...: *“Sure. Even we get walk-in clients who request for medicines for the treatment of chronic disease example: diabetes, stroke and malaria”.*

TM Pharmacist: *“I have encountered people who walk-in requesting for our herbal medications. But it is a policy not to sale over the counter drugs so I usually advise them to see the doctor first”.*

4.2.2 Challenges confronting TM practices

Some researchers have recounted that TM practice is facing several challenges either by low finance and most importantly regarding the WHO policy on integration. Thus this section sought to examine whether these challenges still existed and particularly in Ghana. Therefore the questions that were asked were as follows:

Fieldworker: Do you know any OM practitioner in LEKMA Hospital?

“Ooo yes, I know most of them but we hardly have time to meet and discuss anything concerning best practices that any of us can learn from each other”.

[Dr 2, TM unit]

[Dr 1 had stepped out to attend to a patient. So Dr 2 took over].

Fieldworker: Any formal or informal knowledge about OM?

“I have formal knowledge about OM practice. In fact it was part of my first year programme until I branched off to do plant medicine.”

[Dr.2, TM Unit]

Fieldworker: Has your knowledge on OM been integrated into service delivery for your patients?

“ Yes I use all the knowledge acquired from school to provide quality service for my patients. If a patient is reporting for the first time, I interview them like

the OM practitioners to identify the underlying cause of sickness before I request for a laboratory confirmation”.

[Dr.2, TM Unit]

“I also direct the patients to use the OM laboratory facilities in the hospital. When they bring back the report I conduct an analysis and then prescribe the appropriate treatment using plant medicine”.

[Dr.2, TM Unit]

Fieldworker: Any major challenges encountered operating TM services using OM facilities.

“Well for now I will say there is no cause for worry. OM practitioners have their method of service delivery which is different from ours hence there is no clash in using the facilities”.

[Dr.2, TM Unit]

“We are matured adults doctors hence there is no need of having misunderstanding in our attempt to bring relief to our clients”.

Fieldworker: Any major challenges affecting the sale of TM products at LEKMA Hospital.

“Since I started my practice and even my duties here at LEKMA Hospital I have not encountered any challenges in with regards to the sale of our TM products at LEKMA Hospital”.

[Dr.2, TM Unit]

Fieldworker: Encouraging competing practices of TM with OM practices.

“Whether OM has been safe for use since inception; whether between TM and OM, which one they will recommend to patients as initial medical attention; whether they will study any aspect of OM and use it in the delivery of service to patients if given opportunity; whether they have ever referred any patient to an OM practitioner; and the number of times OM practitioners have referred a patient to them”.

A summary account of participants responses were that they know some of the OM practitioners at LEKMA Hospital and a few believe in TM hence they do refer a few patients to them especially when the patient’s illness defies orthodox treatment. In fact participants mentioned that sometimes the OM practitioners who have knowledge about the efficacy of TM usually refer their family members to them and also these same OM practitioners do use the TM health facility.

Participants further revealed that they have some formal knowledge about OM practice which is taught at their first stages in the university before they branched off to do TM as a specialized field of study.

“I have knowledge about OM practice because was part of the general course taught in my first year at University before I opted for plant and herbal medicine”

[Dr 1, TM unit]

Participants further revealed that TM practice allows them to *perform all the OM services* including consultations, diagnoses and treatment with the exception of surgery, infusions in emergencies and life support issues among other critical conditions.

The results revealed that TM practitioners do not face any major challenge *operating from LEKMA Hospital facility* except for the few doctors who sometimes tease them of their existence.

“I carry out my duties without any interference from OM practitioners. None of the OM practitioners have approached us condemning our use of their facility”

[Dr 2, TM unit]

The outcomes indicate the sales of herbal drugs and orthodox drugs simultaneously at LEKMA hospital has not led to any conflict or competition among TM and OM pharmacist. Pharmacist's comment is that:

“There is no way the sale of TM drugs will lower the sales of OM drug. The reason is that TM drug compositions and efficacy levels are very different from that of OM”.

[Dr 3, OM unit]

Accessibility of TM drugs based on physician's prescription according to the findings.

“I do not and will not sell our herbal medicine to patients without prescription. This is very common with OM pharmacies where some types of medication are sold over the counter”.

[Pharmacist, TM unit]

However, according to participants, patients have the *option to request for the use of TM treatment and medication* after being diagnosed by the OM practitioner at LEKMA Hospital. This according to them is common with diabetes, hypertension, hepatitis, malaria, fever, and some chronic diseases among others.

The *issue of co-equals* according to participants of TM is non-existent because the kinds of services they offer are entirely different from that of OM. Therefore they do not see an issue of competition in terms of the practice. They even mentioned that there are certain effective practices they know that the OM practitioners do not know and vice versa.

“No. As far as am concerned there is no competition between TM practitioners and OM practitioners. My approach to treating patients is entirely different from that of the OM. So for me, there is no issue of co-equals here”.

[Dr 2, TM unit]

Participants in response to *initial recommendation for treatment* stated that it is contingent on the kind of health condition because some illness such as heart diseases, surgery, providing emergency and life support services are mainly found with OM facilities.

'I remember that cardiac issues and emergencies to this facility are referred to OM facilities of stabilization because TM practitioners do not deal with issues like surgery, anesthesia, and the provision of oxygen among few others.

The second doctor said',

"When such serious issues are referred to us and I am available, I give first aid to control the negative impact of the problem and refer the patient to a nearby OM facility"

[Dr. 2- TM Unit]

"So it is only when the patient has been diagnosed and the underlying problem identified then I can come in to provide lasting treatment using their medication".

In terms of *drug safety*, TM participants mentioned that some of their patients who have been on long term orthodox medication complained of various side effects. Participants further indicated that most of the OM medications have contraindications and side effects as stated in some aspects of the literature review. However, they added that in the case of TM there is hardly any side effect unless the user abuses the medicine such as an overdose.

"I cannot remember any of our clients complaining of side effect. You see, plant and herbal medicine has undergone several innovations and improvement thus addressing the issue of safety"

[Dr 1, TM unit]

Notwithstanding, participants said they are *willing to learn more about OM* to expand their knowledge on health issues.

“I have already been attending seminars in China to enhance my knowledge in my profession. However, I will not hesitate to get more information in OM through formal education to deliver health services of both worlds to the patients”

The finding reveals that *referral of patients to OM practitioners* is common with TM practitioners.

“Both of refer patients to with serious life threatening cases to OM practitioners”

All the same participants were grateful that there has been some *gradual improvement in the relationship between TM and OM practice* and that they are very optimistic about further deepening of the integration however they said it requires some high level acceleration in order to meet the full health care demands of Ghanaians.

A summary of the findings shows there are low referrals from OM practitioners to TM practitioners. In addition it was identified that OM health care has been the initial preferred treatment for patients as against the traditional medical treatment. Further findings also suggest that TM practitioners themselves are a contributory factor to their own problems in that their actions most of time projects the OM practice and practitioners over and above their profession. For instance TM practitioners in this study were found to be referring patients to OM practitioners or to their health care centres. This practice has been a very common phenomenon with

TM practitioners according to the findings. However, the same cannot be said of OM practitioners as found in this study. For example, TM participants revealed that OM practitioners rarely referred sick persons to their facilities as a centre for initial treatment. In other words one of the major problems confronting TM practice is the low regard in attitude and behavior for their profession by the OM practitioners culminating in low attention from the public toward their practice.

4.2.3 Acceptability of OM by traditional practitioners

Participants were further assessed on their acceptability of OM. Thus they were asked the following questions; whether: “they will encourage TM practitioners to be trained as surgeons; they will encourage government to put up state of the art health facility for TM practitioners to perform same functions of orthodox medical practitioners; they accept to collaborate with TM practitioners to take critical health decisions concerning the life of a patient; and agree to any government policy that reforms the curricula of medical school to include specific areas of TM”.

In terms of getting trained as surgeons:

“I will be happy to receive training in surgery so that patients on emergency that need immediate help could receive immediate medical attention instead of being referred to an OM practitioner”.

[Dr. I....]

“This has created negative perception or erroneous impression that OM is superior to TM practices which derogatory”.

“I also think government must pay attention to providing a state of the art facility as a TM training center. This will go a long way to help us improve our skills in TM and some aspects of OM.

Participants’ assessment on collaboration between TM and OM practitioners is welcomed since it will help in decision making in the health sector.

“I welcome collaborations between TM and OM practice because each of our professions will complement each other where there are weaknesses”.

[Dr. 1]

The government is expected to hasten policy reform to incorporate critical aspects of TM in the Ghana Medical School curricula.

“I will well be glad in given opportunity by low to have our TM programme infused into the Ghana Medical School curricula”.

“I strongly believe this is a step in the right direction to deepen the level of integration because OM practitioners will acquire knowledge about TM”.

The findings show that TM practitioners are ready for total collaboration with the OM system from the educational front, and equal opportunities at the decision table.

4.3 Response from orthodox medical practitioners

This section assesses the attitude of OM practitioners towards TM, and acceptability of TM by OM practitioners.

4.3.1 Attitude of orthodox medical practitioners towards TM

In order to identify the attitude OM practitioners towards TM, the researcher asked the following question: whether OM practitioners at LEKMA Hospital know any TM

practitioner in their hospital; whether OM practitioners have any formal or informal knowledge about TM; whether OM practitioners who have knowledge about TM have incorporated them into the delivery of service to patients; the major challenges confronting them for allowing TM practitioners to share LEKMA Hospital facilities; whether the demand for traditional medicinal products has affected the sale of pharmaceutical products at LEKMA Hospital; whether they see TM practitioners as co-equals in the health sector; whether they will encourage competition from TM practices; whether the use of TM has been safe; whether between OM and TM, which one will they recommend to patients as initial medical attention; whether they will study any aspect of TM and use it in the delivery of OM service to patients at LEKMA Hospital if given the opportunity; whether they have ever referred any patient to a TM practitioner; and the number of times patients have been referred to them by TM practitioners.

The summary of results in this section recounts that OM practitioners said they *know the LEKMA Hospital TM practitioners* and once in a while they refer patients to them. However, they were quick to add that the TM practitioners in terms of numbers are in the *lead in referring patients to them*. They further revealed that they have *informal knowledge about TM* due to the help of their parents however they would not mind getting some short term formal knowledge in TM to understand better those who operate in this field. They confirmed that because they lacked the formal knowledge about TM that is why they do not incorporate it into their service delivery activities.

Notwithstanding OM participants indicated they do not have any problem with TM practice operating within the LEKMA Hospital facility and also there is *no form of competition* between them hence *no issue of co-equal*. They further added that the demand for TM drugs by some patients is not a threat to them because their main goal is to see patients get healed after patronizing the services at LEKMA Hospital.

OM participants stated that they *have seen improvement in the health of patients' who go for herbal or plant medicine*. They also stated that most OMs have side effects but in the case of TMs it happens when there is an abuse, in other words indicating that TM is safe.

The finding reveals that TM is leading in referrals to OMs. The doctors for OM revealed that they have informal knowledge about TM thus the limitation in incorporating it into the delivery of service however they are willing to collaborate with TM practitioners since they are not in competition in anyway. The findings reveal that the use of TM drugs is safe and its sale in LEKMA Hospital is not in any way negatively affecting sale of the orthodox medicine.

4.3.2 Acceptability of traditional medicine by orthodox medical practitioners

Assessing acceptability of TM by OM practitioners involved the following questions: whether OM practitioners will encourage TM practitioners to be trained as surgeons; whether OM practitioners will encourage government to put up state of the art health facility for TM practitioners to perform same functions of orthodox medical practitioners; whether OM practitioners will accept to collaborate with TM practitioners to take critical health decisions concerning the life of a patient; and

whether they will agree to any government policy that reforms the curricula of medical school to include specific areas of TM.

The participants in this section support the need for *TM practitioners to be trained as surgeons* in order to handle emergencies in the absence of an OM especially in the villages. They further support the idea of a *state of the art facility to be built by government for TM practitioners* in the three major capital cities of Ghana.

Again the OM practitioners said they *are already in collaboration with TM practitioners* however they look forward for further strengthening of the relationship for health sector policy development. However they mentioned that certain mechanisms must be put in place to ensure that there will be no functional overlaps in the process. Participants further stated that the only way for effective integration is government *to expand and incorporate critical aspects of TM* in the Ghana Medical School curricula.

The findings in this section reveals that OM practitioners are ready for a reasonable level of integration at policy level, educational programs and the decision making level of the health sector.

4.4 Response from users of plant medicine at LEKMA Hospital

This section assessed patients' perception on plant medicine service delivery at LEKMA Hospital. Some of the areas considered were the following: scope of traditional medicine offered at LEKMA Hospital; perception of TM acceptability by orthodox medical practitioners; and perception of OM practitioners' attitude toward TM.

4.4.1 Scope of TM Offered at LEKMA Hospital

The assessment of the scope of TM offered at LEKMA Hospital raised the following questions: the kind of services offered by the traditional medical unit of the LEKMA Hospital; whether the TM services and products meet patients' current health requirements; and patients' frequent level of TM services and products patronage at LEKMA Hospital.

The summary of patients on this matter revealed that the TM unit of plant medicine at LEKMA Hospital treats malaria, diabetes, stroke, hypertension and hepatitis among others.

Again the participants stated that TM services and products offered by the TM unit meet their current health requirements. For example a lady who did not state the actual illness she came to treat indicated that she went through all the necessary diagnoses and started treatment using TM. According to the account, she has seen drastic improvement in her health just as her friend who recommended the TM unit at LEKMA Hospital.

Similarly an elderly man who brought his wife a stroke patient for treatment indicated that he has seen drastic improvement just after two weeks. According to him, the wife could not walk but since the treatment started she is now able to walk.

In terms of frequency of traditional medical services and products patronage at LEKMA Hospital, participants stated that they only frequent the facility based on the appointment with the doctor or after they have completed their medications.

The findings reveal that TM can be used to treat several types of ailments. In addition the findings from patient participants show that TM treatment is effective. Lastly the findings from patient participants revealed that frequency of use depend on doctor's request or after taking last medication.

4.4.2 Patients perception concerning acceptability of TM by orthodox medical practitioners

The sub-heading under 4.4.2 was used to assessed the following questions whether: patients encourage the idea that TM practitioners to be trained as surgeons; patients encourage government to put up state of the art health facility for TM practitioners to perform same functions as OM practitioners; patients accept OM practitioners to collaborate with TM practitioners to take critical health decisions concerning the life of a patient; and patients agree to any government policy that will reform the curricula of Ghana medical school to include specific aspects of TM.

In summary, participants said that they support the idea of TM practitioners being trained as surgeons, for government to construct a state of the art health facility for TM practitioners, and accept the idea that OM practitioners collaborate with TM practitioners to make critical health decision concerning the life of patients. They also indicated that they look forward to government curricula policy reform for the Ghana Medical School to incorporate TM know-how in order to keep OM practitioners informed about the best practices which they can incorporate into their service delivery.

The finding shows that patient participants are very confident and have a positive attitude about the TM service quality hence the acceptability of TM and OM integration from training, improved curricula for education, and collaborative decision making at the policy level.

4.4.3 Patients' attitude towards OM and TM

The section was used to assess the following questions: “the major challenges using TM services alongside OM services; whether TM is safe for use; which of the two TM and OM, has dangerous side effects; which of the two TM and OM, has exposed the patient to any form of relapse; which of the two TM and OM, requires high compliance schedule; whether patients know when and where to access TM at LEKMA Hospital; which of the two TM and OM is their initial option for treatment when they fall sick; whether TM offers them correct doses like OM; and which of the two TM and OM comes first to them”.

A summary of data collected from participants representing TM users at LEKMA Hospital indicated that they were of the view that there are not much issues using TM service alongside OM services. However, the only challenge according to them is that a patient who is on OM treatment need to consult the OM practitioner before engaging a TM treatment or medication to avoid certain risks due to chemical conflicts between the drugs. Notwithstanding, the participants have not experienced any relapse or side effects after using TM for more than a year hence it is safe for use. They also added that each medication has a measured dosage hence no need to worry because there is high level of compliance by the drug producers. They also stated in both cases of TM and OM, they both require high level of compliance in

terms of service delivery and patients taking their medication on religious basis as prescribed by the health official.

Participants further stated that the type of illness and affordability are some of the factors that will determine which of the treatments should be applied first. They mentioned that with issues like malaria, fever, hepatitis, stroke and diabetes they could initially opt for TM services however if the situation is an emergency and requires surgery, they will use the OM services.

The findings reveal that patients have a positive attitude toward TM and OM in that they have the option to choose which one best suits the illness type and its level of affordability. According to the participants both of the methods have high compliance and most especially the TM is very safe to use if the patient sticks to the dosage.

4.4.4 Patients customs and religious background acceptability of OM and TM

This section examined the impact of patients' customs and religious background acceptability of OM and TM at LEKMA Hospital. The questions asked were as follows: whether patients' religion and customs accept the use of TM and OM; and whether patients' religion and customs allows them to use TM alongside OM.

A summary report of participants' for this section indicated that patients' customs and religious background does not influence their choice of health treatment. According to them the decision as to which of the two is the best option for them depends on the type of ailment. In addition participants stated that their religion and

customs does not prevent them from accessing TM alongside OM. However, they stated that it is their choice if they want to use both at the same time but for health risks they will prefer advice from the health practitioners.

The findings reveal that religion and custom do not influence the choice of treatment and whether to simultaneously use both methods to treat an ailment.

4.5 Results from clinical observations

During the structured observation, It was realized that there was very little discussion with patients about the integration of OM and TM and the referral system between the two is poor. An observation was made on the patients in the area of follow up care where they said it was lacking. Both TM practitioners and patients often lamented the fact that herbal medicine does not appear to have the same *privileges* in terms of Government support as OM. Patients often enquired whether the NHIS will cover the cost of the TM medicine prescribed. The response in all cases was no. This came to patients as both surprise and disappointment.

CHAPTER FIVE

5.0 DISCUSSION

The current findings which revealed that acupuncture and traditional African medicine or plant medicines form part of the TM services offered to sick people is consistent with previous studies by Muwah (2012), Mensah (2002), Agyare et al. (2001) and WHO (2001) TM services include acupuncture and plant medicine.

Again the finding of the study revealed that TM treatment can heal a wide range of diseases is consistent with the past studies by Vedavathy (2003) and Zubane (2001) that TM heals several diseases.

The findings indicate that TM is very efficacious hence is not seen as a challenge for OM practice thus affecting integration is consistent with the past research by Addae-Mensah (1992) that scientifically, the use of herbs or medicinal plants have proven to be effective for the treatment of various endemic ailments. Our finding is not consistent with past research by Roufogalis (2015) whose study revealed that human clinical safety and efficacy is a challenge for TM practice which is negatively affecting integration.

In terms of demographics, the findings reveal that the gender which mainly patronizes and uses TM are women. This result is consistent with previous studies by Miles and Bisharat (1990) and Vlassoff (1994) cited in Vlassoff (2007 p. 53) that women in developing countries are more inclined to the use of TM than men.

The results also revealed that lower income earners are mostly those who patronize the services of TM. This result is consistent with past study outcomes by Gyasi et al.

(2011) who reported that TM is generally affordable and therefore patronized and used by mostly the rural poor. The findings confirm that the price of TM services is lower hence the usage is consistent with van den Boom (2008) who stated that due to the relative lower prices of TM the transaction cost is very minimal to the client.

The results show that there is collaboration between TM and OM practitioners at the hospital which indicates acceptance of OM by TM practitioners. This is consistent with past studies by Islam and Wiltshire (1994) cited in Gyan (2014 p. 60) who found that collaboration means acceptance. Further proof of acceptance was the result of TM and OM practitioners at LEKMA Hospital working together, consistent with previous research by Anyinam (1989a), Havi (1989) and Tabi et al. (2006), indicating that TM and OM practitioners operating simultaneously implies acceptance of each other's mode of operations. The finding is however not consistent with that of Hyma and Ramesh (1994) and Asante and Avornyo (2013) who found that OM practitioners are against the integration of OM and TM by showing that TM practitioners are suitable for inferior structures especially in terms of hospital facilities.

Furthermore the findings shows that both OM and TM practitioners have accepted each other and show positive attitude toward each other at LEKMA Hospital hence TM using a scientific approach to deliver its services, consistent with Mutabazi (2008) who found that TM practitioners now diagnose and treat patients ailments in more scientific-based approach .

Also the study revealed that the attitude OM practitioners shows willingness and interest to learn the TM approach to treatment supporting earlier studies by several authors, including to Awad et al. (2012), Harris et al. (2006), Hussain (2012) and Tiralongo and Waltis (2008) who found that medical and pharmacy students of OM have shown increased interest and positive attitude towards TM and including it in their academic curricula.

The study further reveals that acceptance and positive attitude of OM and TM practitioners towards each other can be influenced by education and training is consistent with earlier study by Mutabazi (2008) who found that implication of integration means but not limited to training and education,

The findings again showed that religion is not an obstruction for the acceptance of TM by patients. However, in an earlier study, Abdullahi (2011) found that religion among other factors negatively affect the acceptance of TM. The findings in Accra among users of TM is not influenced by religion is not consistent with Bishop et al. (2007); Furnham and Forey (1994); Moore et al. (1985); and Vincent and Furnham (1996) in their earlier research report indicating that the use of TM is influenced by religion.

Again the findings that found that the use of TM is not influenced by custom is not consistent with Sato (2012c) who empirically found evidence to suggest that cultural attitudes and beliefs influence the utilization of TM.

The study reveals that in Ghana there is collaboration between OM and TM practitioners indicating acceptance and positive attitude toward each other. Therefore

integration of TM into OM has started well. However, there is still the need to deepen the integration in terms of knowledge especially with the OM practitioners and government support in terms of infrastructure to the TM practitioners.

Also the TM practitioners have a huge role to play in terms of publicity since the young adults do not show much interest and OM practitioners do less referrals. Once these and more are taken seriously by government and the TM practitioners it will increase the level of awareness and enlarge their scope of service delivery.

The integration of TM and orthodox practice at LEKMA Hospital offers a good case study for other facilities in Ghana that wish to implement the policy of the Ministry of Health and Ghana Health Service directive to establish TM units in each hospital-level facility.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.0 Introduction

This section summarizes the study outcomes, concludes on the results as to whether the historical facts are reliable or needs to be amended based on current findings. The recommendations are drawn from the findings to provide a solution to the challenges facing the integration policy of TM and OM practice in Ghana.

6.1 Summary on the findings on factors that influence the use of TM

The findings indicate that demographics play a major role in the use and patronage of TM over OM. For example the study reveals that women in general and young educated females are mostly the gender type in the urban cities who patronize and use TM.

6.2 Summary of the findings on TM practitioners

The findings show that currently there are only two types of services offered by the TM unit at LEKMA Hospital. Again the finding shows that older women; more females and lower income groups usually patronize their services. Finally the results reveal that the frequent patronage is inconsistent and hence cannot be determined off-head without referring to the records of patients folders.

The findings shows that there is low referrals; OM is regarded as the initial recourse to health treatment; the behavior of the TM practitioners seems to place the OM practitioners on a high pedestal by being the initial recommendation for medical attention; TM taking some training on OM at the first year of University but OM

does not; and TM practitioners seem more ready for deeper collaboration than OM practitioners

The findings show that TM practitioners are ready for total collaboration with the OM system from the educational front, and equal opportunities at the decision table.

6.3 Summary of the finding on OM Practitioners

The finding reveals that TM is leading in referrals to OMs. The doctors for OM revealed that they have informal knowledge about TM thus the limitation in incorporating it into the delivery of service however they are willing to collaborate with TM practitioners since they are not in competition in anyway. The findings reveal that the use of TM drugs is safe and its sale on the premises of LEKMA Hospital is not in any way negatively affecting sale of OM.

The findings in this section reveals that OM practitioners are ready for a reasonable level of integration at policy level, educational programs and the decision making level of the health sector.

6.4 Summary of the findings on users of plant medicine at LEKMA Hospital

The findings reveal that TM can be used to treat several types of ailments. In addition the findings from patient participants show that TM treatment is effective. Lastly the findings from patient participants revealed that frequency of use depend on doctor's request or after taking last medication.

The finding shows that patient participants are very confident and have a positive attitude about the TM service quality hence the acceptability of TM and OM

integration from training to improve curricula for education, and collaborative decision making at the policy level.

The findings reveal that patients have a positive attitude toward TM and OM in that they have the option to choose which one best suits the illness type and its level of affordability. According to the participants methods have high compliance and most especially the TM is very safe to use if the patient sticks to dosage.

The findings reveal that religion and custom do not influence the choice treatment and whether to simultaneously use both methods to treat an ailment.

6.5 Conclusions

The purpose of the study was to investigate the integration of TM into orthodox practice using LEKMA Hospital in Accra, Ghana as the case study. Even though Ghana has a policy on the integration of TM into OM practice, the policy implementation is lacking.

Thus the study sought to identify the existing challenges; attitude of practitioners on both sides towards the integration and acceptability by the practitioners and users.

A qualitative method was used for the study and hence allowed the researcher conduct interviews on the subject matter.

The outcomes show that there is some good level of integration but then the government must play a major role in deepening the integration by introducing and enforcing specific policies in the area expanding the curricula of Ghana Medical School to incorporate TM practice and also create an equal platform for them to

sensitize the Ghanaian youth on their existence and the efficacy of the drugs and treatment.

6.6 Recommendations

Based on the findings of the study, recommendations were made to the following; the Orthodox Medical doctors, Ministry of Health and LEKMA hospital.

Orthodox Medical Doctors

Doctors from the orthodox practice should acknowledge the clinical use of herbal medicine and team up with staff at the herbal unit to help promote the course of patients who opt for herbal medicines. Doctors should look for opportunities to be educated on herbal medicine. The doctors can participate in workshops organised on herbal medicine. Doctors who are interested in specializing in herbal medicine can enroll in courses on herbal medicine.

Ministry of Health

The Ministry of Health should collaborate with the Ghana Medical School and revisit the curriculum for training doctors to include more on herbal medicine since the Ministry approves its clinical use.

The Ministry should develop a policy that would allow the Ministry of Health to regulate the activities of vendors of herbal medicine or a policy that herbal medicines should not be taken anywhere apart from the hospital to enhance the image of herbal medicine in the hospital and among the public. The MOH can also find a way to get all traditional herbal practitioners on board so that workshops and intermittent training can be organized more frequently for them to upgrade their knowledge. The

Ministry must together with the stakeholders revise the drugs covered by NHIS. Herbal medications should be included in the drug list covered by NHIS so that patients who are interested in herbal medications would be taken care of.

LEKMA Hospital

The findings showed insufficient commercialization of herbal medicine by the hospital. If hospitals are now serving herbal medicine then it is necessary for it to be publicized for patients to be aware of the hospital's acknowledgement of herbal medications. The doctors were looking forward to some form of training to enable them push more on herbal medicine. The authorities in LEKMA hospital can help meet this need of the doctors by organizing workshops or in-service training on herbal medicine monthly for the doctors; perhaps all other staff at the hospital should be included except those at the herbal unit.

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APPENDICES

Appendix 1

CONSENT FORM

Dear Participant,

I am a Master of _____, student at -
_____. I am conducting a study on
_____. Your district has been selected as
study areas. I wish that you take full participation in the survey through interviews
administration. The information you provide will be used in a research activity
designed to produce scientific knowledge. It will medical staff of this hospital to
understand and appreciate the importance of integrating traditional medicine into
orthodox medicine in order to provide holistic healthcare delivery system to patients
at any given time. In addition it will help health care professionals provide quality,
safe and effective treatment for the people in the district and other neighboring
districts.

Participation is completely voluntary and participants reserve the right not to answer
certain questions or withdraw at any time in the course of the interview
administration without any penalty.

By signing or thumb printing this form, you are giving your consent to participate in
the study. Notice that whatever information you disclose will only be used for
academic purposes and will be treated as strictly confidential as possible and it will
be reported in a way that no one will know your specific answers.

If you have any question and queries concerning this research, please do not hesitate to contact me on +233..... You may also contact my Lead Supervisor, Dr. (Mrs./Mr.)on (+233.....) Co-supervisor, (+233.....) from Department of, Ensign....., Aburi, Ghana.

Thank you for your participation.

Sincerely,

SIGNED

Akosua.....

Department of

Ensign....., Aburi, Ghana.

Appendix 2

INTERVIEW GUIDE

SECTION A: TRADITIONAL MEDICAL PRACTITIONERS

Scope of Traditional Medicine Offered at Lekma Hospital

1. What kind of TM services does Lekma Hospital offer patients?
2. Which categories of patients patronise TM services?
3. Which gender shows more interest in the utilization of TM services and products?
4. How frequent do they patronize TM services and products?

Challenges confronting TM Practices

1. Do you know any OM practitioner at Lekma Hospital?
2. Do you have any formal or informal knowledge about OM?
3. Has your knowledge about OM been integrated into your delivery of service to patients?
4. What are some of the major challenges operating from the OM facilities?
5. What has been the major challenges selling TM products in OM facilities?
6. Do you see OM practitioners as co-equals in the health sector?
7. Will you encourage competing practices of TM with OM practices?
8. Since inception, has OM been safe for use?
9. Between TM and OM, which one do you recommend to patients as initial medical attention?
10. If given the opportunity, will you study any aspect of OM and use in the delivery of service to patients?

11. Have you ever referred any patient to an OM practitioner?
12. How many times has an OM practitioners referred a patient to you?

Acceptability of Orthodox Medicine by Traditional Practitioners

1. Would you encourage TM practitioners to be trained as surgeons?
2. Would you encourage government to put up state of the art health facility for TM practitioners to perform same functions of orthodox medical practitioners?
3. Would you accept to collaborate with TM practitioners to take critical health decisions concerning the life of a patient?
4. Would you agree to any government policy that reforms the curricula of medical school to include specific areas of TM?

SECTION B: ORTHODOX MEDICAL PRACTITIONERS

Attitude of Orthodox Medical Practitioners towards Traditional Medicine

1. Do you know any TM practitioner in at Lekma Hospital?
2. Do you have any formal or informal knowledge about TM?
3. Has your knowledge about TM been integrated into your delivery of service to patients?
4. What are some of the major challenges allowing TM practitioners to share your facilities?
5. Would you say the demand for TM medicinal products is affecting the sale of pharmaceutical products in your facilities?
6. Do you see TM practitioners as co-equals in the health sector?
7. Will you encourage competing practices of OM with TM practices?

8. Since inception, has TM been safe for use?
9. Between OM and TM, which one would you recommend to patients as initial medical attention?
10. If given the opportunity, will you study any aspect of TM and use it in the delivery of service to patients?
11. Have you ever referred any patients to a TM practitioner?
12. How many times has a patients been referred you as an OM practitioner?

Patients' perception concerning acceptability of TM by orthodox medical practitioners

1. Would you encourage TM practitioners to be trained as surgeons?
2. Would you encourage government to put up state of the art health facility for TM practitioners to perform same functions of orthodox medical practitioners?
3. Would you accept collaboration between OM practitioners and TM practitioners in taking critical health decisions concerning the life of patients?
4. Would you agree to any government policy that reforms the curricula of medical school to include specific areas of TM?

SECTION C: LEKMA HOSPITAL PATIENTS

Scope of Traditional Medicine Offered at Lekma Hospital

1. What kind of TM services does Lekma Hospital you?
2. Do TM services and products meet your current health needs?
3. How frequent do you patronize TM services and products at Lekma Hospital?

Acceptability of Traditional Medicine by Orthodox Medical Practitioners

1. Would you encourage TM practitioners to be trained as surgeons?
2. Would you encourage government to put up state of the art health facility for TM practitioners to perform same functions of orthodox medical practitioners?
3. Would you accept that OM practitioners collaborate with TM practitioners to take critical health decisions concerning the life of a patient?
4. Would you agree to any government policy that reforms the curricula of medical school to include specific areas of TM?

Patients' Attitude towards OM and TM

1. What has been the major challenges using TM services alongside OM services?
2. Do you consider TM safe for use?
3. Between TM and OM, which one has dangerous side effects?
4. Between TM and OM, which one has exposed you to any form of relapse?
5. Between TM and OM, which one requires high compliance schedule?
6. Do you know when and where to access TM at Lekma Hospital?
7. When you are sick which of the treatments do you initially prefer, TM or OM?
8. Does TM offer you correct doses like OM does?
9. Between TM and OM, which one comes first for you?

Acceptability of Orthodox Medicine and Traditional Medicine

1. Does your religion and customs accept the use of TM?
2. Does your religion and customs accept the use of OM?
3. Will you use TM alongside OM?

Appendix 3 **BUDGET FOR THE THESIS PROJECT**

Person involved	Number	Unit	Time spent on project	Duration	Total
Project coordinator	1	75	50%	3	225
Research Assistant	2	35	100%	3	210
Data Entry Clerk	1	50	50%	3	150
Statistician	1	50	25%	3	150
Logistics					
Stationary		25	N/A	3	75
Transport and communication					
Internet , Telephone		10	N/A	3	30
Administration					
Project	4	1	N/A	3	120

Meeting		0			
Documentation and dissemination	5	16	N/A	3	240
				Total	GHC 1200

Appendice 4

Time line

ACTIVITY	STUDY WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Proposal and questionnaire	█																	
Submission for GHS approvals		█																
Training of research assistants			█															
Data collection				█	█	█	█	█	█	█	█	█	█	█	█	█		
Data cleaning				█	█	█	█	█	█	█	█	█	█	█	█	█	█	
Development of analysis plan														█	█	█		
Data analysis & report writing																	█	
Dissemination & evaluation																		█