

# Traditional Medicine and the Fight against Infectious Diseases

<sup>1</sup>Samuel ADU-GYAMFI, <sup>1</sup>Ali YAKUBU NYAABA,

<sup>2</sup>Emmanuel BEMPONG, <sup>1</sup>Ruth DWAMENA, <sup>1</sup>Konadu ASANTE,

<sup>1</sup>Caleb KUSI AMPOMAH, <sup>1</sup>Julia KOM, <sup>1</sup>Bridget AMABLE KLUFAR

<sup>1</sup>Department of History and Political Studies, Kwame Nkrumah University of  
Science and Technology, Kumase-Ghana

<sup>2</sup>Sunyani Technical University, Sunyani

Corresponding Author's Email: mcgyamfi@yahoo.com

## Abstract

*Traditional medicine plays a major role in the management and treatment of infectious diseases in Ghana. Over the years, successive governments have made enormous contributions through initiatives and policies to recognize the importance of traditional medicine in the healthcare system of Ghana. Though traditional medicine is important in healthcare delivery in Ghana, there have been misconceptions relating to the use of traditional medicine in curing infectious diseases. Some have argued that it is ineffective and unsafe due to lack of scientific proof/therapeutic index. This research assessed the effectiveness of traditional medicine in managing and treating infectious diseases in Ghana. The research deployed a qualitative method and a purposive sampling technique. Individuals; ranging from a traditional medical practitioner (1) to orthodox medical practitioners (doctors and nurses) (3) and users of traditional medicine (12) summing up to sixteen (16) participants were interviewed for first-hand data. Secondary information were also collected from books, articles, reports and electronic sources. The study highlights the extent to which traditional medicine has been effective in curing infectious diseases despite the misconceptions surrounding it (NHIS). The study revealed that traditional medicine is efficacious in treating infectious diseases like COVID-19, typhoid, Syphilis, hepatitis B and C, among others and also established that though TM at the local level is noted to have the challenge of proper dosage and prescription, it has no side effects. This study recommends that the government of Ghana collaborate with traditional medical practitioners by providing them with financial assistance to develop if possible, remedies for epidemic and infectious diseases including HIV/AIDS.*

**Keywords:** *traditional medicine, infectious diseases, orthodox medicine, cure.*

## Introduction

Traditional medicine has a long history, with its origins dating back to prehistoric times. It is the sum total of the knowledge, skills, and practices based

on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, or treatment of physical and mental illness (Gureje et al., 2015, p. 168). The principles / approach of traditional medicine vary greatly from culture to culture, but they often include a holistic approach to patient care, a focus on maintaining balance in the body, spirit and the use of natural remedies. Traditionally, the people of Africa have used a plethora of traditional medical knowledge to sustain their respective societies and promote their socio-economic development. Some of the traditional medicines that have been used over the years are *alchornea cordifolia* (*Gyamma* in Twi), a shrub whose root and leaves are used to cure stomachache, jaundice, fever and ringworms (Abbiw, 1990).

Primarily, the people of Ghana have persistently battled with serious health challenges in the course of their existence. Ghana's health policy upholds the principle that "health is not only a human right issue but also a key developmental issue and ultimately a source of wealth (Republic of Ghana, 2007). Amid these challenges, Ghanaians have shown resilience to anything that poses a potential threat to their survival. As espoused by Adu-Gyamfi and Donkoh, the history of any community cannot be written without paying attention to the issues that shaped the lives of the people (Adu-Gyamfi & Donkoh, 2015, p. 4). One of the issues in their postulation is the prevalence of diseases and how they were prevented and cured within the period under review.

According to Adu-Gyamfi, one of the avenues Ghanaians resorted to for the treatment and prevention of diseases included the use of traditional medicine (Adu-Gyamfi, 2010). Prior to the end of the first half of the 19<sup>th</sup> century, Western scientific medicine did not form part of the medical systems of the Gold Coast, especially among the indigenes; traditional medicine was the main and only form of healthcare delivery system (Adu-Gyamfi & Adjei, 2017, p. 5). Traditional medicine is an essential contributor to primary health care in many communities based on a long history of cultural acceptance, with an anecdotal estimate of 80 to 90% of the rural population relying on traditional medicine for this purpose (Houghton, 1995, p. 131).

According to the World Health Organization, traditional medicines are "the total of all knowledge and practices, whether explicable or not, used in diagnoses, prevention and elimination of physical, mental and social imbalance, relying exclusively on practical experience and observation handed down from generation to generation, whether verbally or in writing (WHO, 2019, p. 15)." Adu-Gyamfi and Anderson (2017) also define it as "the diverse health practices, and approaches, knowledge and beliefs incorporating plant, animal, and mineral based

medicines, spiritual therapies, manual techniques and exercises applied singularly or in combination with other things to treat, diagnose and prevent diseases (Adu-Gyamfi & Anderson, 2017, p. 70). Simply put, traditional medicine is often referred to as indigenous or folk medicine, which encompasses medical aspects such as knowledge, skills, and practices based on the theories, beliefs, and experiences that are indigenous to different cultures. These practices are used in the prevention, diagnosis, improvement, or treatment of physical and mental illnesses.

The World Health Organization (WHO, 2002) estimates that about 60% of the global population uses herbal medicine to treat their illnesses and up to 80% of the African population depends on traditional medicine for their primary health care needs. Most traditional medical practices are compatible with their users' cultural values, beliefs, and worldviews regarding the meanings of health, illness, and healing (WHO, 2002, p. 2). In both the developed and developing world, traditional medicine is referred to as complementary and/or alternative medicine (CAM). However, its usage has continued to be popular and is increasing rapidly as a viable health care option among the citizens of these nations. Indeed, Ghana appreciates traditional medicine and has a national policy which is aimed at full-fledged integration of traditional Medicine and Practices into the mainstream orthodox biomedical systems in hospitals and other health centres. Thus, it can be contemplated that Ghana presents a useful space to observe and also analyze the policy for integration of traditional medicine into the biomedical settings (WHO et al., 2001, p. 2). It is significant to note that Ghana is among the twenty-five (25) countries out of WHO's 191 member countries that has a policy for traditional medicine (*Ibidem*).

In 1991, the Ministry of Health established the Traditional and Alternative Medicine Directorate to provide a well-defined and recognized complementary health system based on excellence in traditional and alternative medical knowledge and to coordinate and monitor all traditional medical practices in Ghana (Ministry of Health, 2005). Traditional medicine in Ghana has over the years, proven to be very reliable for the people of Ghana (Anful, 2015, p. 6). Insufficient and poor spatial distribution of health facilities, inadequate number of the already ill-equipped health facilities, limited access to public health services, high cost of healthcare due to weaknesses in healthcare financing through poor insurance arrangements, and inadequately trained personnel at the facilities all make the modern healthcare system incapable of meeting the healthcare needs of Ghanaians, especially those living in rural areas (Republic of Ghana, 1997).

Research shows that by the close of the twentieth century, about 70% to 80% of the Ghanaian population depended on traditional medicine for their healthcare needs; as a result, the importance of indigenous medicine cannot be underestimated (WHO, 2021). Anful (2015) opined that Orthodox medicine hindered the development of traditional medicine, and with the coming of orthodox medicine, the African was made to see his or her medicine as not good enough due to the fact that indigenous medicine was linked to the indigenous religious beliefs of the local populations (Anful, 2015, p. 6). In his research “Trends and challenges of traditional medicine in Africa”, Abdullahi (2011) argued that:

*A century of colonialism, cultural imperialism has held back the development of African traditional health care in general and medicine in particular. During several centuries of conquest and invasion, European systems of medicine were introduced by colonizers. Pre-existing African systems were stigmatized and marginalized. Indigenous knowledge systems were denied the chance to systematize and develop. (Abdullahi, 2011, p. 116)*

However, after Ghana’s independence, successive governments recognized the essence of traditional medicine in the country. This led to the formation of the Ghana Psychic and Traditional Healers Association in 1961, and the establishment of the Center for Scientific Research into Plant Medicine in 1975 attests to this fact (Ministry of Health (MOH) 2005).

Over the years, there have been several scholarly debates about traditional medicine and how it has been used to cure infectious diseases in Ghana. In their study on the “Use of traditional medicine by HIV/AIDS patients in Kumasi Metropolis, Ghana: A cross-sectional survey,” Gyasi *et.al* explored the impediments of infections like HIV/AIDS and how it continues to ravage the population and has adversely impacted productivity and economic growth in Ghana (Gyasi, Darko & Mensah, 2013, p. 117). According to the Ghana Aids Commission, 64% of people living with HIV know their HIV status, and 96% of people with diagnosed HIV infection received sustained anti-retroviral therapy. 73% of people receiving anti-retroviral therapy have viral suppression. The total number of people living with HIV in Ghana is 346,120; 36% are males and 66% are females (Ghana Aids Commission, 2020). The classical treatment with anti-retroviral therapies has been effective in prolonging the lives of HIV positive patients who would have eventually progressed to stages III and IV of AIDS. However, the drug does not cure the infection; it only slows the progression of the condition (Lunat, 2011). People living with AIDS in Ghana use traditional

medicine alongside anti-retroviral therapies. This is because of the availability and easy access to a wide variety of traditional medicine care, the intrinsic cultural beliefs and the freedom of patients to select and utilize the treatment modality of their choice (Liu, Manheimer & Yang, 2005). According to Gyimah et al (2021), prior to the emergence of COVID-19 in Ghana, traditional medicine played a key role in preventing and sustaining the lives of the infected (Gyimah, Donkor, Cindy, Sarkodie, Bekoe & Boateng, 2021). Prof. Abraham Kwabena Anang, the Director of the Noguchi Memorial Institute for Medical Research (NMIMR hereafter) indicated that NMIMR has received a number of local herbal medicines that are being considered for the possible treatment of the coronavirus disease (COVID-19). In an interview with Emelia Ennin Abbey (a senior journalist at the Graphic Group Communications Limited), she hinted that “Looking at the number of local herbal medicines received, there is a lot of hope because we have received a number of local medicines that are being screened for COVID-19 treatment” (Daily Graphic, 2020). Though many assertions have been made on how traditional medicines have cured one disease or the other. So far, there has been limited social anthropology and historical study on how effective or efficacious traditional medicine has been in the fight against these diseases. It is against this backdrop that the present study seeks to assess how traditional medicine has been used to cure infectious diseases over the years.

According to Adu-Gyamfi (2010), prior to 1900, the major healing therapies that were used in Ghana for the treatment of ailments were traditional medical therapies. Indeed, the role played by traditional medical practitioners (TMPs) cannot be gainsaid. Abdullahi (2011) posits that, despite the negative effects the introduction of orthodox medicine had on the practice of traditional medicine, traditional medicine persevered and continues to be important in the country’s health care system (Abdullahi, 2011). It is evident that traditional medicine has a greater proclivity to improve the healthcare status of Ghanaians if it becomes more regulated and systematized. In a study conducted by Gyasi *et al.*, it was revealed that traditional medicine is widely used by HIV/AIDs outpatients on anti-retroviral therapy (ARTs) in the Kumase Metropolis of Ghana (Gyasi, Darko & Mensah, 2013, p.118). According to Liu *et al.* (2005), herbal medicines have been used for treating HIV infection and AIDS. People living with AIDS in Ghana use traditional medicine alongside anti-retroviral therapies because of the availability and easy access to a wide variety of traditional medicine care, the intrinsic cultural beliefs and the freedom of patients to select and utilize the treatment modality of their choice (Liu, Manheimer & Yang, 2005). Also, many Ghanaians resorted to the use of traditional medicine when COVID-19 broke out on March 13, 2020.

Despite the international regulatory bodies like the WHO's perceived double-dealings and suppression of traditional medicinal use, for the combat of epidemic diseases like COVID 19 and HIV/AIDS, the Ghanaian local populations' constant patronage of traditional medicine, could serve as a positive avenue to pass some acceptable messages about traditional medicine, not only as an accessible medicine and practice, but also as an effective and safe practice.

In 2005, the Ministry of Health provided Policy Guidelines on Traditional Medicine Development. It postulated that if traditional medicine is well harnessed, it could be effective and considered advantageous for the development of Ghana's health care system (MOH, 2005). It is against this background that WHO placed much emphasis on traditional medicine as the surest way to achieve total health coverage for the ever-growing populations of Africa. Though the WHO emphasized and legalized the incorporation of traditional medicine into biomedicine to achieve total health in 1978, nonetheless, it still has some reservations as to what traditional medicine can cure and what it cannot cure regardless of its progress. This can also be due to the argument concerning lack of evidence-based health care delivery by traditional health practitioners. It is imperative to ask if all traditional herbal tonics claimed to be able to cure both HIV and COVID 19 were researched thoroughly to assess their efficacy before the authorities drew such conclusions. Notwithstanding the tremendous impact traditional medicine has had on the treatment and management of infectious diseases, biomedical health practitioners have consistently refused to acknowledge the role traditional herbal medicine plays in the management and treatment of such diseases. This emanates from their negative perception toward traditional medicine. It is based on some of these antecedents that the study sought to explore how traditional medicine has been used to cure and manage infectious diseases in Ghana. This research paper aimed to uncover how traditional medicine has been used to cure infectious diseases and its effectiveness since the post-colonial period. The specific objectives of the study were to assess the extent to which traditional medicine has been used to manage and treat infectious diseases in Ghana, to ascertain the attitude and perceptions of orthodox medical practitioners: doctors, nurses, and midwives among others toward the use of traditional medicine in treating infectious diseases in Ghana, to explore the reasons why people with infectious diseases continue to use traditional medicine despite the introduction of orthodox medicine in Ghana and by way of emphasis, it discusses why Ghanaians continue to visit traditional medical practitioners.

*Methodology*

A qualitative research approach was employed to aid the in-depth descriptive data analysis of the study. Primary and secondary sources of information were adopted to achieve the objectives of the research. Data was collected employing oral interviews. Phones were used to record the responses by the interviewees after receiving their consent to do so. Oral accounts from traditional medical practitioners, scientific medical practitioners and users of traditional medicine in Accra and Kumase, respectively, were found to be useful. Sixteen interviews were conducted in the Greater Accra and Asante during data collection. The interview was conducted and explored in Twi, Ga and English because Twi, Ga and English are the three major languages spoken in these two cities: Accra and Kumase. In particular, interviews that were conducted in the local languages; Twi and Ga, were later translated and transcribed into English language.

The purposive sampling technique was adopted to select participants who could provide valuable insights and rich information into the research questions. In view of this, respondents in the study were chosen from individuals with expert knowledge of the subject matter. Traditional medical practitioners, scientific medical practitioners and users were interviewed. The years of experience of the practitioners were significant and ranged from ten to thirty years of practicing herbal and scientific medicine, while most of the users who were interviewed included persons who have been using traditional medicine since childhood. This was to provide an in-depth understanding of their experience on the topic and allowed questions that required some follow-up questions to be duly addressed for better clarification. The interview questions were structured based on the research objectives. Secondary sources were also employed to enrich the study by providing historical accounts and trends in the usage of traditional medicine for the treatment of infectious diseases. Books, journal articles and published articles including reports and online sources supplemented the primary sources.

Accra and Kumase served as the geographical settings of the study. Accra is the capital and largest city of Ghana, located on the southern coast of Guinea, which is part of the Atlantic Ocean. During the 2021 census, the Accra Metropolitan area, which covers 20.4km<sup>2</sup> (1,253 square miles) had a population of 5,455,692 inhabitants. Accra is the Greater Accra region's economic and administrative hub and serves as the anchor of the larger Greater Accra Metropolitan Area (GAMA), which is inhabited by 4 million people, making it the thirteenth largest metropolitan area in Africa. Kumase is a city in the Asante Region and is among the largest metropolitan areas in Ghana. It is located in a

rainforest region near Lake Bosomtwe and is the commercial, industrial and cultural capital of the historical Asante Empire. Kumase was alternatively known as the “Garden City” because of its many species of plants.

### *Discussion of Findings*

This section of the research is divided into five themes; the first theme deals with the extent to which traditional medicine has been used to manage and treat infectious diseases in Ghana, the second theme discusses the attitude and perceptions of orthodox medical practitioners (doctors, nurses, midwives, etc.) toward the use of traditional medicine in treating infectious diseases in Ghana, the third theme explains the reasons why people with infectious diseases continue to use traditional medicine despite the introduction of orthodox medicine in Ghana and the final theme discusses why Ghanaians continue to visit traditional medical practitioners despite the absence of the National Health Insurance Scheme (NHIS) to cover their cost.

#### *The Extent to Which Traditional Medicine Has Been Used to Cure Infectious Diseases in Ghana*

Since time immemorial, man has been confronted with health challenges and one of the avenues he resorted to for cure was traditional medicine. Some studies have discussed how HIV patients use traditional medicine alongside anti-retroviral therapies. Also, prior to the emergence of Covid-19 in Ghana, traditional medicine played an essential role in preventing and sustaining the lives of infected people. The above notwithstanding, several Ghanaians tend not to believe in the efficacy of traditional medicine in the management of infectious diseases (Krah & Ragno, 2018).

In ascertaining the perception of Ghanaians about how traditional medicine can manage and cure infectious diseases, we interviewed Mr. Akanwariwiak, a medical doctor at the Kwame Nkrumah University of Science and Technology (KNUST hereafter) hospital. According to him, traditional medicine can only manage infectious diseases but cannot cure them. He stated that “traditional medical practitioners do not use scientific means in producing and testing their drugs and also they do not have the machines required to be able to detect some of the risky infectious disease viruses so they can only manage infectious disease but cannot cure it”. However, Mr. Sakyi, a traditional medical practitioner and the president of the Plant Medicine and Traditional Healers Association of Ghana (PMTHAG), strongly disagreed with this assertion. According to Mr Sakyi, traditional medicine can be used to manage and cure infectious diseases. He



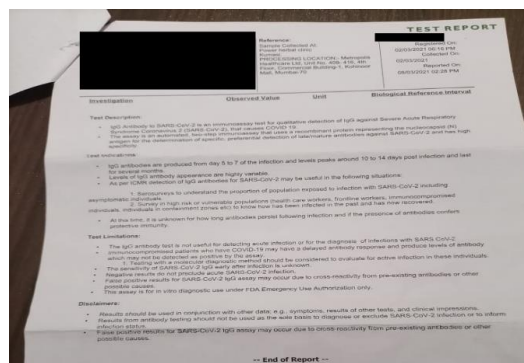
supported his position by explaining that, in the case of COVID-19, when it first appeared, nobody was certain as to how to tackle it. The Minister of Health asked herbal practitioners if they could help. The Ministry took medicines from some specific herbal hospitals to run some tests to see if they could be used as an immune booster because you cannot treat any viral infection without resorting to the immune system. He further explained that it is not the drug that cures the virus; the drug only provides the necessary information to the immune system as to how to tackle the virus.

Sakyi agrees with the assertion made by Doctor Randy concerning the fact that traditional medical practitioners do not have the facilities to diagnose infectious diseases; however, he explained that they identify the virus through the symptoms and put the patient on drugs. However, concerning COVID-19, he emphasized that during the period of the outbreak, they received and treated several patients who had contracted the virus. As a result of dealing with COVID-19 cases, he became infected along with his wife and two of his staff, and as usual, they detected the virus through the symptoms. When asked about how they concluded that they had been healed, he stated;

*After we realized we had been infected, we started using some of the medicines we produce here in our hospital. We started by taking immune boosters and other medicines. After using it for some time, we realized we were cured because we were not experiencing the symptoms again and so we went ahead to check at the orthodox hospital and when the result came, it proved that our body had developed immunity to the virus. Your body can only become immune to a virus if you have been infected by it, and so this serves as evidence to prove that traditional medicine is capable of managing and to some extent, curing infectious disease (Interview with Sakyi, 2022).*

He provided additional evidence to support his argument that his herbal center has been treating and curing infectious diseases. This is seen in the medical test result in figure 1 thereunder:

**Figure 1.** COVID-19 Test results indicate that the patient has become immune to the virus.



Notwithstanding the above testimony, when the COVID-19 vaccine; Pfizer, was developed, the Ghanaian Government, through the Ministry of Health, received some from the United States Government and made it mandatory for public employees to be vaccinated. The question that begs for an answer and attention is why did the Ministry of Health initially resort to investing in traditional medicine to get a cure for the virus and what could have caused the shift from researching and testing traditional medicine to pursue vaccines?

The Food and Drugs Authority (FDA hereafter), in collaboration with the National Medicine Regulatory Agency (NMRA), approved a clinical trial of “*Cryptolepis Sanguinolenta*,” locally known as “Nibima,” for its efficacy in treating COVID-19 cases (Kekrebesi, 2022). Also, at the height of COVID-19 in 2021, the President of Madagascar, Andry Rajoelina, unveiled a locally developed herbal tonic made from the *Artemisia* plant that contains antimalarial properties (Koiga, 2021), hailing it as a traditional cure for the virus but the World Health Organization did not accept or acknowledge its relevance; a quintessential African narrative.

Again, in a discussion with Amoah, a user of traditional medicine, he indicated that whenever he experienced any form of sickness, his first point of contact was always traditional medicine because the therapy works very well for him. Oduro also informed us that in 2018, his sister was infected with Hepatitis C. According to him, they visited many hospitals, including prayer camps but saw no improvement until someone directed them to visit a traditional hospital.

He stated “*Doctor no deɛ, waboa yɛn papa. Yɛ hyɛɛ aseɛ sɛ yɛ kɔ ne hɔ no, bɛyɛ bosome miensa, ankyɛ koraa na yɛ hunuu nsonsonoyɛ wɔ me nua ne ho ɛfa hepatitis yareɛ no ho*” (Interview with Oduro, 2022). It translates as “the doctor placed my sister on drugs and just three months later, my sister tested negative for the Hepatitis C virus.” He added that since then, whenever they need medical help, their first point of contact is a traditional hospital or to see a traditional medical practitioner. After Oduro gave us this information, we asked if we could interview the doctor who took care of his sister, but unfortunately, we were not able to reach the doctor due to his busy schedule. We went back to Doctor Sakyi, the herbal doctor we had interviewed, to inquire if we could get any evidence to support the narrative that traditional medicine can cure hepatitis. We asked if he had been able to cure any patient who came to their centre with Hepatitis B virus, using traditional medicine.

He showed us some of the awards he has received for treating hepatitis and also provided us with evidence to support his opinion that traditional medicine is

very effective in treating infectious diseases. Below are some of the evidence to support the argument that traditional medicine can treat and cure infectious diseases.

**Figure 2.** A report indicating that the patient has tested positive for Hepatitis B. Patient's name has been anonymized due to ethical considerations.

4863 2

POWER SPECIALIST HERBAL CLINIC  
LOCATION: DOME BORN AGAIN NEAR GHANA COMMERCIAL BANK, ACCRA  
MOBILE: 0200383831/0244544422  
LABORATORY RESULTS

Patient's Name: [REDACTED]  
Age: 25  
Sex: M  
Path Number: 03

SEROLOGY  
HEPATITIS B PROFILE TEST

HBsAg -	POSITIVE
HBsAb -	NEGATIVE
HBeAg -	NEGATIVE
HBeAb -	POSITIVE
HBcAb -	POSITIVE

INTERPRETATION OF HBV SEROLOGY  
HBsAg- Indication of infection  
HBsAb- recovery or successful vaccination  
HBeAg- Indicates active replication and highly contagious  
HBeAb- Indicates recovery level of HBV  
HBcAb- Indicates previous or ongoing infection

DATE: 28/04 / 17  
SIGNATURE: [REDACTED]

The above report illustrates that the patient has been diagnosed with Hepatitis B virus. This patient is said to have visited several orthodox hospitals but saw no improvement in the health condition. The patient decided to use traditional medicine as a last resort. According to the patient, he had seen no improvement in the health condition, after visiting the hospital and taking medicine prescribed by the orthodox medicine practitioners for a period not less than three years. He said in Asante twi; “*ma bre o, ma kyini papapapa, me baa ha koraa na anidaasoɔ biara nni ho se me ho be to me, nanso Power Specialist Herbal Clinic adaworoma nti ene me nso menya mayare sa*” (Interview with Sakyi, 2022).

**Figure 3.** The report indicating that the patient whose report indicates positive in figure 2, has tested negative for the Hepatitis B virus. Patient's name has been anonymized due to ethical reasons.

POWER SPECIALIST HERBAL CLINIC  
LOCATION: DOME BORN AGAIN NEAR GHANA COMMERCIAL BANK, ACCRA  
MOBILE: 0200383831/ 0244544422  
MEDICAL LABORATORY REPORT

Patient's Name: [REDACTED]  
Age: 25  
Sex: M  
Path Number: 03

SEROLOGY

HEPATITIS B PROFILE TEST

HBsAG -	NEGATIVE
HBsAB -	NEGATIVE
HBeAG -	NEGATIVE
HBeAB -	NEGATIVE
HBcAB -	POSITIVE

INTERPRETATION OF HBV SEROLOGY

HBsAG- Indication of infection  
HBsAB- Recovery or successful vaccination  
HBeAG- Indicates active replication and highly contagious  
HBeAB- Indicates recovery level of HBV  
HBcAB- Indicates previous or ongoing infection

Date: 05/ 08/17

Signature: [REDACTED]

After he visited the traditional medicine hospital, they placed him on drugs for two to three months and after a few months, he went back to check his status and he tested negative for the hepatitis B virus. This further attests to the fact that traditional medicine is effective in the management and treatment of infectious diseases in Ghana. It is quite unfortunate that some individuals do not believe in the efficacy of traditional medicine in treating infectious diseases based on misconceptions about the usage of traditional medicine. However, others do believe in the efficacy of traditional medicine because they visit traditional medical practitioners for treatment and mostly see these practitioners receive new patients suffering from infectious diseases in their hospitals or healing centers.

The above notwithstanding, the two medical reports, positive and negative are all emanating from one herbal laboratory. Several clinicians and diagnostic centres argue that to ascertain the true nature of a first diagnosis, the health centre ought to get a second opinion from mostly a well-reputed laboratory. It seems to us that this is a missed opportunity for the herbal centre to prove the efficacy of herbal medicine in this context.

*The Attitude and Perception of Orthodox Medical Practitioners (Doctors and Nurses) Towards the Use of Traditional Medicine for the Treatment of Infectious Diseases in Ghana*

In Ghana, statistics show that several people use traditional medicine rather than orthodox medicine to treat diseases. Concerning infectious diseases, there is the assumption that only orthodox methods can cure them. Based on the objectives of the research, we proceeded to find out the attitude and perception orthodox doctors and nurses have toward the use of traditional medicine in treating infectious diseases in Ghana. Below are some of the discussions of the interviews we conducted and the views of the respective individuals we interviewed. According to Akanwariwiak, orthodox medicine involves “giving treatment to patients by giving them drugs that have been clinically and scientifically proven and do not cause harm to patients because they are given the required dosage”. He further explained that if the medicine is taken in a large quantity above the required dosage, it may cause harm to the patient. However, if the right amount of drug is taken then the drug would be curative to the body.

We asked if the orthodox medical practitioners have any relationship with the traditional medical practitioners. Our interviewee further hinted that they do not have any relationship with traditional medical practitioners (TMPs hereafter) in terms of collaborating to treat infectious disease. Also, they do not refer any patients to the TMPs. In fact, during his ten years of working experience as a medical doctor, he has never seen any of his colleagues transfer patients to herbal hospitals. He emphasized; “I do not agree to the assertion that traditional medicine can cure infectious disease because most of the time, their medications have no therapeutic index. The same dosage of medicine that can cure malaria can also cure HIV” (Interview with Akanwariwiak, 2022). TMPs often associate their claims to Judeo-Christian Bible verse like Ezekiel 47:12, where it is written that the fruits of trees will be for food and the leaves for healing, which is further interpreted to mean that all trees can serve the purpose of healing.

Dr. Boamah, a medical doctor in Brodekwano, a town in the Bosomtwe District in the Asante Region of Ghana, hinted that “poor people who contract infectious disease visit traditional or herbal centres because the national health insurance does not cover all the costs regarding infectious diseases and infectious diseases like septic arthritis or any other deep tissue infections are known to be very costly. If an individual or a patient suffering from this infectious disease does not have money, traditional medicine will become his or her alternative”. He argues that the beliefs of people influence their health-seeking behavior in Ghana. When an elite is infected with an infectious disease, the first option will be to visit

the hospital while the unlettered mostly prefer traditional medicine because of what they have been conditioned to believe in (Interview with Boamah, 2022). In an interview with 32 years old nurse in Accra; Alberta Fianu, she also added that traditional medicine cannot cure infectious diseases because TMPs lack the requisite machines and skills that will aid the process of treating infectious diseases. She further argued that TMPs can treat some diseases like malaria, headaches, and stomachaches but their assertion of being capable of treating diseases like HIV/AIDS, hepatitis and recently COVID-19 is not true because she has never seen any evidence that shows that traditional medicine has cured any infectious disease because they lack the scientific capabilities to do so. Generally, some TMPs do not keep their hospitals or centres clean and the methods they use in producing their drugs are also not modernized (Interview with Fianu, 2022). However, an interviewee said that she believes that traditional medicine can cure infectious diseases because people continue to visit herbal hospitals, which means traditional medical practitioners do not just manage the disease but cure it and people testify to that on television and radio (Interview with Konadu, 2022).

Despite the negative perceptions and brashness held by some medical practitioners toward the use of traditional medicine in treating infectious diseases, other medical practitioners believe that traditional medicine is very important in the healthcare delivery system of Ghana. They believe that traditional medicine and orthodox medicine are complementary and not on a war path for survival. Indeed, they can co-exist even if it is done with no easy truce. An interviewee, Mansah, made a statement which is consistent with Adu-Gyamfi and Adjei's assertion that African traditional healers' systems are a part of African culture and that even in contemporary Africa, traditional medical practitioners remain relevant to the health and general well-being of Africans (Interview with Mansah, 2022; Adu-Gyamfi & Adjei, 2017, p. 4). The medical doctor hinted that the services provided by traditional medical practitioners are important in the healthcare system of Ghana because not all villages have access to clinics or hospitals, but TMPs can be located in every village, town and city in Ghana. Therefore, they fill a lacuna for those who do not have access to orthodox hospitals by providing another alternative. She also argued that though TMPs lack the facilities required for treating infectious diseases, they are still able to cure some infectious diseases like hepatitis, urinary tract infections, malaria, and COVID-19.

Dr. Sakyi also provided us with the necessary information to debunk some of the allegations made by some of the orthodox medicine doctors or practitioners cornering the use of traditional medicine in treating infectious diseases and how the TMPs conduct their services. According to Dr. Sakyi, traditional medical

practitioners collaborate with orthodox medical practitioners in treating some infectious disease cases. He stated that they have a referral system that is based on mutual understanding. He hinted among other things that

*There are certain infectious disease cases that the orthodox medical practitioners cannot treat and others that herbal medical practitioners cannot treat as well, so when we encounter such issues (for example, cases that need surgical attention), we refer them to the orthodox hospitals and they also refer to us cases they think we can attend to. (Interview with Sakyi, 2022)*

He also argued that the assertion that the preparation of traditional medicine is not attractive due to poor hygiene and the belief that it is not safe because TMPs do not use scientific means in producing the medicines are all false to some extent. He argued further that not all traditional medical doctors use the traditional method of producing or manufacturing medicines. Most of the traditional medicine centres in Ghana recently infuse the scientific method of producing drugs and healing into their systems.

Dr. Sakyi gave us a tour around his production hub to take us through how modern “traditional” medical practitioners produce their medicines. The evidence is seen thereunder:

**Figure 4.** *Shredding machine. It is used to cut the medicinal plants into smaller pieces. With the traditional method, the plants were placed on top of a table or a piece of wood and shredded by using a cutlass.*





**Figure 5.**  
*Grinding machine*



**Figure 6.**  
*Drying room*



Traditional medical practitioners use the above machine (Figure 5) to turn raw materials, such as leaves, bark of trees and dried fruits into powder. With the traditional method, traditional/herbal practitioners pound their ingredients in a mortar.

They also have a drying room where all the leaves, bark of trees and shredded plants are assembled to dry as seen in figure 6 above. This process, however, does not use the traditional method of drying plants directly with the sun; it uses a solar dryer that is equipped with ventilators to assist in drying the ingredients. Solar dryers use the heat from the sun to remove the moisture content from the plants and leaves which is done in the shortest possible time as compared to the traditional method of drying it directly under the sun, which could take a longer period of time.



**Figure 7.** *A Chiller Machine*

*A chiller machine (cooling water circulation device) is used to remove heat or liquid from the herbs.*



The machine below (**Figure 8**) is used to prepare liquid medicine or syrups. A boiler is a closed vessel in which fluid is heated. The final product of the medicine comes about via vapor compression, and absorption refrigeration cycles.

**Figure 8.** *Boiler*



**Figure 9.**

*The medical plants and leaves that have been shredded and grounded are placed in this pan before they are transferred into the boiler machine to be heated*



**Figure 10.**

*Filtration Machine*



The water that goes to the boiler machine passes through the filtration machine and the machine physically traps any sediments or contaminants. Then, activated carbon acts like a magnet for compounds as water passes through. So, it basically cleanses the water before it is used for the preparation of the medicine

**Figure 11**

*Bottle-filling machine*



The above machine (**Figure 11**) is also used to refill the prepared liquid medicines into bottles and also includes a capping machine.

We have included these images to help shape the perception people have concerning how traditional medicine is prepared. Modern traditional medicine is a mixture of tradition and modernity in the sense that, some but not all traditional medical practitioners have infused scientific measures into producing their medicines and maintaining good hygiene in their hospitals and clinics. With the images provided above, we hope to enlighten readers and users in order to change the negative and sometimes too, the false narratives concerning traditional medicine, especially its preparation.

*Reasons Why People with Infectious Disease Continue to Use Traditional Medicine despite the Introduction of Orthodox Medicine*

Akua Konadu, a 45-year-old woman, uses traditional medicine because she grew up in a traditional home where her grandmother used to pour traditional medicine for her and her siblings every morning. “So, I grew up trusting in the efficacy of traditional medicine because that is what I was brought up with”. We asked if she has used traditional medicine in treating any infectious disease. She narrated that she suffered from a urinary tract infection when she was about 25. She reported that all her friends advised her to visit the hospital but she did not. She used dried *gyamma*, a local herb in treating it. Her grandmother taught her how to use it and it actually cured it.

The excerpt provided above describes the situation of several Ghanaians. They grow up using traditional medicine to treat common ailments such as

headaches, stomachaches, malaria, rashes, and fever. However, Mr. Nii Odatey Benjamin has a different reason for using traditional medicine. According to him, he had never utilized traditional medicine until he had typhoid. He said among others:

*I took all the medications the hospital gave me but I saw no difference. It got to the point where I nearly believed it was spiritual and it never crossed my mind to visit an herbal clinic though my wife was pushing me to do that. I didn't want to visit any herbal hospital because I said to myself, even these doctors are not helping me? What can these traditional doctors do? My situation worsened and so I had no choice but to listen to my wife's plea. I took the medication for just a month and it was as if a miracle happened, the disease vanished from my system. I'm always telling people about it because I never thought that traditional medicine was so powerful.* (Interview with Odartey, 2022)

He added that he has never been to the hospital ever since and that anytime he feels unwell he purchases traditional medicine such as time herbal mixture, herbicide herbal mixture, and *Adu-Yaa herbal malamix* and it always works for him.

Most of the interviewees we interviewed concerning COVID-19 informed us that they used traditional medicine when COVID-19 was on the rise because traditional medicine does not have side effects as compared to orthodox medicine. Mr. Akomea reported that one can use traditional medicine throughout the life course without fear because they are plants and in essence, they are like food. Plant medicine is a restorative form of therapy; it replaces lost cells and replenishes the body. When the body has too much of it, it will just excrete the mineral (Interview with Sakyi, 2022). We further asked about why the conclusion that traditional medicine has no side effects. He explained that generally there are no side effects but there are certain poisonous plants. If the right plants are identified and used, there are no side effects. He goes on to discuss that traditional medical practitioners send their medicines to either Kwame Nkrumah University of Science and Technology (KNUST) or Center for Scientific Research into Plant Medicine, Akuapim Mampong, for them to conduct toxicity tests, and the result always comes out as containing no side effects (*ibidem*). This also influences people with infectious diseases to utilize traditional medicine since it has fewer or no side effects compared to orthodox medicines.

Ocloo, a 53-year-old woman from Accra also has a different opinion regarding this discourse. For her, she has not and will not use traditional medicine to treat an infectious disease because orthodox medicine has never failed her when she contracts any infectious disease like white or candidiasis (Interview with Ocloo, 2022). She strongly opposes the assertion that traditional medicine can

manage and treat any infectious disease. Few of the interviewees had the same opinion. Janet Dufie also argued that she would rather patronize orthodox medicine than herbal medicine (Interview with Dufie, 2022). However, it is important to note that their assertion of not believing in the use of traditional medicine to cure infectious disease was not based on personal experiences but on the mere perception that traditional medicine would not be effective in curing any infectious disease.

According to Amankwaa, traditional medicine requires trust from patients. He hinted that

*Psychologically, if you do not trust the treatment of diseases using traditional medicine, the therapy will not work for you. However, if you believe in the treatment of diseases using traditional medicine then it will work for you. An individual's faith in traditional medicine means 50% coverage of the treatment. In emphasis, belief in the efficacy of traditional medicine works for patients* (Interview with Amankwaa, 2022).

According to him, trust and mutual relationships contribute to why people choose herbal medicine over biomedicine. Further, he emphasized that trust and faith in the herbal medicine during treatment is key in traditional medicine treatment and the healing processes in particular.

Some respondents including Affum and Offei also hinted that they experienced the symptoms of COVID-19 but did not visit the orthodox hospital due to the fear of being quarantined (Interview with Affum; Offei, 2022). Hence, such people treated the virus by using traditional medicine such as hibiscus tea (*sobolo*); a mixture of roselle leaves, ginger, *prekese*, and pineapple. Others also included medications that were provided by their traditional medical practitioners, but they refused to provide the names of such medicines because they were advised not to. The findings revealed that severally, traditional medical practitioners do not provide the names of the exact medicines they use in treating infectious diseases because there are policies and guidelines by the Food and Drugs Authority concerning the registration of herbal medicinal products in Ghana. In fact, this process requires a huge amount of money, so several traditional medical practitioners remain silent on what their medicines are capable of curing since it can lead to their arrest if they have not gone through the right procedure or requirements to register the particular medicines they are using to cure infectious diseases.

*Reasons for Ghanaians Patronage of Traditional Medical Practitioners despite Funding Challenges*

Our findings are consistent with Patrick A. Twumasi's assertion that Ghanaians were entirely reliant on traditional medicine until the introduction of orthodox medicine. Generally, ordinary Ghanaians have used traditional medicine to cure common ailments such as headaches, stomachaches, and jaundice since childhood. About 85% of the people we interviewed stated that they have been using traditional medicine since infancy.

Nursing mothers use an enema bulb syringe (known as “*bentoa*” in Akan) to clean the colon of their babies. “*bentoa*” is used to deliver herbal medicinal portions into the lower gastrointestinal tract through the rectum for treating common ailments and diseases like constipation, nausea, indigestion, headache and dizziness. Based on the above discussion, it is evident that most Ghanaians grow up trusting in the efficacy of traditional medicine. The study also revealed that, unlike orthodox medicine, traditional medicine is easily accessible to Ghanaians. Mr. Ottu at Bosomtwe, a suburb of Kumase reported:

*Most of the communities surrounding me do not have orthodox hospitals and the few communities that do, they do not have drugs to help with the treatment of their patients. The doctors normally prescribe the medicine for us to go and buy at the pharmacy and there is only one pharmacy in my village, so most of the time they do not have the prescribed drugs and we have to travel to a different town to purchase them. What we normally do is visit Opanin Kusi, a traditional medical practitioner for him to treat us using traditional medicines and it always works for us (Interview with Ottu, 2022).*

The above indent depicts the dilemma of some Ghanaians. Villages and towns and to some extent some cities lack hospital facilities to cater for the healthcare needs of the increasing population in the country. However, it is important to emphasize that traditional medical practitioners can be found in every part of the country namely: villages, towns, and cities. This indicates that traditional medicine has become the first and to some extent, the only form of healthcare for the majority of Ghanaians.

According to Amankwaa, people prefer traditional medicine because of trust, proximity, mode of payment, and the mutual trust between traditional medical practitioners and their patients. Amankwaa further hinted that:

*An individual's faith in traditional medicine means 50% coverage of the treatment. In emphasis, belief in the efficacy of traditional medicine works for patients (Interview with Amankwaa, 2022).*

According to her, trust, proximity, payment methods and mutual relationships contribute to why people choose herbal medicine over biomedicine. Also, when it comes to availability and accessibility, traditional medical practitioners can be located in every sphere of the country (villages, towns and cities) but orthodox medical practitioners are mostly found in towns and cities but are rare in villages.

The findings from this research revealed that some people also prefer using traditional medicine to cure infectious diseases due to the mode of payment. This affirms Adu-Gyamfi's assertion in his research, titled "From present African health care systems to the future: health financing in Ghana and Rwanda". The research argues among other things that payments for traditional medical practitioners in pre-colonial Ghana were made in kind, especially through the provision of livestock; it was essentially an out-of-pocket payment system (Adu-Gyamfi, 2019, p. 319). Traditional healers who do not have clinics or hospitals conduct their services at home, and the mode of payment is more flexible in the sense that some of the traditional medical practitioners do not accept money as payment. This claim corresponds with the assertions of Twumasi (1975) and Adu-Gyamfi and Adjei (2017). In Twumasi's study, he indicated that in pre-colonial Gold Coast, which is now Ghana, indigenous healers did not charge their clients for their services, but relied on the appreciation shown by the patients as their reward (Twumasi, 1979, p. 29). Adu-Gyamfi and Adjei also argued that traditional medical practitioners still rely on the pre-colonial mode of payment where the lack of resources by patients did not deny them access to healthcare delivery (Adu-Gyamfi & Adjei, 2017). Again in Adu-Gyamfi's article, "Islamic traditional healing amongst the people of Sampa in Ghana; An empirical study", Aziz, a traditional healer, is said to have argued that traditional medicine is very effective. In order not to hinder a sick person's healing, he proceeds to treat a patient who is unable to pay for his service and he continues to treat a patient who may not be able to pay him after the healing process has been completed. He further indicated that the power of healing is from Allah, and charging too much as a result of greed will reduce the power or the efficacy of the medicine (Adu-Gyamfi, 2014).

Also, one of the interviewees indicated that she was infected with syphilis, and the traditional medical practitioner who took care of her asked for a hen as payment. "I could have spent more money if I had visited the orthodox hospitals so I will recommend people with infectious diseases to visit the traditional medical practitioners, their medicine is effective and affordable as well" (Interview with Serwaah, 2022). Some orthodox medical practitioners are of the view that poor people use traditional medicine because it is not expensive, however, Dr. Sakyi, a



traditional medical practitioner, strongly disagrees with this assertion. He argued that poverty is not one of the reasons people patronize or opt for traditional medicine. He added that several traditional medical practitioners have established either clinics or hospitals and their services do not accept the national health insurance scheme (NHIS). The fact that people still visit these herbal hospitals for treatment, knowing that they cannot use their national health insurance, proves that it is not only poor people who use traditional medicine (Interview with Sakyi, 2022).

Ghanaians continue to patronize traditional medicine despite the introduction of orthodox medicine to treat diseases and infectious diseases in particular. Among other things, accessibility, flexible mode of payment, and sometimes efficacy in treating diseases have been listed as the reasons for the increasing patronage of traditional medicine irrespective of the existence of orthodox or western biomedicine. Indeed, it can be argued that poverty cannot be the only major factor that influences people to choose traditional medicine as a mode of treatment or cure for their illnesses in Ghana.

### *Conclusion*

The research revealed that several orthodox practitioners believe that traditional medicine is dangerous due to the fact that there is no therapeutic index. However, traditional medical practitioners, on the other hand, asserted that herbal medicines do not have side effects compared to orthodox ones because traditional medicines are plant-based and in essence, they are like food. Plant-based medicines are restorative form of therapies; they have the capacity of replacing lost cells and replenish the body. Also, herbal medicine users sided with herbal medical practitioners to confirm that traditional medicine has no side effects. In some cases, traditional medical practitioners who cannot handle certain ailments, refer issues involving surgical operations to orthodox medical practitioners for treatment and vice versa. The Medical practitioners interviewed expressed skepticism about the efficacy of TM. For instance, Dr. Boamah stated that TM can only manage but not cure serious diseases, labeling it as unsafe due to its lack of proper scientific research. Similarly, Dr. Randy Akanwariwiak pointed out that TM lacks a therapeutic index for dosage prescription and deem it unsafe scientifically. Nurse Alberta Fianu echoed these sentiments, stating that TM lacks the scientific capacity in terms of technology and herbs' lack the effectiveness to cure infectious diseases. Likewise, some users share similar sentiments with the medical practitioners. Individuals like Dufie and Ocloo expressed negative views, stating they would never use TM and prefer to go to the hospital or seek



biomedical treatments, which they find to be effective and is supported by appropriate legal tenets. In contrast to the views of the biomedical doctors, TM practitioners like Dr. Akomeah Sakyi postulated that TM effectively cures many infections, including Hepatitis B and C. Mr. Aziz also noted that TM is effective and offers flexible payment methods as does not inconvenience users with any side effects.

Users of TM provided a range of experiences. For example, Akua Donkoh and Oduro, reported that TM was “very effective” in curing infections such as candidiasis and Hepatitis B. Others, like Mansah, emphasized TM’s relevance in curing endemic infectious diseases, while Nii Odartey shared a personal success story of curing typhoid after one month of TM treatment. However, not all interviewees provided positive responses. Dufie and Ocloo expressed their distaste against TM, stating that they have not used it before and they will never use TM and prefer scientific medical treatments. Some respondents, like Amankwaa, suggested that TM’s efficacy could be influenced by the user’s belief in its effectiveness. This highlights the psychological and spiritual aspects of treatment and its potential impact on perceived outcomes. According to the study, TMs’ availability, accessibility, flexible payment method, mutual relationship it offers users and its effectiveness contribute to the reasons why most people patronize it. Nonetheless, a medical practitioner, Dr Boamah presented some reasoning regarding funding. He opined that TMs are patronized by poor people because they cannot afford biomedicine. Dr Sakyi, a TMP, refuted the argument concerning funding. He hinted that TMs are not covered by NHIS like biomedicine so poverty cannot be the rationale. It is rather based on individual choice, accessibility and the belief in the potency of traditional medicine by the local population.

Generally, the effectiveness of traditional medicine in curing infectious diseases appears to be highly subjective and varies significantly among practitioners and users. While some practitioners and users report positive outcomes and effectiveness, others express skepticism and caution regarding its scientific basis and safety. While biomedical practitioners question the scientific validity and safety of TM, many users and TM practitioners attest to its effectiveness based on personal experiences. However, more scientific research and clinical trials may be needed to objectively determine the effectiveness of TM in curing infectious diseases. However, further studies should focus on more scientific research and clinical trials to objectively determine the effectiveness of TM in curing infectious diseases. As elucidated in the discussions, successive governments in Ghana have implemented policies and/or initiatives that have assisted in promoting traditional medicine and have also helped in creating a

platform for all traditional medical practitioners to come under one umbrella; which is known as the Traditional Medicine Practice Council (TMPC). Its purpose is to brand and create a respectable image for Traditional and Alternative Medicine (TAM) practice in Ghana. The organization has succeeded in transforming the methods used by some traditional medical practitioners in producing their medicines and to some extent built a respectable image of traditional medicine in Ghana. However, a lot more can be done to sponsor traditional medicinal research to handle complicated health issues.

Conclusively, the research has revealed that traditional medicine is efficacious in managing and treating COVID-19, Hepatitis B and C, typhoid and general infections like candidiasis, syphilis, among others since it has a significant of twelve (11) positive responses against four (4) negative and one (1) neutral response. Though both biomedicine and traditional practitioners were biased or subjective, the view of users can be considered due to the fact that they were based on individual experiences. Therefore, the study proposes that the government gives much attention to traditional medical practitioners in their quest to cure or fight COVID and any other future epidemics and pandemics in order to build public trust. This study recommends that the government of Ghana collaborate with traditional medical practitioners by providing them with financial assistance to develop if possible, remedies for epidemic and infectious diseases. However, more scientific research and clinical trials are needed to objectively determine the effectiveness of TM in curing infectious diseases. Also, further studies should focus more on scientific research and clinical trials to objectively and scientifically determine the effectiveness of TM in curing infectious diseases with a larger sample size.

## **References**

1. Abbey, E. E. (10<sup>th</sup> June, 2020). Noguchi Tests Herbal Medicines for COVID-19 Treatment. *DailyGraphic*, June, 10<sup>th</sup> 2020. <https://www.noguchimedres.org/index.php/components/content/article/94-noguchi-main-news/204-nmimr-tests-herbal-medicine-for-covid19treatment?Itemid=437>.
2. Abbiw, D. (1990). *Useful Plants Ghana*. London Intermediate Technology Publications Ltd, the Royal Botanical Gardens, Kew.
3. Abdullahi, A. (2011). Trends and Challenges of Traditional Medicine in Africa. *African Journal of Traditional Complementary and Alternative Medicines*, 8(5S). <https://doi.org/10.4314/ajtcam.v8i5s.5>.
4. Adu-Gyamfi, S., & Online Research Journals. (2014). Islamic Traditional Healing Amongst the People of Sampa in Ghana: An Empirical Study.

*Online International Journal of Arts and Humanities*, 3(7), 105-114.  
<http://www.onlineresearchjournals.org/IJAH>.

5. Adu-Gyamfi, S. (2019). From Present African Health Care Systems to the Future. *Epidemics and the Health of African Nations*, 316.
6. Adu-Gyamfi, S., & Adjei, R. (2017). *Traditional Medicine: Narratives from an Indigenous Population*. LAP LAMBERT Academic Publishing.
7. Adu-Gyamfi, S., & Anderson, E. A. (2019). Indigenous Medicine and Traditional Healing in Africa: a Systematic Synthesis of the Literature. *Philosophy, Social and Human Disciplines*, 69-71.
8. Adu-Gyamfi, S., & Donkoh, W. J. (2013). A Historical Review of Diseases and Disease Prevention in Gold Coast: A Focus on Asante (1900-1957). *Historical Research Letter*, 5, 4. <https://www.iiste.org>.
9. Adu-Gyamfi, S., Teikillah, A., Nyaaba, A. Y., Kuusaana, M. M., Darkwa, B. D., & Tomdi, L. (2020). Muslim Healers and Healing: An Ethnographic Study of Aboabo Community of Ghana. *International Journal of Modern Anthropology*, 2(14), 291-316. <https://doi.org/10.4314/ijma.v2i14.4>.
10. Affum. (August, 2022). Personal Interview. Accra.
11. Akanwariwak Randy. (August, 2022). Personal Interview. Kumase.
12. Amankwah (July, 2022). Personal Interview. Accra.
13. Amoah. (August, 2022). Personal Interview. Kumase.
14. Amoako Sylvia. (August, 2022). Personal Interview. Accra.
15. Boamah. (August, 2022). Personal Interview. Kumase.
16. Dufie. (August, 2022). Personal Interview. Kumase.
17. Fianu Alberta. (September, 2022). Personal Interview. Accra.
18. GHANA Aids Commission. (2020). *National HIV&AIDS Strategic Plan 2021-2025*.
19. Ghana, & Ghana. Ministry of Health. (2007). *National health policy: creating wealth through health*. Ministry of Health. <https://www.moh.gov.gh/wp-content/uploads/2016/02/national-health-policy>.
20. Gureje, O., Nortje, G., Makanjuola, V., Oladeji, B. D., Seedat, S., & Jenkins, R. (2015). The role of global traditional and complementary systems of medicine in the treatment of mental health disorders. *The Lancet Psychiatry*, 2(2), 168.
21. Gyasi, R. M., Tagoe-Darko, E., PhD, & Mensah, C. M., PhD. (2013). Use of Traditional Medicine by HIV/AIDS Patients in Kumasi Metropolis, Ghana: A Cross-sectional Survey. In Center for Promoting Ideas, USA, *American International Journal of Contemporary Research*, 3(4), 117.

22. Houghton, P. J. (1995). The role of plants in traditional medicine and current therapy. *The Journal of Alternative and Complementary Medicine*, 1(2), 131-143. <https://doi.org/10.1089/acm.1995.1.131>.
23. Kekrebesi, E. C. (2021). FDA Approves First Herbal Medicine for Clinical Trials for Covid-19 Treatment. *Ghana Today*, February 2, 2021. <https://allafrica.com/stories/202102030078.html>.
24. Koiga, B. (2021). Madagascar's Controversial Herbal Remedy for COVID-19. *Fair Planet*, April 7<sup>th</sup>.
25. Konadu Akua. (August, 2022). Personal Interview. Kumase.
26. Krah, E., de Kruijf, J., & Ragno, L. (2018). Integrating traditional healers into the health care system: challenges and opportunities in rural northern Ghana. *Journal of community health*, 43, 157-163.
27. Liu, J. P., Manheimer, E., & Yang, M. (2005). Herbal medicines for treating HIV infection and AIDS. *Cochrane Database of Systematic Reviews* 2005, Issue 3, DOI: 10.1002/14651858.CD003937.pub2.
28. Lunat, I. (2011). *Traditional, complementary and alternative use in HIV-patients*. A Doctoral Thesis.
29. Ma Y., Chen M., Guo Y., Liu J., Chen W., Wang Y., Zhao X. et al., (2019). *Prevention and treatment of infectious diseases by traditional Chinese medicine: a commentary*. APMIS 127(5), DOI 10.1111/apm.12928; pp. 372.
30. Mansah. (August, 2022). Personal Interview. Accra.
31. Ministry of Health. (2003). *Code of ethics and standards of practice for traditional and alternative medicine practitioners in Ghana*.
32. Mireku-Gyimah, N. A., Donkor, P. O., Kitcher, C., Sarkodie, J. A., Bekoe, E. O., Boateng, O. K., & Nyarko, A. K. (2021). Response to Covid-19 disease in Ghana: a review of the herbs. *Journal of Natural Remedies*, 283-290.
33. National Centre for Complimentary and Integrative Health. (2020). In the News: Coronavirus and "Alternative Treatments". <https://www.nccih.nih.gov/health/in-the-news-coronavirus-and-alternativetreatments>.
34. Nii Odartey. (August, 2022). Personal Interview. Accra.
35. Ocloo Margaret. (August, 2022). Personal Interview. Accra.
36. Oduro. (July, 2022). Personal Interview. Kumase.
37. Offei. (August, 2022). Personal Interview. Accra.
38. Ottu. (August, 2022). Personal Interview. Accra.
39. Republic of Ghana, Ghana – Vision 2020: The First Medium – Term Development Plan (1997-2000), Accra, National Development Planning Commission. (1997).

40. Sakyi Amoako. (August, 2022). Personal Interview. Kumase.
41. Twumasi, P. A. (1979). History of Pluralistic Medical Systems: A Sociological Analysis of the Ghanaian Case. *Issue*, 9(3), 29-34. <https://doi.org/10.2307/1166260>.
42. World Health Organization, Cummings, N., Gagne, J., Lasseur, S., Li, Y., Maddalena, S., Ramillien, M., Truong, V., & Zhang, G. (2001). *Legal Status of Traditional Medicine and Complementary/Alternative Medicine: A Worldwide Review* (K. Sheridan & D. Whitney, Eds.).
43. World Health Organization. (2002). *WHO traditional medicine strategy, 2000-2005*.
44. World Health Organization. (2013). *WHO traditional medicine strategy: 2014-2023*. World Health Organization.
45. World Health Organization. (2018). *World Malaria Report 2018*. <https://iris.who.int/bitstream/handle/10665/275867/9789241565653-eng.pdf?ua=1>.