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SUSTAINABILITY OF COMPLEMENTARY AND ALTERNATIVE MEDICINES AT LEKMA HOSPITAL.

BY

ANGELA ABBEY

(10151348)

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DECLARATION

I hereby declare that excluding precise references which have been duly acknowledged, this submission is my own work towards my MPH dissertation and that, to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any of any other degree of the University or elsewhere.

ANGELA ABBEY

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SIGNATURE

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DATE

CERTIFIED BY

PROF MOSES AIKINS

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SIGNATURE

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DATE

LIST OF ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
CAM	Complementary and Alternative Medicines
CHPS	Community- based Health Planning and Services
CI	Confidence Interval
EUROCAM	European Association of Complementary and Alternative Medicines
GDHS	Ghana Demographic and Health Survey
GHAFTRAM	Ghana Federation of Traditional medicine Practitioners Association
GHS	Ghana Health Service
GHS	Ghana Cedi
GSS	Ghana Statistical Service
KNUST	Kwame Nkrumah University of Science and Technology
LEKMA	Ledzokuku Krowo Municipal Assembly
MPC	Medical Practice Council
MPH	Master of Public Health
NHIS	National Health Insurance Scheme
NRC	National Redemption Council
OPD	Out-patient Department
PNDC	Provisional National Defense Council
SES	Socio-economic Status
TM	Traditional Medicine
TAMD	Traditional and Alternative Medicine Directorate
TM	Traditional Medicine

UG	University of Ghana
UHAS	University of Health and Allied Science
USA	United States of America
WHO	World Health Organization

DEDICATION

This work is dedicated to God Almighty for how far He has brought me, God am grateful, my late Dad, Reuben Kofi Abbey, may late Mum, Mrs Grace Abbey Nee Thompson and my girls Selikem and Sesime

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My sincere thanks to my dearest husband for his support and encouragements, without him this would have been a dream, also to Prof. Moses Aikins, my supervisor for his overwhelming support, ideas he shared with me, guidance, and encouragements he rendered to me which helped me to become better. You are more than a father to me, your unique patience, dedication and principles. Prof. you are unique and am grateful.

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ABSTRACT

Introduction

Complementary and alternative medicine (CAM) is known to be the oldest form of healthcare available and are found in almost every country around the world. Complementary and alternative medicine is used worldwide, both in developed and developing countries. About 80% of people in developing countries such as China, India, Latin America and large parts of Africa are known to rely on CAM as a source of primary health care. In Ghana, about 70% of the population depends on CAM practices for their primary health care needs. Complementary and alternative medicines was integrated into main healthcare delivery system in Ghana by the Ministry of Health in September 2012 and LEKMA hospital was one of such institutions. However, much has not been documented on CAM patronage and it"s sustainability in the health system.

Methods

The study was a cross-sectional design that used both quantitative and qualitative data collection approach. The quantitative component used an exit interview and a structured questionnaire was administered to 57 patients attending CAM unit of LEKMA hospital. The qualitative component purposively selected 5 managers who were heads of the various units in the facility and conducted in-depth interviews using an interview guide, to assess sustainability of CAM. The study was conducted between April to June 2017 at the Ledzokuku Krowo Municipal Hospital in Teshie. The sustainability of CAM from clients" perspective was scored using a Likert scale which has five dimensions. The responses for each dimension and their individual items were determined for each patient. This was then used to describe the patronage of complementary and alternative medicine services. For sustainability of CAM from management perspective, Likert scale with three dimensions were used. The responses for each dimension and their individual items under them were determined for managers. This then described full sustainability or partial sustainability. Results were displayed graphically. Proportions and percentages of users of CAM were also determined.

Thematic analysis was used for the qualitative interviews. Appropriate summary tables, graphs and charts was used to present results.

Results

Overall, 73% of the respondents had high patronage of CAM whiles 27% had partial and the composite score for CAM sustainability was 20% full sustainability and 80% partial sustainability. The composite score on general belief showed that 82% of the respondents agreed on the belief statements in CAM. The composite score shows that 80% of the respondents agreed with all the statements under these domains indicating that location of CAM services and availability of visible directional signs influenced the patronage of CAM. The composite score for perceived effectiveness from the three questions under this domain indicated that 83.6% of the respondents agreed that the patronage of CAM was influenced by their perceived effectiveness. Fifty-one percent (51%) of the respondents were indifferent on the influence of CAM availability on its patronage.

Conclusion

The assessment of CAM at LEKMA hospital revealed a high patronage of CAM and very low full sustainability (20%). The 73% patronage of CAM was due to the high general belief in the potency, perceived effectiveness, location and availability of CAM.

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CHAPTER ONE

INTRODUCTION

1.0 BACKGROUND

Complementary and alternate medicine (CAM) is known to be the oldest form of healthcare system available and is found in almost every country around the world (Abdullahi, 2011) . Complementary and alternative medicine have been in existence for centuries before the birth of modern orthodox medicine. Complementary and alternative medicine is very broad and diverse and refers to different forms of health practices and products outside the mainstream of orthodox medicine (EUROCAM, 2014). It covers a broad spectra of ancient and modern approaches that support the prevention or treatment of diseases (Kuunibe & Domanban, 2012). It includes the use of traditional herbs, traditional and spiritual healing and other medical practices (Kuunibe & Domanban, 2012)

Complementary and alternative medicine is used worldwide, both in developed and developing countries. It has therefore been described as an important source of health worldwide (Management Sciences for Health, 2012; WHO, 2005). Globally, the interest in CAM and its use keeps growing and it is widely being accepted by many people in both developed and developing countries (WHO, 2005). In a systematic review of the use and acceptance of CAM, Frass et al., (2012) points out that many users willing pay for the service even when the service is not covered by insurance schemes. This reflects its acceptance by the general public. This global upsurge in the utilization of CAM has led to it playing a significant role in health sector reform globally (WHO, 2005). About 80% of people in developing countries sure as China, India, Latin America and large parts of Africa are known to rely on CAM as a source of primary health care (Kasilo & Trapsida, 2010).

In Africa, CAM has been the dominant medical system for millions of people both in rural and urban areas (Abdullahi, 2011). It is commonly known as traditional medicine. Traditional

medicines basically refer to the indigenous health traditions of the world (Bodeker & Kronenberg, 2002). It has been the dominant medical system used in Africa before the introduction of orthodox medicine. These medical practices of evolved traditional medicine system were passed down from generation to generation and are still being used. This is because they have been found to be very valuable and efficacious since they depict the African culture and traditions and employs a holistic approach in treatment of the sick (Gyasi, Mensah, Adjei, & Agyemang, 2011; Hillenbrand, 2006).

Complementary and alternative medicine has been widely used and accepted by many because it reveals the socio-culture structure, religious values, behaviours and practices of the people (Gyasi et al., 2011; Hillenbrand, 2006). Providers of CAM have been known to offer a holistic treatment to their patients by attempting to reconnect the social and emotional equilibrium of the patient based on the community"s norms and cultural practices. Unlike orthodox healthcare practitioners known to treat just the specific disease (Hillenbrand, 2006), CAM uses a holistic approach in treatment of patients.

Utilization of CAM in recent years has grown dramatically (Miller, Emanuel, Rosenstein, & Straus, 2004) not only in Africa, but also in other parts of the world (Abdullahi, 2011) with CAM clinics are gradually springing up in urban centres and catching the attention of many. In America, 38% of the adult population has been reported to patronize CAM (National Center for Complementary and Alternative Medicnine, 2008) whiles in Europe, 50% of the citizens use CAM (EUROCAM, 2014). In Ghana, about 70% of the population depend on CAM practices for their primary health care needs (Busia, 2007). The sudden increase in use and acceptance has been explained by the fact that CAM has a number of important and effective therapeutic regimens which has been used in management of a wide spectrum of diseases orthodox medicine has not been able to treat.

In Ghana, the relevance and impact of CAM in healthcare cannot be overlooked. Like many other countries, CAM has been in Ghana years before the introduction of orthodox medicine. It is described as the oldest health care system which has been used to deal and cope with life threatening diseases (Abdullahi, 2011). With the evolution of health treatment throughout the generations with time, traditional medicines have remained and have stood through the tests of time. Complementary and alternative medicine remains the main source of primary healthcare for many Ghanaians especially in rural areas with little or no access to health care services (Abdulai, 2009).

1.1 PROBLEM STATEMENT

WHO estimate that about 80% of people today depend upon CAM medication as component of their primary healthcare. In America, 38% of the adult population have been reported to patronize CAM (National Center for Complementary and Alternative Medicnine, 2008) whiles in Europe, 50% of the citizens use CAM (Eurocam, 2014). In Ghana, about 70% of the population depends on CAM practices for their primary health care needs (Busia, 2007).

In 2002, WHO adapted a strategy to facilitate the integration of CAM into existing health care. In line with the WHO integration strategy, CAM was integrated into main healthcare delivery system in Ghana by the Ministry of Health in September 2012 (Ministry of Health, 2016). This move was to ensure that CAM services are offered in a safe, respectful and effective manner according to the policies and regulations of the country (WHO, 2013). Since the integration of CAM at LEKMA Hospital, much has not been documented on CAM use, types of services being offered, the perceived effectiveness, the general belief in CAM and sustainability of the co-existence of the practice in Ghana as well as the operational challenges.

To ensure the integration provides a holistic health restoration, proper monitoring in the dispensation of medicinal products and medical service delivery in Ghana, there is a need to assess CAM use, perceived effectiveness, belief and whether they are enough resource in terms of material, human and infrastructure or policies for CAM. In addition, there is the need to explore the attributes of sustainability of the CAM which include funding stability, organizational capacity to provide the needed services, programme evaluation, political support and partnership. These attributes have not been assessed after the establishment of CAM at LEKMA hospital. This thesis will provide practical and sustainable ways of this integration.

1.2 JUSTIFICATION OF THE STUDY

Sale of CAM products is gradually become a popular trade with significant socio-economic importance. Therefore, CAM products and services serve as a source of income to the service providers and the nation as a whole. Ghana gained an export value of about US $ 15 million and an internal market value of US$ 7.8 million in just 2010 alone (Van Andel, Myren, & Van Onselen, 2012). There is a lot to be learnt from CAM and its benefits to society can be tremendously improved and maximized when integrated with orthodox medicine. WHO has come up with a strategy for countries to help achieve this by coming up with ways of helping them prioritize their specific needs, finding solutions to them and providing an effective delivery of services to their people with the support of appropriate regulations (WHO, 2013).

Complementary and alternative medicine is made up of indigenous knowledge of a group of people or community and their experiences based on their culture and environment, besides, it keeps changing with time as the environmental conditions change. Since the details of the properties, side effects, components and methods of the medicinal materials and medical

practices used are not fully known and well established, there is the risk of health implications in using CAM. This explains why, most of the elite in Ghana frown on its use.

This study will provide information on the use of CAM, the perceived effectiveness, practical and sustainable ways of the integration that is meant to provide affordable, safe and sustainable healthcare to the people. This information can be used by service providers in providing health education to patients on CAM.

1.4 OBJECTIVES

1.4.1 Research Questions

1. How sustainable is CAM at LEKMA hospital from client‟s perspective?
2. How sustainable is CAM at LEKMA Hospital from health provider‟s perspective?

1.4.2 General Objective

The general objective is to determine sustainability of Complementary and Alternative Medicines (CAM) at LEKMA Hospital from management and clients perspectives.

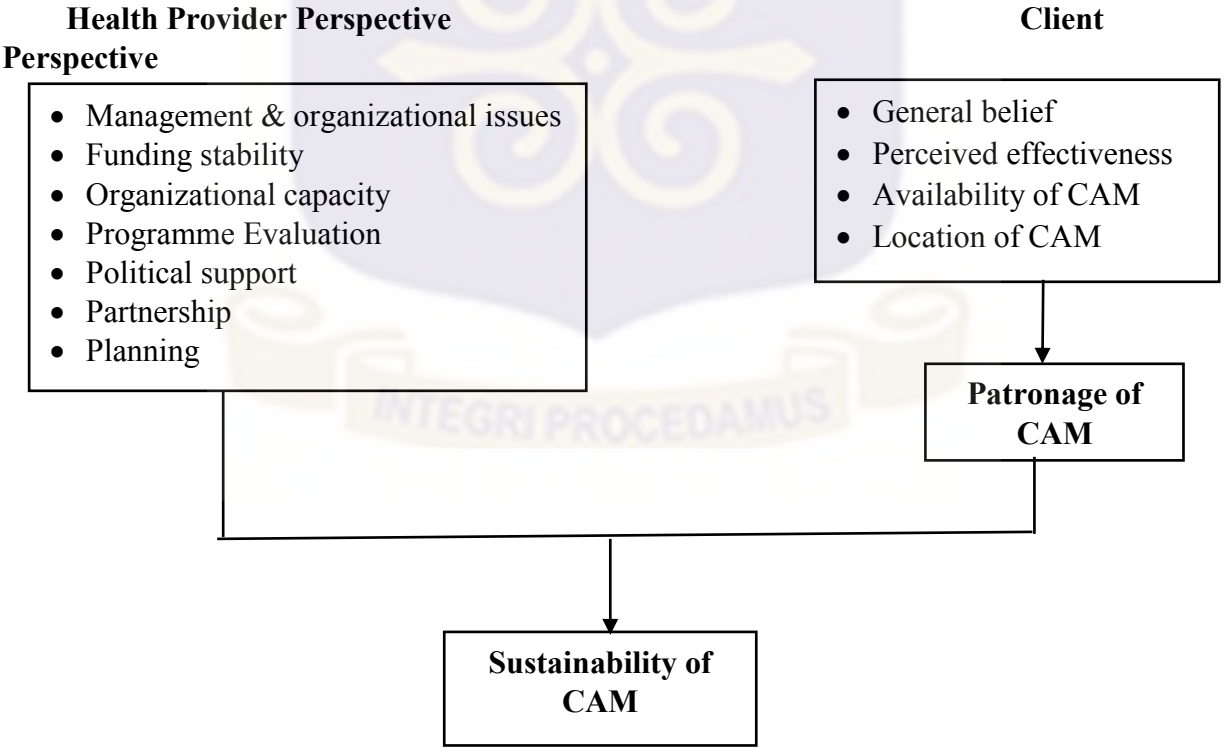
1.4.2 Specific Objectives

1. To determine the sustainability of complementary and alternative medicines from clients perspective
2. To determine sustainability of complementary and alternative medicines from the perspective of the management of LEKMA

1.6 CONCEPTUAL FRAMEWORK

Figure 1 shows the conceptual framework of the study. Several factors affect the sustainability of CAM from client perspective. Generally, the belief system of an individual or community has direct relationship on the use of CAM. Once they believe in CAM, they perceive it to be effective not necessarily because it has been medically proven to be effective. The perceived effectiveness and the belief in CAM both have effect on the availability of CAM. Thus when people believe in CAM and perceive it to be effective, they patronize it and sustains the services. This in turn creates demand, and suppliers/providers ensure service availability, easy access to CAM services depends on the location. For CAM services to be situated in a geographical area that will ensure easy access and constant availability requires sustain services.

Figure 1: Conceptual framework of sustainability of complementary and alternative medicines study



Sustainability of CAM services from the health provider perspective depends on the political support, funding stability, planning, organizational capacity, programme evaluation and partnership. These attributes of sustainability ensure that the needed funding is always provided to ensure the availability of the various CAM services. For the programme to continue to exist, it requires good planning, buy-in from the political establishment, and good management (i.e., continuous evaluation to ensure services meet stated objectives).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Complementary and alternative medicine (CAM) has been defined as a group of diverse medical and health care systems, practices, and products that are not normally considered to be part of conservative medicine. While Complementary medicine is used together with conventional medicine, alternative medicine is used in place of conventional medicine. Complementary and alternate medicines are known to be the oldest form of healthcare system available and is found in almost every country around the world (Abdullahi, 2011; Eurocam, 2014). They have been in existence for hundreds of years before the birth of modern orthodox medicine. Complementary and alternative medicine (CAM) is very broad and diverse and refers to different forms of health practices and products outside the mainstream of orthodox medicine (Eurocam, 2014) It covers a broad spectra of ancient and modern approaches that support in the prevention or treatment of diseases (Kuunibe & Domanban, 2012). It includes the use of traditional herbs, traditional and spiritual healing and other medical practices (Kuunibe & Domanban, 2012).

Different societies have different indigenous health practices which have evolved over the years, thus the difficulty in coming up with single universally accepted definition for CAM (Abdullahi, 2011). In Africa, complementary and alternative medicine is commonly known as traditional medicine. Traditional medicines basically refer to the indigenous health traditions of the world (Bodeker & Kronenberg, 2002).

The WHO defines traditional medicine as: “the sum total of knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis,

improvement or treatment of physical and mental illness." WHO refers to complementary and alternative medicine as a very important aspect of health services yet this aspect is often underestimated (WHO, 2013).

2.1.1 History of CAM in Ghana

Treatment and prevention of disease dates back to the pre-historical era, man then relied on natural resources for life and sustenance. This practice has been employed over the centuries and by trial and error, knowledge of traditional medicine has been acquired and adopted (Dwamena, 1998). Complementary and alternative medicine is therefore described as the oldest form of health care system in the world. In Ghana, it is known to have existed hundreds of years before the colonial era (Elujoba, Odeleye, & Ogunyemi, 2005).

Colonization and activities of the missionaries in the country led to the introduction of conventional medicine (WHO 2001). This led to the stifling of CAM in Ghana. Conventional medicine was therefore recognized and institutionalized as the mainstream healthcare in the country. However, CAM has still been recognized by governments over the years as an existing health system.

2.1.2 Legislation and policy on CAM in Ghana

The recognition of CAM in Ghana even after colonization was affirmed by the first President of the country, Dr. Kwame Nkrumah in 1960. This was done through the initiation of the formation of the Ghana Psychic and Traditional Healing Association. After its formation, he charged Traditional Medicine practitioners with the responsibility of promoting and encouraging the study into herbs and their application in public health, not only in Ghana but in Africa as a whole. He also urged them to establish CAM clinics in the various regions to treat diseases conventional medicine could not cure (Addy, 2005). In 1972, the Medical and Dental Decree and the Nurses and Midwives Decree were passed to allow the practice of

traditional medicine in the country provided no life endangering procedures were involved (WHO 2011)

In 1975, the N.R.C Degree 344 led to the establishment of the first research institution for traditional medicine, Centre for Scientific Research into Plant medicine was established. The centre also has a hospital which provides CAM treatment (WHO 2011). This centre till date carries out research on plant medicine in the country.

In 1991, the Traditional Medicine Unit was established within the Ministry of Health. It was elevated to the status of a Directorate in 1999 (WHO 2011). This came with a change of name and an expansion of its coverage. The directorate name was changed to Traditional and Alternative Medicines Directorate (TAMD). It covers all traditional medicines and treatments, including modalities which are different form allopathic treatment and the traditional mode. The mission of the directorate is to make available to Ghana a well-defined and comparable system of health based on excellence in CAM knowledge (Addy, 2005)

In 1992, the Food and Drug Law (PNDC Law 305B) mandated Food and Drugs Authority to come up with regulatory measures aimed at ensuring high standards of safety, efficacy and quality of drugs including herbal medicines. To assist with this mandate, the Department of Herbal Medicine at KNUST carries out experiments on medicinal plant products to characterize, examine their therapeutic potential and determine their toxicity profile before they are issued license by the Food and Drugs Authority (Adarkwa, 2009).

In 1999, the Ghana Federation of Traditional Medicine Practitioners Association (GHAFTRAM) was formed to be the recognized mouthpiece of all TM practitioners in the country. This group became the big umbrella under which all the various types of CAM practitioners were united.

The Traditional Medicine Practice Council was established by Act 575 of Traditional Medicine Practice Act, 2000. This council was established to register Traditional Medicine practitioners and license them, regulate the practice of traditional medicine and the preparation and sale of traditional medicine products (WHO 2011). However, implementation of this council has not been down (Dixon, 2008).

Institutionalization of the celebration of the Traditional Medicine week has also been done in the country. The first of its kind was organized in 2000. This has become an annual event and has now been scheduled to coincide with the African Traditional Medicine Day which also began in 2003 (Addy, 2005).

2.2 Use of CAM

Complementary and alternative medicine has been widely used and accepted by many because it reveals the socio-culture structure, religious values, behaviours and practices of the people (Gyasi et al., 2011; Hillenbrand, 2006). Complementary and alternative medicine administrators have been known to offer a holistic treatment to their patients by attempting to reconnect the social and emotional equilibrium of the patient based on the community‟s norms and cultural practices. Unlike orthodox healthcare practitioners known to treat just the specific disease (Hillenbrand, 2006), CAM uses a holistic approach in treatment of patients.

Utilization of CAM in recent years has grown dramatically (Miller et al., 2004) not only in Africa, but also in other parts of the world (Abdullahi, 2011) with CAM clinics gradually springing up in urban centres and catching the attention of many. In America, 38% of the adult population have been reported to patronize CAM (National Center for Complementary and Alternative Medicnine, 2008) whiles in Europe, 50% of the citizens use CAM (Eurocam, 2014). A systematic review on CAM use among cancer patients reported an average

prevalence rates of 31.4%, varying from 5 - 60% (Verhoef, Balneaves, Boon, & Vroegindewey, 2005). In Ghana, about 70% of the population depend on CAM practices for their primary health care needs (Busia, 2007). The sudden increase in use and acceptance has been explained by the fact that CAM has a number of important and effective therapeutic regimens which has been used in management of a wide spectrum of diseases orthodox medicine has not been able to treat (Abdulai, 2009).

Reasons for CAM use differ broadly, ranging from a perceived beneficial response, wanting control, strong belief in CAM, CAM as a last resort and finding hope (Verhoef et al., 2005). Other reasons for the use of CAM include disappointment with conventional treatment (Verhoef et al., 2005). In a systematic review on reasons for use of CAM among cancer patients, socio - demographic characteristics were commonly identified across various studies as significantly associated with CAM use. These socio-demographic characteristics include age, gender, and socioeconomic status (SES) (Verhoef et al., 2005). It has also been reported that women and younger individuals were more likely to use CAM than men and older individuals. Reason attributed to this, is the fact that women are more afflicted with chronic illness than men (Verhoef et al., 2005)

2.3 Belief in CAM

Generally, the belief in the efficacy of traditional medicine among a majority of Africans is high. Since Traditional Medicine practitioners are normally respected people in their community, therefore, the community members turn to trust and believe in their capability to heal them or accept what they are told by these practitioners. A systematic review done among cancer patients who use CAM, 17.3% indicated their use of CAM because they belief in it (Verhoef et al., 2005). A study conducted in the US among medical students to determine their baseline attitudes or beliefs towards CAM, and the factors that may have

informed them, including use of CAM itself. The study showed that students enter medical school with positive attitudes/beliefs towards CAM practice and displayed a high level of self-reported use of CAM modalities, above that witnessed in the general US population (Russnes, Lønning, Børresen-Dale, & Lingjærde, 2014).

Other people find the use of CAM to be physiologically comfortable because they believe this system of health is embedded in their socio-cultural traditions (Gyasi et al., 2011). They believe they are potent, powerful and very useful in treatment of various ailments. Also, religious and spiritual beliefs of people have been found to be some of the reasons that draw people to (Gyasi, 2014). According to Adjei, (2013), Ghanaians are gradually developing more trust and interest in CAM. The acceptability and increasing interest in CAM by both patients and health care providers is a reflection of changing behaviour, needs and values in our modern society (Jonas & Levin, 1999).

2.4 Perceived effectiveness of CAM

Traditional medicines are known to be the direct and indirect source of about 30% of modern medicines and are known to have therapeutic benefits (WHO, 2005). A community survey conducted on use and perceived effectiveness of CAM to treat and manage children with Autism in Southeastern Virginia revealed that CAM was frequently used among this population. Out of the 194 parents surveyed, 80.9% reported that they had ever tried some form of CAM for their child with autism. The CAM therapies frequently used include multivitamins (58.6%), the gluten-free casein-free diet (54.8%), and methyl B-12 injections (54.1%). For CAM therapies that were perceived to be effective received high rating and in Southeastern Virginia study, sensory integration therapy, melatonin and off-label use of antifungal medications received the highest rating (Hopf, Madren, & Santianni, 2016). The

frequent use of CAM therapies in this population, and many were perceived to be effective in addressing some of the health problems associated with autism (Hopf et al., 2016).

A study carried out in the Ashanti region found that clients perceived traditional medicine to be effective. This was backed by their experiences of healing from conditions such as hypertension, boils, broken bones/fractures, impotency and infertility etc. Some even believed as far as these diseases are concerned, it was more effective than conventional medicine (Gyasi et al., 2011). A study in the Caribbean revealed that traditional medicines were perceived to be more efficacious in some instances or as equally as effective as orthodox medicines (Clement et al., 2007) since they are perceived to be effective for the treatment of a wide range of diseases including chronic non-communicable diseases. In Muftawu"s assessment of integration of CAM into the healthcare system at LEKMA Hospital, it was observed that herbal medicine was in high demand due to the increase chronic non-communicable disease (Muftawu, 2014). This perceived effectiveness of CAM could be contributing factors to the large numbers of people being drawn to the usage of CAM.

2.5 Ease of use

Traditional medicine remains very popular in developing countries, especially Ghana, since it is known to provide a readily available, affordable and accessible healthcare which is equally as effective as orthodox medicines. In most parts of Ghana and other developing countries, most people especially in rural areas have little, access to modern health facilities and medicines. This is due to lack of adequate health resources and personnel, cost of healthcare and long distances they have to travel to access healthcare. Others are not able to bear the cost of healthcare at facilities close by due to poverty and other related factors. Inequity and

inequality in the health care delivery system makes CAM the choice of most people since it is known to be relatively affordable (Abdullahi, 2011).

Therefore, the high patronage of CAM has been found to be linked with its low cost, accessibility and affordability (Adjei, 2013; Kuunibe & Domanban, 2012). Traditional medicine has therefore been described as a vehicle to affordable health to large unreached populations and an indispensable force in healthcare delivery to rural parts developing countries who form a majority of their populations. This is due to its ease of accessibility, availability, effectiveness, and affordability (Adjei, 2013; Patwardhan, 2005).

2.6 Sustainability of CAM

In an attempt to improve upon CAM services and make it easy to regulate, studies have suggested the incorporation of CAM into the health care system to enhance and health outcomes (Gyasi, 2014; Gyasi et al., 2011; Kretchy, Owusu-Daaku, & Danquah, 2014). This move would ensure that CAM services are offered in a safe, respectful and effective manner (WHO, 2013) according to the policies and regulations of the country.

It is an undeniable fact that efforts are being made by policy makers, to bridge the disjoint between the conventional health system and CAM. This is to form an integrated health services which meets the new demands of healthcare (who 2005 and 2013). However, this integration process has been slow and there seem to be lack of cooperation and challenges between orthodox medicine practitioners and CAM practitioners (Hillenbrand, 2006). There is a lot to be learnt from CAM and its benefits to society can be tremendously improved and maximized when integrated with orthodox medicine.

The WHO revised its traditional medicines strategy for countries to aid them in the incorporation of traditional medicine into their national healthcare. In this document, countries are to achieve this by coming up with ways of helping them to prioritize their

specific needs, finding solutions to them and providing an effective delivery of services to their people with the support of appropriate regulations (WHO, 2013). Therefore, it beholds on each country to develop practical approaches to foster this integration and deal with the bottle necks which already exist and those which would arise during the process. Again, during the 2012 regional consultation on traditional medicine practice in Harare, member countries, including Ghana, adopted recommendations which would help in sustaining traditional medicine in the healthcare system in their countries. These recommendations cover policy formulation, resources allocation and capacity building (WHO, 2012)

2.6.1 Sustainability of Health Programs or Services

Even though a number of strategies have been adopted by the nation to sustain health programmes and services, some of which includes the following:

The National Health Insurance Scheme was adopted by the nation and started in 2004. This method of healthcare financing was adopted to mobilize resources, provide basic health services and support public health programs. This scheme was introduced as an effort to sustain health care financing and also provide universal coverage of healthcare for all (Owusu-Sekyere & Bagah, 2014). The implementation of the Community- based Health Planning and Services zones began in 1999 a national policy initiative, and scaling up to provide a wider coverage of primary health care to the district and sub-district levels especially those in deprived rural areas (Nyonator, Awoonor-Williams, Phillips, Jones, & Miller, 2005).

Resource allocation to Primary Health Care in Ghana is of great importance if handled with much urgency. In 2016, nearly GHS 5 billion was allocated to the programmes and projects of the Ministry of Health to aid in the smooth running of its programmes and activities (Ministry of Health, 2016). The Ministry of health works tirelessly to ensure that the health

system in the country is up to the best standard. This is done through strategic policy planning and periodic evaluation reports of their efforts as these policies are implemented (Ministry of Health, 2016)

However, according to Luff and Thomas (2000), General practitioner and complementary practitioners felt that their ability to sustain complementary therapy provision was mediated by funding, the need for research, and appropriate service delivery mechanisms.

2.7 Efforts being made to sustain CAM in Ghana

2.7.1 Government policies

There have been a number of government policies to regulate traditional medicine and make it more sustainable. In 1994, the Traditional and Alternate Medicines Directorate was set up to under the Ministry of Health. This act is described by Essegbey & Awuni, (2016) as an important first step in integration of traditional medicine into the healthcare system of the country. Currently, in Ghana, about 17 hospitals have herbal medicine included in their health facility under this initiative (Boateng, Danso-appiah, Turkson, & Tersbøl, 2016).

Another step was the Traditional Medicine Practice Act (ACT575) of 2000 by Parliament which requires all traditional medicine practitioners to be registered with the Medical Practice Council (MPC). This Act would help to get rid of fake practitioners and charlatans who try to take advantage of the system and swindle innocent people. It would also help in monitoring the activities of the MPC so that safe standard practices can be enforced.

Other policies and initiatives include the addition of some herbal medicines to the Essential Drug List and the establishment of traditional medicine clinic in public clinics in and hospitals. Also, there are plans of including some traditional medicine treatments to be

covered by the National Health Insurance Scheme. Training manuals for traditional medicine practitioners was also developed in 2003 and 2005 (Essegbey & Awuni, 2016).

Other policies that have been developed and are being implemented in Ghana over the years to sustain traditional medicine include the following:

1. Strategic Plan for the Development of Traditional Medicines (2005-2009)
2. Policy and Administrative Guidelines for Complementary and Alternative Medicine (2008) ; and
3. Guidelines for Intellectual Property rights Protection Framework for Indigenous Knowledge related to health and medicinal plant resources (2008) (Essegbey & Awuni, 2016).

These policies have been progressive and are being revised with time to meet the needs and demands of the people. In 2014, the Ghana Traditional Medicine Foundation was re-launched with the aim of ensuring growth and development in the practice of traditional medicine in Ghana (Ghana News Agency, 2014). Enforcement of these policies, would lead to a strong CAM system in the country backed by law and would also help in the faster integration of CAM into the mainstream healthcare system.

2.7.2 Training and capacity building

Muftawu (2014) attributes China‟s success in development and promotion of traditional medicine to its incorporation into formal education for medics and medicine practitioners. Complementary and alternative medicine has been handed down from generation, most of the administrators who are known to possess rich traditional knowledge about medicinal plants and therapeutic methods (Wodah & Asare, 2012) are mostly uneducated or have very little education with little or no training. Therefore, they have little or no knowledge in anatomy, pharmacology, or hygiene therefore, they are not able to explain the science behind the treatment given and its effects on the other parts of the body.

Currently, a number of schools have been established in the country to train traditional medicine practitioners and people who want to be in the practice. There has been an increase in the number of training schools for CAM practitioners. This has been described by (Adusi-Poku et al., 2010) as a step towards the advancement CAM in Ghana. As part of the capacity building efforts of the local universities to improve CAM in Ghana, the National Cancer Institute and Missouri Botanical Gardens along with the Departments of Botany and Chemistry of the University of Ghana established a plant collection and screening program in 1995. This project lead to the collection of a large number of plants from Ghana to be screened for potential anti-cancer and anti-AIDS drugs (Addae-Mensah, 2000).

Over a decade ago, the Department of Herbal Medicine under the Faculty of Pharmacy and Pharmaceutical Sciences in KNUST was established with the aim of training Traditional Medicine Practitioners with formal knowledge of medicinal plants who can apply scientifically-harnessed herbal medicines to treatment of diagnosed diseases (Adusi-Poku et al., 2010) using locally available resources. The bachelor in herbal medicine programme introduced in KNUST was the first attempt as a nation to integrate the knowledge of CAM into a university curriculum. Further plans are also in place at the University of Health and Allied Science to establish an institute of Traditional and Alternate Medicine. Currently, steps are being taken by the ministry to add traditional medicines in the curriculum allopathic medical schools and so introducing a diploma course in traditional medicine at the postgraduate level (WHO, 2011).

Also, various training sessions have also been held by KNUST for traditional healers in the country. In 2014, 100 members of the Ghana National Traditional Healers Association carried out training programmes to improve upon production and packaging of traditional medicine products (Ghana News Agency, 2014b). Unlike other countries with well implemented and effective legislature, Ghana has no official standards for education of CAM

practitioners. However, the Traditional and Alternative Medicine Directorate within the Ministry of Health produces training manuals and materials for herbalists (Dixon, 2008). Trainings are also organized by the ministry for traditional birth attendants as part of capacity building of CAM practitioners (WHO, 2001).

The Traditional Medicine Practice Council has also contributed to building the capacity of its members by rolling out a series of capacity building and continuous professional development programmes (Ghana news agency 2010). Furthermore, the Traditional Medicine Practice Council has carried out exercises in the various regions to ensures that the practitioners conform to approved standard practices (Ministry of Health, 2016) These concerted efforts could lead to reduction in complications of CAM users caused by poor or even inappropriate diagnosis of patients (Hillenbrand, 2006) thus making CAM a safer choice for its users.

2.7.3 Resources Allocation

Currently, the Ministry of Health has allocated funds for carrying out programmes to support research and expand into traditional medicines, acquisition of laboratory equipment for further experiments and for cultivation of medicinal plants to improve existing herbal products in the country and to come up with safe, effective and quality herbal products (Ministry of Health, 2016). Plans are also underway to rehabilitate old research laboratories and facilities and acquire other assets that to help improve traditional medicine development in the country.

With the current efforts and strategies adopted by the nation, CAM is likely to become more established and its acceptance increased in this country. This is because the steps being taken are sustainable and can expedite this integration of CAM into the healthcare system. This would provide affordable, safe and sustainable healthcare to the people and help in widening

coverage of healthcare in the nation. Thus, bridging the equity and equality gap in health services to aid in the provision of affordable, available and accessible health to all (Patwardhan, 2005).

2.8 Summary of Review

Complementary and alternative medicine is an essential aspect of the healthcare system and therefore cannot be overlooked. Over the years, it has stood the test of time and evolved yet maintaining its perceived efficacy thus increasing the confidence people have in it. In the 21st century, CAM has become an accepted option a solution to the health needs of a lot of people. Ghana as a country has fully embraced CAM and is working on effective was of sustaining it through the integration into conventional medicine which is the mainstream healthcare system to enhance and health outcomes in the country (Gyasi, 2014; Gyasi et al., 2011; Kretchy et al., 2014). This integrated health services which meets the new demands of healthcare (WHO, 2013). Some hospitals currently have alternative medicine departments. This move would also ensure that CAM services are offered in a safe, respectful and effective manner (WHO, 2013) according to the policies and regulations of the country. There is still a lot to be learnt from CAM and its benefits to society can be tremendously improved and maximized when integrated with orthodox medicine. Proper implementation of the WHO strategy for countries to prioritize their specific needs, finding solutions to them and providing an effective delivery of services to their people with the support of appropriate regulations could help achieve this integration (WHO, 2013)

It beholds on each country to develop practical approaches to foster this integration and deal with the bottle necks which already exist and those which would arise during the process. There is therefore the need to access practical and sustainable ways of expediting this integration to provide affordable, safe and sustainable healthcare to the people. This would

help in widening coverage of healthcare in the nation and bridge the equity and equality gap in health services to aid in the provision of affordable, available and accessible health to all (Patwardhan, 2005).

Gaps in sustainability of CAM in Ghana

In spite of all that is known and has been achieved by CAM in Ghana, there still exist some gaps which need to be addressed, knowledge on the policies and legislation of CAM in Ghana is very low. In spite of the numerous laws and policies, very little effort is being made to enlighten Ghanaians on these existing laws and how they can protect themselves from fakes and charlatans in the CAM industry. Documentation on the activities of CAM practitioners is still scanty probably because the implementation of some of the aspects of the Traditional Medicine Act, 2000 have not been too effective. Monitoring of the activities of CAM practitioners seems to be on the low and usage of CAM and its sustainability has not been extensively studied.

CHAPTER THREE

METHODS

3.1 Study design

As shown in Figure 2, the study was a cross-sectional design that used both quantitative and qualitative data collection approaches. The quantitative component used an exit interview with structured questionnaire to collect data on patients attending LEKMA hospital in Teshie during the study period to determine the use of CAM. The qualitative component purposively selected managers and heads of the various units in the facility and conducted in-depth interviews with an interview guide to assess sustainability of CAM. The study was conducted between April to June 2017 at the Ledzokuku Krowo Municipal Hospital in Teshie.

3.2 Study site

The study was conducted at LEKMA located in Greater Accra Region at the Teshie Nungua district newly created in 2008. Greater Accra Region is one of the ten regions in Ghana. Ledzokuku-Krowor Municipal shares boundaries with La Dade-Kotopon Municipal to the west, Tema Metropolitan to the east, to the north with Ashaiman municipal and to the South with the Gulf of Guinea. The LEKMA hospital was built through the collaboration between Ghana-China. It has 9 departments namely Out-Patients Department (OPD); Maternity (Ante-natal and family planning); Dental; Eye; Laboratory; Ear- Nose -and Throat; Radiology; Dermatology and CAM departments. LEKMA has hundred (100) beds. The orthodox component of the hospital currently has eighteen (18) Medical Doctors including eight (8) specialists, six (6) medical officers and four (4) houseofficers, ninety-five (95) nurses, and about hundred and ten (110) health extension workers. On the average the hospital has 200 clients at the OPD per day.

Full operations of the CAM Unit of the hospital started 2011. The Unit provides herbal

medicine services, acupuncture, massage and some components of complementary and alternative medicine therapy. From the 2014 report from LEKMA, 369 patients were seen at the CAM unit from January to May 2014 (LEKMA, 2014). The CAM Unit is under the central management of the hospital. It has three (3) trained medical herbalists, a nurse, a dispensing technologist and massage therapist.

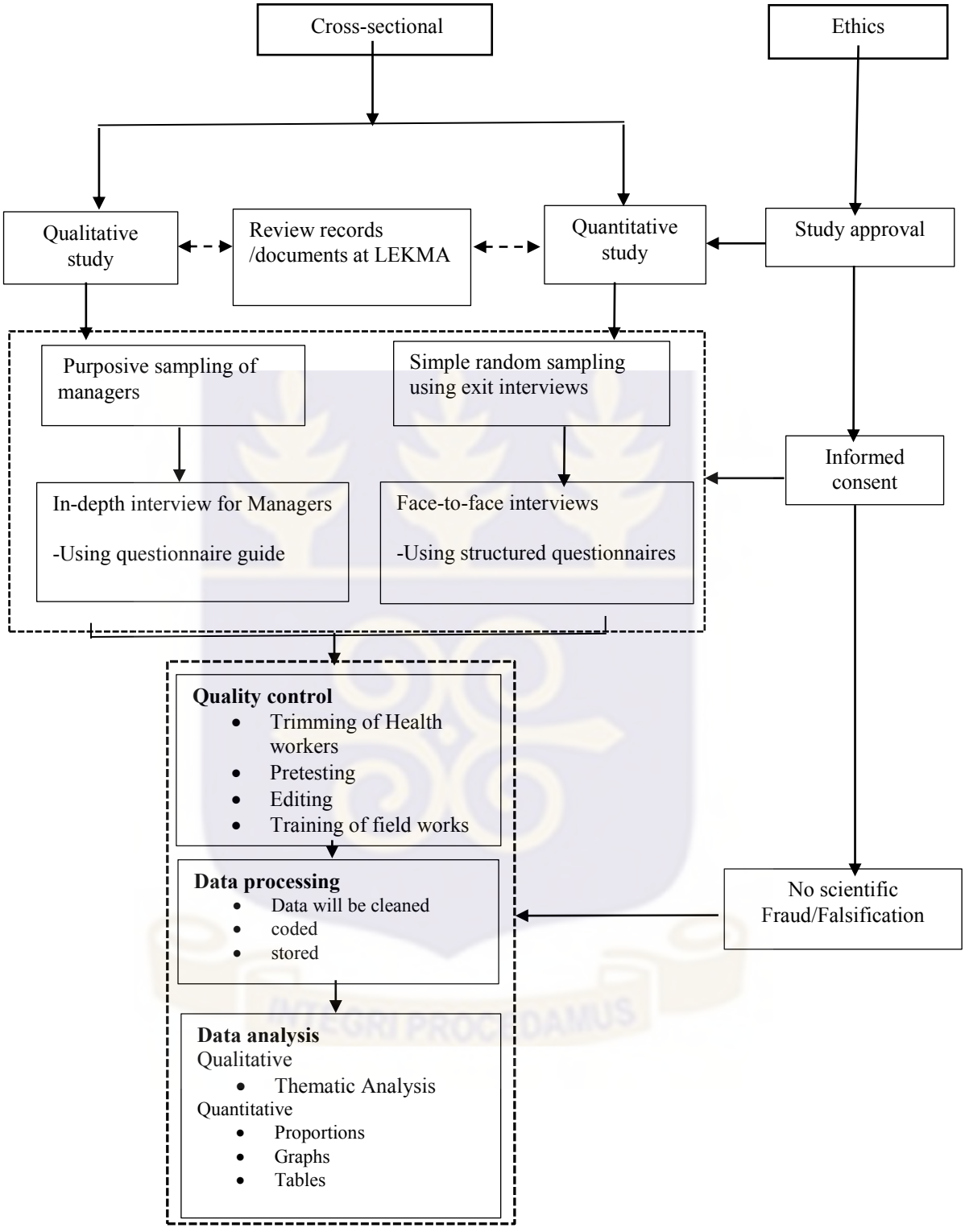


***Figure 2:* Study design**

3.3 Study population

3.3.1 Quantitative

The population for the quantitative study included all adult patients 18 years and above attending LEKMA hospital for health care needs during the study period.

3.3.2 Qualitative

The study population for the qualitative component of the study include heads of units; medical director, nursing, and CAM pharmacy.

3.4 Variables

3.4.1 Quantitative variables

Dependent variables

From Table 1, the dependent variable for the quantitative component of the work is sustainability of CAM from clients‟ perspective (Categorical: Low patronage, partial patronage and full patronage). And for sustainability from management‟s perspective it was categorized as low sustainability, partial sustainability and full sustainability.

Independent variables

The independent variables for the quantitative component of the work include, Age (Continuous variable: from 18 years and above); Sex (Binary variable categorized as Male and Female); Marital status (nominal variable that will be categorized into married and unmarried; Socio-economic characteristics (type of occupation which is nominal, and education level as ordinal variable); A Likert scale was used for belief in CAM, perceived effectiveness in CAM, availability of CAM services and location of CAM services. For sustainability of CAM among management, the independent variables, Likert scale was also used to assess funding, organizational capacity, programme evaluation, planning, political support and partnership.

***Table 1*: Variables for quantitative component of the study**

Dependent	Measurement	Scale (Variable type)
Client perspective on sustainability of CAM	High patronage Medium patronage Low patronage	Categorical
Independent		
Age	Categorical	Continuous
Sex	Categorical	Nominal
Educational level	Ordinal	Ordinal
Ethnicity	Ordinal	Ordinal
Occupation	Nominal	Nominal
Marital status	Categorical	Nominal
Belief in CAM	Likert scale	Ordinal
Perceived effectiveness	Likert scale	Ordinal
Availability of CAM services	Likert scale	Ordinal
Location of CAM services	Likert scale	Ordinal
Dependent	Measurement	Scale (Variable type)
Health provider perspective	Low sustainability Partial sustainability Full sustainability	Categorical
Independent		
Sex	Categorical	Nominal
Position	Ordinal	Ordinal
Department	Nominal	Nominal
Duration of work	Categorical	Discrete

Funding	Likert scale	Ordinal
Organizational capacity	Likert scale	Ordinal
Programme evaluation	Likert scale	Ordinal
Political support	Likert scale	Ordinal
Partnership	Likert scale	Ordinal
Planning	Likert scale	Ordinal

3.5 Sample size determination

Patients: The total estimated number of clients expected to attend CAM clinic during the study period was 60. The study took a consensus of the patient and at the end of the period, a total of 57 were interviewed

Managers: All the managers in the institution were purposively selected and interviewed, they are, Medical Director, Nurse in-Charge, Pharmacy head, doctor in charge of CAM Unit and the Pharmacy Technologist at the CAM unit.

3.6 Sampling method

3.6.1 Quantitative (Exit Interview)

An exit interview was used. All adult patients leaving the consulting rooms after receiving the service at LEKMA Hospital was consecutively approached and their consent sought to participate in the study. Information about the study was explained to each potential participant for them to give their written consent. Two research assistants were be trained to work with the Principal Investigator. For all who consent to participate in the study, a total of 4 were interviewed face-to-face with a structured questionnaire on each clinic days for 14 clinic days to achieve the needed sample size.

3.6.2 Qualitative (In-depth Interview)

Managers of the service and heads of the various units were purposively selected and audio recorded in-depth interviews was conducted using interview guide after they have consented.

3.7 Data collection Approach

3.7.1 Quantitative (Exit Interview)

A structured questionnaire was used. The questionnaire includes questions on socio-demographic characteristics, belief in CAM, perceived effectiveness in CAM, types of CAM services, service provider availability and location of CAM services to assess the use of CAM. A face -to- face interview was conducted using the structured questionnaire. The questionnaire administration took approximately 30 minutes in one of the consulting rooms to ensure patients had the right environment to answer all the questions.

3.7.2.1 Qualitative (In-depth Interview for managers)

An interview guide was used, the guide was structured along the components of sustainability such as state of CAM in LEKMA hospital, opportunities and threats, human resource and infrastructure. These questions were open ended. Interviews were conducted in empty consulting rooms or offices on the wards where it was quiet to ensure there were no interruption. The interviews were recorded using digital voice recorder in addition to note-taking.

3.7.2. 2Quantitative for managers

A structured questionnaire was used, the questionnaire was structured along the components of sustainability such as funding stability, partnership, planning, organizational capacity, evaluation of the programme and political support.

3.7.3 Quality control

Quality control included training of Research Assistants on how to administer the structured questionnaire for the data collection and the date entry clerks on data entry. The structured questionnaires and the interview guide were pre-tested at Police Hospital for editing and were checked for consistency. When the main field work started, at the end of each day, the Principal Investigator reviewed all the administered questionnaire to check for completeness and in case of missing data, interviewers were requested to call the respondents to obtain that data. Double entry of data was done by two independent people to ensure the data entered is correct. At the end of each day‟s data entry, a sample of 10% of the data were chosen at random for verification of proper data entry in the password protected computer database. Data was processed by ensuring that all errors are corrected, they are coded and all the hard copies of the questionnaire are stored and locked with key. Digital audio-recorded interviews and are stored on a password protected computed and were destroyed once transcription and analysis had been done.

3.7.4 Training of research assistants

The research assistants were trained on the proper completion of the structured questionnaire and how they were be filled. They were thought on how to handle issues on informed consent and also about confidentiality. Information collected by the study were not be shared.

3.7.5 Pre-testing and review of data collection instruments

Pretesting of the questionnaires were conducted at a Police Hospital in Accra. Police Hospital is among the hospitals that has also integrated Herbal Medicine into national healthcare system. The essence of the pretesting was to identify appropriateness of the questions, to identify questions that needed adjustment before the main study.

3.8 Data analysis

3.8.1 Background Characteristics of Patients and Managers

Socio-demographic characteristics were presented using frequency tables and graphs. Descriptive statistics were also used for continuous variables like age.

3.8.2 Quantitative (client perspective on sustainability)

The client perspective on sustainability was scored using a Likert scale which has five dimension where patients were asked to rate the statements under each dimension as (1)"Strongly disagree" (2)"Disagree" (3) „Neutral" (4) „Agree" and (5)" Strongly agree in respect of general belief in CAM, location of CAM, perceived effectiveness and availability of CAM. The responses for each dimension and their individual items were determined for each patient. This was then used to describe the patronage of complementary and alternative medicine services. Table 2 indicates the scale and score of use of CAM. This score was then reclassified into low, moderate, and high patronage with their corresponding ranges using descriptive tertile statistics as shown in table 3. Appropriate graphs were used to present results. Proportions and percentages of users of CAM were also determined. Table 3 shows the composite score for CAM patronage.

***Table 2*: Estimation of patronage scores**

No	Domain	Dimensions	Score	Score Range
1	**General belief**	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	Score range is estimated by multiplying the number of questions under this domain by the number of dimensions	4 – 20
2	**Location**	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	Score range is estimated by multiplying the number of questions under this domain by the number of dimensions	3 – 15
3	**Perceived effectiveness**	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	Score range is estimated by multiplying the number of questions under this domain by the number of dimensions	3 – 15
4	**Availability of CAM**	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	Score range is estimated by multiplying the number of questions under this domain by the number of dimensions	5 – 25
	Total		Summation of total	
	Range		Lowest – Highest Range	15 – 75

***Table 3*: Composite Score for patronage**

Low Patronage		15 – 35
Partial Patronage		36 – 56
High Patronage		57 – 75

3.8.3 Qualitative/ Quantitative (health provider sustainability perspective)

An in-depth interview as well as a Likert scale was used to assess sustainability from health provider perspective. The in-depth interview was analyzed by coding responses from the interviews. Thematic content analysis was carried out by developing themes and patterns with the aid of NVivo7, and a qualitative data analysis software. Again a Likert score is used to assess sustainability of CAM, this scale has three dimensions, (1)‟not at all, (2)‟a little, and (3)‟ to a large extent. The responses and their individual items under them were determined for managers. Table (4) indicates the scale and score of sustainability. This score was then reclassified into low, partial and full sustainability with their ranges using descriptive tertile statistic as shown in table 5. Appropriate graphs were used to present results. Table 5 shows the composite score for CAM sustainability.

***Table 4*: Estimation of sustainability from health provider perspective scores**

No	Domain	Dimension	Score	Score Range
1	Funding	1.Not at all 2.Part of it 3.All its budget	Score range is estimated by multiplying the number of questions under this domain by the number of dimensions	3 – 9
2	Organizational capacity	1.Not at all 2. A little 3. To a large extent	Score range is estimated by multiplying the number of questions under this domain by the number of dimensions	4 – 12
3	Programme evaluation	1.Not at all 2. A little 3. To a large extent	Score range is estimated by multiplying the number of questions under this domain by the number of dimensions	3 – 9
4	Political support	1.Not at all 2. A little 3. To a large extent	Score range is estimated by multiplying the number of questions under this domain by the number of dimensions	5- 15
5	Partnership	1.Not at all 2. A little 3. To a large extent	Score range is estimated by multiplying the number of	2 – 6

			questions under this domain by the number of dimensions	
6	Planning	1.Not at all 2. A little 3. To a large extent	Score range is estimated by multiplying the number of questions under this domain by the number of dimensions	2 – 6
	Total		Summation of totals	
	Range		Lowest – Highest Range	19 – 57

***Table 5*: Composite score for CAM sustainability health provider perspective**

Low sustainability		**19 – 32**
Partial sustainability		**33 – 46**
Full sustainability		**47 – 57**

3.9 Ethical consideration and approval

Ethical clearance: ethical clearance was provided by Ghana Health Service Ethics Review Committee for review.

Study area approval: The Principal Investigator also sought permission from the Greater Accra Regional Director of Ghana Health Services and thereafter from the Accra Metropolitan Health Directorate and the LEKMA Hospital Management.

Subjects involved in the study: The study involved adults from 18 years attending LEKMA Hospital during the study period and managers of the facility.

Potential risks of the study: The study does not have any perceived potential risk but the participants will be asked questions about their belief, perceived effectiveness, location and availability of CAM.

Benefits of the study: The findings from the study is to help establish sustainability of the CAM service at LEKMA hospital and its use by patients.

Description of consenting process: Participants that were approached were be taken through a consenting process by informing them about the study, this was done in the language they refer, based on their literacy level, participants were ask to read the consent form. When they agree to be a part of the study, they were asked to either append their signature on the form or thump print. There were two copies, one was be kept by the study and the other given to participants.

Privacy and Confidentiality: Every participant was assigned a unique number on the questionnaire to conceal their individual identity. When the data were being used by the Principal Investigator and the Study Supervisor for analysis or publication, no names were used.

Data storage, security and usage: Data collected were stored on computers under passwords and hardcopies (questionnaires and interview guides) were kept in lockable safe. The data collected was only accessed by the Principal Investigator and the Supervisor of the study.

Compensation: The study provided no compensation of any kind however patient‟s participation is highly appreciated.

Voluntary withdrawal: Participation in the study was voluntary and participants could anytime withdraw from the study.

Conflict of interest: The Principal Investigator declare no conflicting interests.

CHAPTER FOUR

RESULTS

4.1 Participant Characteristics

A total of 55 out of 57 participants were interviewed for the study which represent 96.5% (55/57) response rate. The fifty five (55) patients interviewed were made up of 71% (39/55) females. The respondents‟ ages were between 18 to 85 years, a mean age of 53.9 (SD 53.9± 15.6 years). Most of the respondents 29% (16/55) were in age group 50-59, and the least was age group less than 20 with 1.8% (1/55). Christians were in majority which represents 81% (45/55), most of the respondents were unemployed representing 36.4% (20/55) with 18.2% (10/55) being professionals. Fifty-one percent (28/55) were married as shown in Table 6. Of the 55 respondents, 49.1% (27/55) had had secondary level education and 12.7% (7/55) had primary education. Forty-two percent (23/55) were from Ga ethnic group and 10.9% (6/55) were Mole Dagbon.

***Table 6*: Demographic characteristics of respondents accessing CAM unit of LEKMA Hospital**

Variable	Number (%)
Age	
<20	1 (1.8)
20-29	4 (7.3)
30-39	5 (9.1)
40-49	9 (16.4)
50-59	16 (29.1)
60-69	11 (20.0)
70-79	7 (12.7)
80+	2 (3.6)
Sex	
Male	10 (29.4)
Female	24 (70.6)
Educational level	
Non formal	10 (18.2)
Primary	7 (12.7)
Secondary	27 (49.1)
Tertiary	11 (20.0)
Non formal	10 (18.2)
Marital status	
Married	28 (50.9)
Not married	27 (49.1)
Religion	
Christian	45 (81.8)
Muslim	7 (12.7)
Others	3 (5.5)
Ethnic group	
Ga	23 (41.8)
Akan	15 (27.3)
Ewe	11 (20.0)
Dagbon	6 (10.9)
Occupation	
Trader	13 (23.6)
Artisan	12 (21.8)
Professional	10 (18.2)
Unemployed	20 (36.4)
Total	55(100.00)

Patronage of CAM

4.2 Composite Score for client patronage of CAM

Seventy three percent of respondents indicated high patronage of CAM whilst the remaining 27% indicated partial patronage. This current high patronage gives an indication that CAM services can be sustained from the client perspective

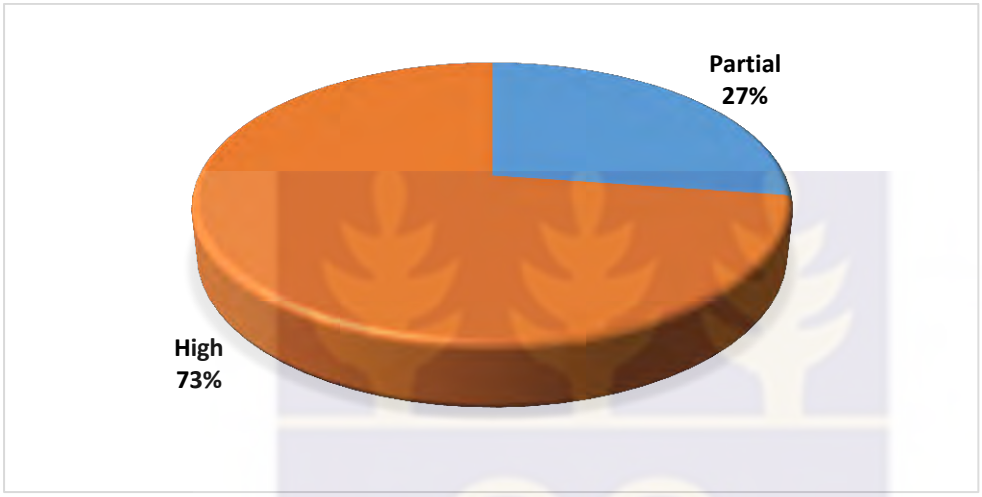


Figure 3: Composite score client patronage of CAM

4.2.1 Belief in CAM

Responses from the participants indicate that 72.3% (43/55) agreed that the more knowledge one has regarding CAM, the more likely one is to use it but. About 70% (36/55) agree with the belief that CAM is more potent than orthodox treatment. On whether CAM can be dangerous when used with orthodox medicine, 74.6% (41/55) agreed. More than half the respondents 50.9% (28/55) agreed that CAM can be used a last resort, however, 14.6% (12/55) were neutral on that statement (Table 7). Knowledge on CAM was the driving force in the belief in CAM.

Table 7*: Respondents views on CAM*

Client issues	Disagree (%)	Neutral (%)	Agree (%)
Belief in CAM			
Knowledge in use of CAM	3 (5.4)	9 (16.4)	43(78.2)
More potent than orthodox medicine	5 (9.1)	14 (25.5)	36 (65.5)
Can be dangerous	8 (9.6)	6 (10.9)	41 (74.6)
Last resort	19 (34.5)	8 (14.6)	28 (50.9)
Location of CAM			
Location influences decision	9 (16.4)	4 (7.3)	42 (76.4)
More people will use if located in health facility	3 (5.5)	2 (3.6)	50 (90.9)
Visible directional signs	15(27.3)	6 (10.9)	34 (61.9)
Perceived effectiveness			
More effective	6 (10.9)	15 (27.3)	34 (61.8)
Decide before coming	7 (12.7)	1 (1.8)	47 (85.4)
Availability of CAM services			
Readily available	8 (14.5)	13 (23.6)	34 (61.8)
Waiting time	5 (9.1)	10 (18.2)	40 (72.7)
Cost is cheaper	23(41.8)	17 (30.9)	15 (27.3)
Included in NHIS	2 (3.6)	3 (5.5)	50 (90.9)
CAM service is easier	15(27.3)	14 (25.5)	26 (47.3)

Perceived effectiveness	Definitely no	Not sure	Definitely yes
Recommendation of CAM to family and friends	4(7.2)	4 (7.23)	47 (85.5)

4.2.2 Location of CAM Services

Seventy-six percent (42/55) of respondents agreed that the location of CAM services influenced their decision to use the service, 16.4% (9/55) disagree and 7% (4/55) were

neutral. Ninety percent (50/55) were of the opinion that more people will use CAM when it is located at a health facility. Majority of the respondents 61.9% (34/55) agreed there were visible directional signs that direct one to the CAM unit however, 27.3% (15/55) disagree (Table 7). More people will patronize CAM when located in a health facility was the driving force in the location of CAM services.

4.2.3 Perceived effectiveness of CAM

With respect to perceived effectiveness of CAM, 61.8% (34/55) of respondents agree that CAM is more effective for the treatment of their condition than orthodox medicine whilst 10.9% (6/55) disagreed with that statement. Under the second statement on perceived effectiveness, 85.4% (47/55) agreed that they willingly made a choice to use CAM before coming to LEKMA hospital however only 1.8% (1/55) was neutral. People willingly decide to visit the facility before they come to the hospital was the driving force in perceived effectiveness of CAM services

4.2.4 Availability of CAM services

The responses from the 5 questions under this domain showed the following as presented in table 7: 61.8 % (34/55) of respondents agreed that usage of CAM is influenced by availability of medication and logistics for treatment of their ailment compared to orthodox treatment, whereas 14.5% (8/55) disagreed. Opinion on waiting time showed that 72.7% (40/55) agreed that CAM services have relatively shorter waiting time whiles 9.1% (5/55) disagree. Forty-two (23/55) disagreed that cost of CAM was cheaper than orthodox medicine whiles 27.3% (15/55) agreed on that issue. As to whether CAM should be included in the NHIS, 90.9 %(46/55) of the respondents agreed and only 3.6% (2/55) disagreed with the opinion. On the ease of use, 47.3% (26/55) agreed that it‟s easier to use CAM than orthodox

medicine however 25.5% (14/55) were indifferent on this position. On availability of CAM more people indicated that CAM services should be included in the NHIS.

On the patronage of CAM, majority of respondents 85.5% (47/55) indicated that they will definitely recommend CAM to their friends and family but 7.2% (4/55) will definitely not (Table 7). CAM should be included in the NHIS is the driving force in the availability of CAM services.

Sustainability of CAM health provider perspective

***Table 8*: Background characteristics of managers**

Variable	Number
Sex	
Male	2
Female	3
Departments	
Medicine	1
Herbal unit	3
Pharmacy	1
Duration of work at LEKMA	
<10	3
>10	2
Position	
Medical doctor	1
Pharmacist	1
Herbal doctor	1
Nurse	1
Pharmacy technician	1

A total of 5 service mangers were interviewed, 3 females and 2 males. Three of them were directly involved in the day to day running of the herbal clinic with minimum working experience of >10 and maximum <10 years.

4.3 Composite Score for Sustainability of CAM from health provider perspective

Eighty percent of health providers indicated that sustainability in the hospital was partial (figure 4).

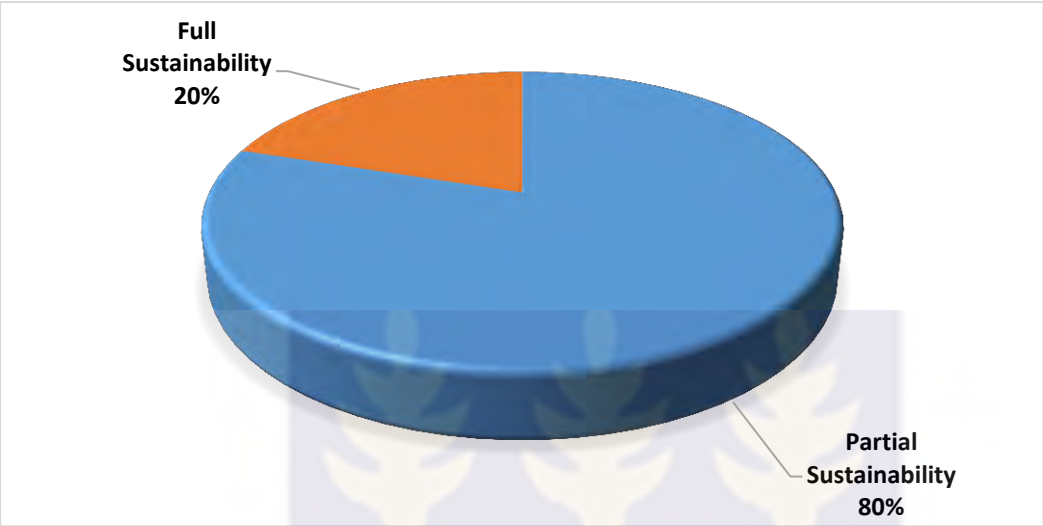


***Figure 4*: Composite score for sustainability of CAM health provider perspective**

Managers further assessment of CAM sustainability were in the following areas: funding, organizational capacity, programme evaluation, political support, partnership and planning as shown in table 9

Funding: Under funding, 3 out of 5 managers said the CAM budget was part of the LEKMA hospital budget a little. All the managers (5/5) agreed that salaries were paid by government to a large extent. None of the managers said CAM had got sustained funding to a large extent.

Organizational Capacity: Four out the 5 managers agreed that CAM‟s integration into the operations of the hospital was a little, whiles one person said it had been integrated to a large extent. Only one person said there were no organizational system in place to support its various needs. Two out of five managers were of the view that, there was a little in place whiles two also thought it was to a large extent.

Programme Evaluation: Of the 5 respondents, 3 were of the view that there was evidence of the useful services the unit was providing and that the services of the unit were being monitored. All respondents agreed that the unit submitted regular reports.

Political Support: All the respondents agreed that Ghana Health Services garners resources for CAM services. Sixty percent of the mangers agreed that the unit had political support from local authorities. The same percentage (60%) of respondents also said Ghana Health Services advocates for CAM services.

Partnership: Two out of five managers agreed that CAM had public, community and stakeholder support a little and to a large extent respectively. Three out of five managers were also of the view that local leaders such as community leaders engage in development of CAM goals a little.

Planning: Only one manager was of the view that the LEKMA Health Directorate was to a large extent involved with plans of CAM operation and expansion. Although three of the managers said the plans of the unit were integrated in the main plan of the hospital to a large extent.

***Table 9*: Health providers view sustainability of CAM**

Component	Not at all (%)	A little (%)	To a large extent (%)
Funding			
CAM budget	1 (20.0)	3 (60.0)	1 (20.0)
Salaries paid by Government	0 (0)	0 (0)	5 (100)
Sustained funding	2 (40.0)	3 (60.0)	0 (0)
Organizational capacity			
Well integrated	0 (0.0)	4 (80.0)	1 (20.0)
Organizational system	1 (20.0)	2 (40.0)	2 (40.0)
Effect management of staff & resources	0 (0)	3 (60.0)	2 (40.0)
Adequate staff	0 (0)	3 (60.0)	2 (40.0)
Programme evaluation			
Monitoring of services	0 (0)	3 (60.0)	2 (40.0)
Evidence of useful services	0 (0)	3 (60.0)	2 (40.0)
Provision of regular reports	0 (0)	0 (0)	5 (100)
Political support			
GHS advocates for CAM	0 (0)	3 (60.0)	2 (40.0)
GHS garners resources for CAM	0 (0)	5 (100)	0 (0)
Support from local authorities	2 (40.0)	3 (60.0)	0 (0)
Partnership			
Stakeholder support	1 (20.0)	20 (40.0)	20 (40.0)
Local leader engagement	1 (20.0)	3 (60.0)	1 (20.0)
LEKMA Health Directorate involvement of LEKMA in CAM operations & expansion	2 (40.0)	2 (40.0)	1 (20.0)
Integrated of unit plan into LEKMA	0 (0)	2 (40.0)	3 (60.0)

Managers supported their assertion of high partial sustainability of CAM with the following observations.

> *"It's in its growing stages. It's quite new in Ghana. Before CAM used to be only for foreigners who have come in but now locals are now getting to know CAM and it's beginning to spread. In the past if you wanted CAM services, probably you will need to go to a Chinese clinic or some foreigner place. But now we are finding them in even private clinics owned by Ghanaians.*"" (Head of Herbal unit)

> "C*urrently, what we are doing is just one part of CAM, and not the whole service just because people do not like the medications, the herbal part seems to be dying, whiles the massage and other… the acupuncture seems to be growing. But if we are looking for a holistic service, all these things must go together." (Doctor)*

On the issue of the current state of CAM in LEKMA, a manager indicated that:

> *"The present, it is not good. We have a lot to do. The past was better, because we were distributing flyers, we were talking to patients, we were making announcements downstairs for people to know of the herbal services upstairs, we were talking to the doctors so they can refer patients to us. But such things have ceased, because the microphone over there is spoilt" (Pharmacy Technologist)*

On the issue of infrastructure to sustain the service, the responses were that, there were not enough to sustain the service:

> *"When LEKMA was built, there was whole sector for the herbal division, the Chinese wanted to do a lot because they wanted to bring in some machines and other equipment, but because of time, the rooms were given out, now we have just two single rooms. The infrastructure is not enough. We still need rooms for so many things." (Pharmacy Technologist).*

> "*Personally, everything we are using is donated. So when the donations stop coming in then, it will become a bit difficult"." (Head of Herbal Unit)*

Human resources was also an issue to sustain the services, managers think that that too was inadequate.

> *"Some personnel are not permanent. So they just come in for a specific time and then they have to go away. If this continues, it will not be something we can sustain" (Head of Herbal unit).*

> *To sustain the Chinese help from time to time, and they are also helping to make sure it is sustained" (Doctor).*

They also mentioned that a staff is currently being trained in China.

> *„"One of our ladies is currently in china, learning something different from what she was trained to do, she is a herbalist, but now learning acupuncture, this is also to help with sustainability"" (Doctor)*

They all mentioned that to sustain, they need to improve on the service

> *„Okay, so there is this issue of low client turn over, because people are not even aware this service is available, sometimes it seems like we are not being very useful"." (Head of Herbal Unit)*

> *„I said earlier on a lot more could be done… we are not supposed to advertise too" (Head of Pharmacy)*

The main threat pointed was shortage of drugs and lack of variety of drugs at the pharmacy.

> *„ There is a list of herbal medicines that government have put in place, those are the approved drugs that we are to use. We can only use drugs from Mampong. That is one of the problems, sustainability means that, should stock variety of drugs all time „ "(Herbal Technologist)*

> *„ "Sometimes we do run short of some of the vital drugs at the pharmacy, because of the way they are purchased". (Nurse)*

> *„In opinion, like the private pharmacy we should also have the essential drugs in stock every time, so clients do not to have to leave the hospital to go and purchase drugs from outside""(nurse)*

Another respondent said the slow nature of herbal treatment is a threat which could discourage clients if the service providers are not confident enough to convince them of its effectiveness also there is a problem with low client patronage, they all mentioned the lack of advertisement as a threat to the service.

> *„People want the accuracy of what you are giving to them, they want to make sure it will work, herbal is slow but it"s very effective.""(Pharmacy Technologist)*

> *"Ghana Health Service do not permit us to advertise, so how are they helping for people to know what we do?""(Herbal Technologist)*

> *„ "If we were able to advertise, „ YES" that will be a great opportunity.""(Head of Herbal unit)*

CHAPTER FIVE

DISCUSSIONS

Data collected from the respondents was used to determine the sustainability of complementary and alternative medicines at LEKMA hospital. From the clients‟ perspective, the high patronage of CAM at LEKMA indicated that it was sustainable whiles from the health service providers‟ perspective was partially sustainable.

Results from clients‟ perspective in this study shows 73% high patronage while 27% indicated partial patronage of CAM, this results was similar to what was found by Miller et, al. (2004) which states that utilization of CAM in recent years has grown dramatically, this same position was also supported by Busia (2007) in his work in Ghana which documented that about 70% of the population depend on CAM practices for their primary health care needs. Previous studies indicated that high patronage of CAM has been found to be linked with its low cost, accessibility and affordability (Adjei, 2013; Kuunibe & Domanban, 2012)

Findings on general belief showed that 82% of the respondent‟s belief in CAM, they believe that CAM was potent than orthodox medicine and that it was able treatment their condition better than orthodox medicine, this was not surprising because Gyasi et al., (2011) supported this and reported similar statement that people believe CAM was potent, powerful and very useful in treatment of various ailments. Other people find the use of CAM to be physiologically comfortable because they believe this system of health was embedded in their socio-cultural traditions (Gyasi et al., 2011) Furthermore, religious and spiritual beliefs of people have been found to be the same (Gyasi, 2014). Adjei, (2013) documented that Ghanaians were gradually developing more trust and interest in CAM. It was this acceptability and increasing interest in CAM by both patients and health care providers was a reflection of changing behavior, needs and values in our modern society (Jonas & Levin, 1999). About 51% of respondent believe that CAM should be used as a last resort and this

was corroborated by (Verhoef et al., 2005) in their study which indicated that CAM can be used as a last resort and finding hope.

This study found a number of factors that influence people‟s decision to use CAM, they include the location of CAM; the availability of visible signs to direct people to the site and when CAM was located at the health facility. This may be explained by the fact that once it was located within the premise of the health facility it means it has been recognized as part of the health system and users may feel comfortable that their activities will be regulated.

Patients who responded to the study perceive CAM to be very effective (61.9%) and as such CAM was effective for the treatment of their condition, this finding was no different from the community survey conducted on use and perceived effectiveness of CAM to treat and manage children with autism in Southeastern Virginia which revealed that CAM was frequently used among this population. Hopf (2016) showed that CAM therapies that were perceived to be effective received high rating and some of them include sensory integration therapy, melatonin and off-label use of antifungal medications. Some of CAM therapies frequently used include multivitamins, the gluten-free casein-free diet, and methyl B-12 injections. A study in the Caribbean revealed that traditional medicines were perceived to be more efficacious in some instances or as equally as effective as orthodox medicines (Clement et al., 2007), this assertion was similar to the findings in this study. Earlier work done in the Ashanti region found that clients perceived Traditional Medicine to be effective. This was supported by their experiences of healing from conditions such as hypertension, boils, broken bones/fractures, impotency and infertility etc. Some even believed as far as these diseases were concerned, it was more effective than conventional medicine (Gyasi et al., 2011). Muftawu, (2014) study on integration in the same hospital observed that herbal medicine was in high demand due to the increase chronic non-communicable disease.

On the availability of CAM, 40% of respondents strongly agreed that usage of CAM was influenced by availability of medication and logistics for treatment of their ailment compared to orthodox treatment. The absence of the logistics invariable means even those who depend on CAM 100% will not be able to use it. The availability of the needed logistics to effective use CAM cannot be over-emphasized and was linked to its sustainability.

The study revealed that complementary and alternative medicine at LEKMA hospital was partially sustainable. Only 20% of the managers were of the view that CAM was fully sustainable. A critical assessment of the components of sustainability clearly shows that there was the need to pay much attention to availability of human resource; availability of infrastructure; funding; organizational capacity; programme evaluation; political support and partnership. In-depth interview with the managers reveal that funding of CAM was under threat, their salaries are paid regularly but there was little or no sustained funding from Government and respondents recommend CAM services should be absorbed by the NHIS. Although, the Ministry of Health reported to have allocated funds for carrying out programmes to support research and expand into traditional medicines, acquisition of laboratory equipment for further experiments and for cultivation of medicinal plants to improve existing herbal products in the country and to come up with safe, effective and quality herbal products (Ministry of Health, 2016), the managers had not received fund allocated. Hence, the plans to rehabilitate old research laboratories and facilities and acquire other assets are yet to materialize to help improve traditional medicine development in the country. KNUST trains Traditional Medicine Practitioners with formal knowledge of medicinal plants who can apply scientifically-harnessed herbal medicines to treatment of diagnosed diseases (Adusi-Poku et al., 2010) using locally available resources and the Traditional Medicine Practice Council contribute to building the capacity of its members by rolling out a series of capacity building training and continuous professional development

programmes. Managers praised the human resource capacity the Chinese Government brings on board in the running of the clinic.

Even though 80% of the managers agreed that there was little integration of CAM into the operations of the hospital and some organizational system in place to support the various needs of CAM. The organizational system described by the managers falls short of what Essegbey & Awuni, (2016) defined as an important first step in integration of traditional medicine into the healthcare system of the country which include oversight responsibility from Traditional and Alternate Medicines Directorate that was set up under the Ministry of Health. The addition of some herbal medicines to the Essential Drug List and ensuring some traditional medicine treatments are covered by the National Health Insurance Scheme (NHIS) have all not yet been implemented.

With respect to programme evaluation component of sustainability, there was demonstrable evidence of usefulness of the CAM according to the managers and in addition to some level of monitoring of the services, there was regular report generated on service provision. Documentation of service provision though very good if it not disseminated to the wider community it loses its value.

The political climate may be described as fair because logistics needed to conduct advocacy for CAM has been dwindling over the years. The managers admitted that the flyers, announcements and education on CAM these days are not been done like previously. Moreover, per the policy of GHS, they are not expected to carry out advertisement on their work. In addition, the frequent shortage of drugs, non-availability of variety of products threatens the sustainability of CAM.

Government of Ghana partnership with the Chinese Government has yielded a lot of benefit including the infrastructure for CAM treatment, regular support with equipment and human

resource. Local leaders‟ engagement have been ongoing but their presence not much felt unless during the period of durbars, however they have been instrumental in providing the peaceful environment for CAM operations at LEKMA. It was evident that the plans of the unit have partially integrated into the main plans of the hospital. It was the same managers who oversees both the orthodox and CAM facility and they ensure its functionality.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

The assessment of CAM at LEKMA hospital revealed a high patronage of from clients‟ perspective and partial sustainability from health service providers‟ perspective. The 73% patronage of CAM from clients‟ perspective which indicate sustainability was due their high general belief in the potency, knowledge in its use and serve as a last resort when all else fail. It addresses not only the physical needs of the patients but the psychological, social, cultural and spiritual needs. Other factors that positively influence the high patronage of CAM include the location, perceived effectiveness and availability. Unfortunately, the study showed that the current state of affairs for CAM at LEKMA may not be sustained from the service provider‟s perspective. The very low full sustainability score of 20% emerged from the unavailability of sustained funding, fairly established organizational system, lack of full political support locally and nationally plus inadequate dissemination of CAM services and their success stories.

CAM services can be sustained at LEKMA provided Government of Ghana through Ministry of Health and the Ghana Health service, ensures the following areas are critically addressed.

1. Managers of the facility ensure that there is regular positing of staff to the CAM unit to provide service to clients
2. Managers of the service through advocacy ensure that CAM services are covered under the NHIS with regular supply of scientifically approved drugs from various sources
3. Health education on CAM services at OPD of LEKMA should resume to popularize the service.

4. The study suggest that there are no advert for CAM services in the facility. The Ghana Health Service should advertise CAM services in the media

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APPENDICES

INFORMED CONSENT FOR IN-DEPTH INTERVIEWS WITH MANAGERS AT LEKMA HOSPITAL

Study Title: Use and sustainability of Complementary and alternative medicines at LEKMA Hospital in Teshie at Greater Accra Region

Principal Investigator: Angela Abbey
Phone: 0244982423

Introduction to Study

I am conducting a study on the use and Sustainability of CAM at LEKMA Hospital. Ghana integrated CAM into our health delivery system in September 2012. This move was to ensure that CAM services are offered in a safe, respectful and effective manner according to the policies and regulations of the country. Since the integration of CAM at LEKMA Hospital, much has not been documented on CAM use, types of services being offered, the perceived effectiveness, the general belief in CAM and sustainability of the co-existence of the practice in Ghana as well as the operational challenges.

What should you expect during this study

If you volunteer to be part of the study, you will be asked to take part in a one-on-one interview with a trained interviewer at a time of your choice at the health care facility where you work. The interview will last between 45-60 minutes.

Everything you share in the interview will be confidential and private. If you agree, we will make a digital-recording of the interview so we can be sure to record the information you share with us. Nothing you say will be linked to your name. If you agree to be recorded but feel uncomfortable at any time during the interview, you can ask us to turn off the recorder.

Potential Risks

Some of the questions may make you uncomfortable or upset. You can refuse to answer any question.

Benefits

There is no direct benefit to you from taking part in this study. It is hoped that the research will help us to find out about the use of CAM and how it can be sustained.

Compensation
There will be no cost to you for being in in the study.

Confidentiality
What you tell us is confidential. Nothing you share in questionnaire will be linked to your personal information. No one except the Principal Investigator, research assistants and supervisor will have access to your comments.

Rights
Voluntary participation/withdrawal
Participation in research is completely voluntary. You are free to not take part in the study. You can decline to answer any questions and are free to stop taking part in the research study at any time. There will be no penalty to you or loss of benefits to which you are otherwise entitled if you do decide not to answer any questions or decide to stop being in the study.

Questions
If you have any future questions about this research, please feel free to contact Angela Abbey, the Principal Investigator of the study. She can be reached phone at +233 244982423 or by email at angelakenu@yahoo.com and **Abena Kwaa Addai-Donkoh- 0302681109** in case you have any problem with participation in the research

Agreement and Consent
You have read this document. Do you have any questions?
Do you agree to take part in the discussion?

1. I have been informed by the interviewer about the nature, conduct, benefits and risks of this study
2. I have also received, read and understood the above written information regarding the study
3. I am aware that the results of the study, including any personal information I choose to share, will be anonymously processed into a study report
4. I may, at any stage during the discussions, without prejudice, withdraw my consent and participation in the study
5. I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study

Date: _____ Signature of Participant: _____

I have fully explained to the participant the nature and purpose of the procedures described above and the risks involved in its performance. I have asked if any questions have arisen regarding the procedures and have answered these questions to the best of my ability.

Date: _____ Signature of Interviewer: _____

Signed copies of this consent form must be 1) retained on file by the principal investigator and 2) given to the subject.

Qualitative/Quantitative questionnaire for managers

In-depth interview on sustainability

Section 1

Respondent ID	
Date of Interview	
Name of interviewers	
Sex	
Position	
Department	
Duration of work	
Is the recorder working?	
Consent given?	

Introductory Remarks

I am _____ from _____

General purpose of the study

Aims of the interview

How long it will last

Any questions?

1) What do you understand by sustainability?

2) What is the current state of CAM in Ghana

Probe

- How was it in the past?

3) Is CAM services sustainable in its current state? Why/why not?

Probe

- Human resources available?
- What about infrastructure?
- Is there anything else you'll like to share with me?

4) How will CAM services be sustained?

5) What are the opportunities for and threats of CAM services sustainability?

6) What will you say about the level of integration of CAM services in this hospital?

Probe on what exactly has been integrated

7) Looking at the impact of CAM services in Ghana should the integration include all health facilities in Ghana?

Section 2: Questionnaire for managers

Please indicate the extent or not to the following statements on CAM sustainability

No	Funding	
8	Is the complementary and alternative medicine budget part of LEKMAs overall budget? Not at all A little to a large extent	☐
9	Are the salaries of the staff of the complementary and alternative medicine unit paid by government Not at all A little to a large extent	☐
10	Has the complementary and alternative medicine unit got sustained funding Not at all A little to a large extent	☐
	Organizational capacity	
11	Is the programme well integrated into the operations of organization? Not at all A little to a large extent	☐
12	Has complementary and alternative medicine unit got organizational system in place to support its various needs?	☐

	Not at all A little to a large extent	
13	Does the leadership of complementary and alternative medicine unit efficiently manage staff and other resources? Not at all A little to a large extent	☐
14	Does the complementary and alternative medicine unit has adequate staff to efficiently manage resources and complete organizational goal? Not at all A little to a large extent	☐
	Programme Evaluation	
15	Does the complementary and alternative medicine unit monitors its services regularly? Not at all A little to a large extent	☐
16	Does the complementary and alternative medicine unit provides evidence to the public that its services are useful? Not at all A little to a large extent	☐
17	Does the complementary and alternative medicine unit provide regular reports to LEKMA health directorate? Not at all A little to a large extent	☐
	Political support	
18	Does the GHS advocates for complementary and alternative medicine services? Not at all A little to a large extent	☐

19	In your opinion does the GHS/MOH garner's resources for complementary and alternative medicine services? Not at all A little to a large extent	☐
20	Has the complementary and alternative medicine services got political support from the municipal assembly, chiefs and opinion leaders? Not at all A little to a large extent	☐
21	Has complementary and alternative medicine services got political support from the public and other community members? Not at all A little to a large extent	☐
22	Does LEKMA health directorate advocate support for complementary and alternative medicines services Not at all A little to a large extent	☐
	Partnership	
23	Does the public, community or any stakeholder support any services of complementary and alternative medicine? Not at all A little to a large extent	☐
25	Are community leaders engage in the development goals of LEKMA? Not at all A little to a large extent	☐
	Planning	
26	Does the LEKMA health directorates get involved with plans for complementary and alternative medicine its operations and expansions? Not at all A little to a large extent	☐

27	Are the plans of the unit integrated in the main plan of the hospital? Not at all A little to a large extent	☐

QUANTITATIVE QUESTIONNAIRE FOR PATIENT

	Respondent"s ID	
SECTION 1: DEMOGRAPHIC CHARACTERISTICS		
	Age	
	Sex 1.Male 2. Female	☐
	Highest level of education No formal education Primary Secondary Tertiary	☐
	Religion Christianity Muslim Others	☐
5.	Occupation Trader Artisan Professional Unemployed	☐
6.	Marital status Married Not Married	☐
7.	Ethnicity Ga Akan Ewe Mole - Dagbon	☐

SECTION 2 Please indicate your agreement or disagreement to the following statement on CAM usage		
General belief in CAM		
8.	The more knowledge you have regarding complementary and alternative medicine, the more likely you are to use it Strongly disagree Disagree Neutral Agree Strongly agree	☐
9.	Do you belief that complementary and alternative medicine treatment is more potent than orthodox treatment Strongly disagree Disagree Neutral Agree Strongly agree	☐
10.	Complementary and alternative medicine can be dangerous when used with orthodox medicine Strongly disagree Disagree Neutral Agree Strongly agree	☐
11.	Complementary and alternative medicine should only be used as a last resort Strongly disagree Disagree Neutral Agree Strongly agree	☐
	Location of CAM services	
12.	Location of Complementary and alternative medicine has influenced your decision to use the service Strongly disagree Disagree	☐

	Neutral Agree Strongly agree	
13.	More people will use Complementary and alternative medicine treatment when located at a health care facility Strongly disagree Disagree Neutral Agree Strongly agree	☐
14.	Are there visible directional signs to direct one to the Complementary and alternative medicine unit Strongly disagree Disagree Neutral Agree Strongly agree	☐
	Perceived effectiveness of CAM	
15.	Complementary and alternative medicine is more effective for my treatment than orthodox medicine Strongly disagree Disagree Neutral Agree Strongly agree	☐
16.	Do you willing make a choice to decide to use Complementary and alternative medicine before coming to LEKMA hospital Strongly disagree Disagree Neutral Agree Strongly agree	☐
17.	Would you recommend Complementary and alternative medicine services to your friends and family Definitely No Probably No Not Sure Probably Yes Definitely Yes	☐
	Availability of CAM	
18.	Are the medication and logistics for Complementary and alternative	

	medicine treatment of my ailment readily available compared to orthodox treatment Strongly disagree Disagree Neutral Agree Strongly agree	☐
19.	In your opinion is the waiting time for Complementary and alternative medicine services relatively shorter than that of orthodox treatment Strongly disagree Disagree Neutral Agree Strongly agree	☐
20.	In your opinion is the cost of Complementary and alternative medicine medication relatively cheaper than orthodox treatment for the same treatment Strongly disagree Disagree Neutral Agree Strongly agree	☐
21.	In your opinion should Complementary and alternative medicine medication be included in the NHIS Strongly disagree Disagree Neutral Agree Strongly agree	☐
22.	Is Complementary and alternative medicine service easier to use than orthodox for the same treatment Strongly disagree Disagree Neutral Agree Strongly agree	☐