

Use of Traditional Medicine by HIV/AIDS Patients in Kumasi Metropolis, Ghana: A Cross-sectional Survey

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Abstract

The aim of this cross-sectional study was to assess the use of traditional medicine by people living with HIV adhering to antiretroviral therapies in Kumasi Metropolis, Ghana. Using systematic random sampling technique, 62 HIV-seropositive persons were selected from outpatient departments in three public hospitals and interviewed via interviewer administered questionnaire. Data were subjected to descriptive statistics and multivariate logistic regression through PASW for Windows application programme, version 17.0. The findings suggest that traditional medicine was commonly accessed for HIV/AIDS (33, 53.2%) and herbal therapy remained frequently used form of traditional medicine (23, 70%). Traditional medicines were mainly used for appetite (90.9%), pain relief (87.9%), stress relief (63.6%) and general wellbeing (75.8%). Most participants (93.9%) did not disclose traditional medicine use for HIV/AIDS to their orthodox medical providers. Multivariate logistic regression on demographics identified educational attainment ($P=0.013$), residence ($P=0.001$) and employment history ($P=0.043$) as significant with use of traditional therapies. An evaluation of traditional healers' role in managing HIV/AIDS is exigent and should be brought into a sharp focus. However, concomitant traditional medicine use with antiretroviral therapies has the propensity for drug interactions and should be discussed routinely in antiretroviral therapy counselling sessions.

Keywords: HIV/AIDS, traditional medicine, antiretroviral therapies, drug interactions, herbal therapy, Ghana

1. Introduction

Sub-Saharan Africa remains the region most heavily wrecked by HIV/AIDS. According to UNAIDS (2011), about 68% of all people living with HIV (PLWA) resided in sub-Saharan Africa and the sub-region disproportionately accommodated 70% of new HIV infections in 2010. HIV in Ghana continues to be a generalised epidemic with a prevalence of more than 1% in the general population. In 2011, there were 195,077 adults and 30,401 children living with HIV, with 12,077 new infections in the country. Further, an estimated 15,263 annual AIDS deaths occurred in Ghana towards the end of 2011 (UNAIDS, 2011).

HIV/AIDS continues to ravage the population and has adversely impacted the productive capacity and economic growth in Ghana. Being aware of the obvious threat that HIV/AIDS poses to the achievement of national development goals, and committed to improving the health and social well-being of all of its denizens, the Government of Ghana (GOG) authorized the development of a National HIV/AIDS and STI Policy to skirmish the pandemic.

The GOG through Ghana Aids Commission (GAC) therefore published a National HIV/AIDS and STI Policy in August, 2004 for comprehensive HIV/AIDS care, management and treatment for PLWA in Ghana (GAC, 2004). In this policy, alternative treatment modalities are outlined and individuals are privy to them. Ghanaians living with HIV/AIDS shall therefore have the right and are encouraged to choose and have access to all apposite treatment therapies available, including anti-retroviral therapies (ARTs), nutritional therapies, regular exercises, as well as traditional, complementary and alternative medicines (TCAM). Good nutritional habits including information on vitamins and other dietary supplements were also promoted.

More people than ever are living with HIV, largely due to greater access to treatment (UNAIDS, 2011). The classical treatment with ARTs 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 drugs do not cure the infection; they only apprehend the progression of the condition (Lunat, 2011). These drugs are also potentially toxic and have significant adverse side effects (Galabuzi *et al*, 2010; Hughes *et al*, 2012) which can result in lack of adherence. An alteration of blood drug levels and/or development of drug-resistant strains of the virus are therefore highly possible, thus undermining effective treatment and posing public health risks (Hughes *et al*, 2012) and challenges. These have made it necessary and essential to investigating all alternatives to formal HIV/AIDS treatment.

A large body of research reports that the use of traditional medicine (TM) is widespread in developing countries (Mensah & Gyasi, 2012; WHO, 2003; Angus & Pekala, 2007; Peltzer, 2009; Nxumalo *et al*, 2011; Gyasi *et al*, 2011). Studies reveal that about 70% of Ghanaians depend on traditional therapies for their health care needs (UNDP, 2007; Apt, 2013) and this is recognised by the Ministry of Health (MOH). PLWA in Ghana use TM alongside the ARTs. This is because of the availability and easy access to a wide variety of TM care, the intrinsic cultural beliefs and the freedom of patients to select and utilise treatment modality of their choice on one hand, and unsatisfactory effects, high cost, non-availability and adverse effects of use of conventional medicines on the other (Liu *et al*, 2005). Studies in South Africa report that about 70-80% of South Africans consult traditional healers (TH), especially PLWA (Kasilo, 2000; Department of Health, 2006; Peltzer *et al*, 2007; Hughes *et al*, 2012) whereas up to 90% of Ugandans utilise the services of traditional health care providers (Kamatenesi-Mugisha and Oryem-Origa 2005; Galabuzi *et al*, 2010). Indeed, TH tend to be the first point of call by people with sexually transmitted disease, including HIV despite the fact that many of the herbal medicines used have not been quantified nor analyzed for its active and inactive components (Peltzer *et al*, 2008). THs are more easily accessible geographically and socially and provide a culturally accepted treatment (Mensah & Gyasi, 2012) for HIV patients (Peltzer & Mngqundaniso, 2008).

It has been estimated from various studies that at least 30% of PLWA on ARTs utilise any form of TM (London *et al*, 2003; Wiwanitkit, 2003; Dhalla *et al*, 2006; Noumi & Manga, 2011). Peltzer and colleagues assessed the use of TCAM by 618 HIV patients in three public hospitals in KwaZulu-Natal, South Africa and found that 51.3% relied on traditional therapies (Peltzer *et al*, 2008). In Kabarole District, Western Uganda, Langlois-Klassen *et al* (2007) observed among 137 AIDS patients, that 63.7% had used TM after diagnosis to manage the opportunistic infections and to boost the immune system. Herbal medicines and pharmaceutical drugs use was reported by 32.8% of AIDS patients. Babb *et al* (2007) studied 44 individuals with moderate or advanced HIV disease attending a workplace clinic providing ARTs in South Africa. They observed that 32% were using TM, most frequently African potato and aloe vera. According to Malangu (2007), 7.7% among HIV-infected patients on ARTs in Pretoria, South Africa, used traditional health care based on a self-reported survey on use of TCAM and over-the-counter medicines by HIV patients. Mudzviti *et al* (2012) interviewed 388 HIV-patients in a study of impact of herbal drug use on adverse drug reaction profiles of patients on ARTs in Zimbabwe and found that 98.2% of participants were using at least one herbal drug together with ARTs. Two indigenous herbs, *Musakavakadzi* and *Peltoforum africanum* were identified to reduce the occurrence of adverse drug events (Mudzviti *et al*, 2012). Further, ARTs recipients have been reported to use herbs to alleviate some of the negative side effects of ART drugs such as nausea and diarrhoea (Langlois-Klassen *et al*, 2007). In Australia, Fogarty *et al* (2007) found that 44.3% of PLWA sample reported mixed use of marijuana for therapeutic and recreational purposes.

Medical practitioners ought to be informed about the use of traditional therapies for both HIV-related illnesses and other melancholic conditions as part of their history taking and clinical assessments (Orisatoki & Oguntibeju, 2010).

However, orthodox medical practitioners are mostly not fully aware of the use of TM by their HIV-positive clients. For example, previously published research in the United States observed that up to 70% of HIV patients who use such therapies do not tell their doctors (Dwyer *et al*, 1995). A study in Canada also found that more than 53% of HIV outpatients taking TM did not report its use to their physicians (Furler *et al*, 2003). There is overwhelming evidence that commonly used herbal dietary supplements such as garlic have been found to be antagonistic and hence impede the efficacy of ARTs (Dhalla *et al*, 2006; Orisatoki & Oguntibeju, 2010).

So far, an anecdotal evidence from Kumasi Metropolis indicates that a number of HIV patients resort to TM for various reasons including the management of opportunistic infections and symptomatic conditions of HIV/AIDS. However, little is known empirically about prevalence rate, reasons of use, pattern of use, types of TM and the impact of TM on quality of life of HIV patients and therefore remains implicit. The current study is designed primarily to assess the use of TM for HIV/AIDS patients in the Kumasi Metropolis of Ashanti Region, Ghana.

2. Methods

2.1. The Study Prefecture

Kumasi Metropolis is one of Ghana's 30 political and administrative districts and the capital city of the Ashanti Region, located in the south-central part of the country. Kumasi is located in the transitional forest zone and is about 270 kilometres north of the national capital, Accra. The metropolis has an area of about 254 square kilometres. With a 5.4% annual growth rate, Kumasi Metropolis is the most populous district in the Ashanti, representing 42.6% of the total population of the region. Kumasi has a population of 2,035,064 of which 52.2% constitutes females (GSS, 2012; MOH/GHS, 2008).

Being the capital and nodal city, its vibrant economy, centrality, the growth of industries and commercial activities and educational centre with 2 Public Universities, 6 Private Universities, a Polytechnic, 2 Colleges of Education, Secondary Schools and a host of Nursing and Midwifery institutions, Kumasi receives migrants with diverse socio-economic and cultural spectra from all corners of the country and elsewhere. This has resulted in a high rate of disease burden. Common diseases in the Metropolis include malaria, diarrhoea, HIV/AIDS, tuberculosis, hypertension and diabetes mellitus. Septic abortion and road traffic accidents also constitute other major challenges to the health sector. Health Services in the metropolis are organized around 5 Sub-Metro Health teams, *videlicet*, Bantama, Asokwa, Manhyia North, Manhyia South and Subin (MOH/GHS, 2008).

The Metropolis has a number of health facilities in both the public and private sectors. The Komfo Anokye Teaching Hospital (KATH), 1 of the 3 national autonomous hospitals, is situated in the Metropolis. There are other 4 quasi health institutions, 5 health centres, over 200 private health institutions and 13 industrial clinics in the metropolis (MOH/GHS, 2008). HIV Counselling and Testing (CT) services are provided at Kumasi South Hospital, Suntreso Hospital, Tafo Hospital, Manhyia Hospital, Bomso Clinic, Aninwaa Medical Centre, KNUST Hospital, Kwadaso Seventh Day Adventist Hospital and KATH whilst ARTs are provided at the KATH, Kumasi South Hospital and Bomso Clinic (MOH/GHS, 2008).

2.2. Study Design, Sampling Procedure and Data Collection

This descriptive cross-sectional survey was conducted between September, 2012 and February, 2013 in Kumasi Metropolis. HIV patients on ARTs attending three public hospitals in the Metropolis and have attained a statutory age of 18 years or older were recruited for the study. The study utilised a systematic random sampling technique to select 62 HIV-infected patients from the three ART centres in the Metropolis, *videlicet*, the KATH, Kumasi South Hospital and the Bomso Clinic. All patients satisfying the criteria of inclusion were automatically recruited for the study. It was made clear that participation was voluntary and a decision to decline would not affect the pattern of medical care of the patient at the various treatment centres.

Data were collected predominantly through interviews. There was a difficulty contacting the study participants by the researchers and to interviewing them thereof in person. Patients were not ready whatsoever to present themselves physically and to be exposed to the third party of their condition. Patients who indicated interest in the survey were therefore interviewed using structured questionnaire guides administered by trained health care providers in each of the health facilities.

The questionnaire was translated into the Asante-Twi (a major language spoken in the study area) and verified by a second translator for the purposes of the interview. Where inconsistencies were found, these were reconciled. Main outcome measures included data on demographic and socioeconomic variables such as age, sex, religious affiliation, educational background, employment history, sources and levels of income. Others included information on health status, medical care, ART treatment, knowledge, perceptions and practices of TM including sources, types and pattern of use of TM. Intrinsic and extrinsic symptomatic conditions on patients and their management were assessed from the perspectives of the study sample.

Ethical protocol was obtained from the Committee on Human Research and Publication Ethics, School of Medical Sciences, Kwame Nkrumah University of Science & Technology, Kumasi. Before the survey was administered, the objectives of the study were explained to the patients. Study participants were then asked to sign and complete a consent form before the interviews. Interviews took place in a private area within the health facilities. Questionnaires were anonymous, with no personal identifying information recorded on them. Study participants were assured a strict confidentiality of the information they provided.

2.3. Statistical Analysis of Data

Data were edited, cleaned, coded and analyzed thereof using PASW for Windows software application programme version 17.0. Descriptive statistics was predominantly performed to assess basic client characteristics chiefly due to smallness of the sample size. Multivariate logistic regression analysis was conducted for socio-demographic variables. The various background characteristics of the study sample that entered into the regression model were defined as follows: Male=0, Female=1; 18-39years=0, 40+years=1; Never educated=0, Ever educated=1; Never married=0, Ever married=1; Rural=0, Urban=1; Employed=0, Unemployed=1; Never ensured=0, Ever ensured=1. Associations were considered significant at $P < 0.05$. The presentation of data was done through frequency tabulations and percentages.

3. Results

3.1. Demographics

A total number of 67 HIV seropositive men and women were recruited for the survey based on the established inclusion criteria, albeit, sixty-two (62) patients participated in the survey giving out a response rate of 96%. Out of this, 27 (44.5%), 21 (33.9%) and 14 (22.6%) were respectively assessed from KATH, Kumasi South Hospital and Bomso Clinic. Five (5) of the recruited participants were ultimately excluded from the study; 2 had no interest to partake the survey whilst the data obtained from 3 of them were not complete enough to be included. Approximately, 69.3% constituted females and the largest number of participants (45.2%) was in the age bracket of 18-29 years (see Table 1). The mean age of the sample was 29 years. Almost 3 out of 5 of the sample had never married; only a sixth had completed tertiary or post-secondary education of various forms such as university, college of education and polytechnic and the largest proportion of patients (68%) were Christians. The sample was further constituted people from different socio-economic and ethnic backgrounds from different parts of the country. Most patients (76%) were unemployed and nearly 40% reported having at least a child. An estimated 73% of those gainfully employed indicated that they were working in private or non-governmental organizations including petty trading, artisanal jobs and other self-employed economic ventures. Also, only 22.6% reported having regular source of income and the mean monthly income of the participants was GH¢300.00 (\$158.00). However, 68 % had registered for and were beneficiaries of the National Health Insurance Scheme. A few of them (13%) said they lived with their relatives in the family house. The demographic and socio-economic characteristics of participants are indicated in Table 1

3.2. Clinical Characteristics of the Participants

Table 2 presents information on the clinical and/or health characteristics of the study sample. Fifty-one (82.3%) of the participants had received their HIV diagnosis within the past 5 years and were currently taking ART combinations but majority of them fell within 3 and 5 years. More than one-half of the study sample (55%) indicated living with HIV virus for a period of 5 years.

Also, most respondents (48.4%) reported they had started treatment in stage I of WHO disease classification and almost all participants had a Cluster of Differentiation 4 Cells (CD4) count of less or equal to 200 cells/uL which satisfies the condition for HIV positive patient to enrol on the ARTs in the public health sector in Ghana and elsewhere and that their viral load and CD4 count were closely monitored. This was vindicated upon a review of the patients' treatment record forms in the various centres of treatment.

The study again found that apart from the ARTs utilisation, the participants resorted to other treatment modalities in their bid to managing the opportunistic infections and symptoms presented by the HIV/AIDS. That, the sources of these treatment modalities were chiefly self-initiated or self-care by individual victims. TM was commonly used for HIV by study participants (33, 53.2%). Patients were never prompted to discontinue accessing the ARTs as a conduit to rely entirely on the alternative treatment mechanisms. It was found that 85.4% of the participants had a perceived high degree of trust in the medical providers who offered them treatment services. Issues with discrimination, bigotry and stigmatisation were on the low as 3.2% respondents claimed to have been subjected to and suffered from such conditions as far as the activities of their treatment agents and health care providers were concerned.

3.3. Symptomatic Conditions of the Study Sample

Patients reported about the symptoms they experienced as a result of the affliction and infliction of HIV/AIDS. The top 10 symptoms, *inter alia*, body weakness, headaches, memory loss, chills, thirst, joint pains, depression, loss of appetite, fever and fatigue were reported. Multiple symptomatic conditions were experienced by all respondents and an estimated 71% of them reported having at least 4 symptoms at a time. It was however interesting to notice that technically, different symptoms were presented by TM users and non-users.

3.4. Utilisation of TM

Illness presentation and TM use was a common practice by HIV infected study participants. About 61% had never used TM prior to being diagnosed with the virus. However, respondents were more likely to utilise orthodox medicine than traditional medical therapies since the use of TM was not mutually exclusive. The sources, types, reasons for TM use and knowledge of conventional practitioners about TM use are presented in Table 3. Nearly, eighty-eight percent obtained TM from traditional healers not only in the Metropolis but elsewhere in the country. Relatives were more likely to recommend TM use to the people living with HIV. Herbal therapies were mostly utilised (70.0%) albeit, other forms of TM including faith/spiritual/prayer healing, exercise, over-the-counter drugs, etc, were obtained for various reasons, *videlicet*, pain relief (87.9%), immune supplementation (57.6%), stress relief (63.6%), improve overall wellbeing of victims (75.8%), etc. Knowledge about curing HIV/AIDS with TM was high. This is so because, 97% of the participants believed that TM could only manage HIV/AIDS but cannot cure the disease altogether. Clients were further asked whether or not they informed their conventional health providers about the use of TM. Most participants (93.9%) indicated non-disclosure of alternative HIV/AIDS treatment modalities and that their professional health care providers were not aware of such use of TM. However, they were ready to update the TH about the use of ARTs. Respondents were more likely to report using TM if they reside in rural areas.

4. Discussion

This study has investigated utilisation of TM by HIV/AIDS patients in the Kumasi Metropolis of Ashanti Region, Ghana. This is the first study addressing the use of TM in the prefecture by population with the disease. Majority of new HIV infections continues to concentrate in Africa and no country in the region, including Ghana is spared. TM has been a gizmo to scuffle the peril of the pandemic.

The survey has established beyond all reasonable doubts that TM was commonly used by the HIV infected persons attending the three anti-retroviral treating hospitals/centres in the Metropolis, despite its perceived risks. TM use was reported by 53.2% of the study participants which is consistent with other research reports in Africa (Dhalla *et al*, 2006; Kasilo, 2000; Wiwanitikit, 2003; Langlois-Klassen *et al*, 2007; Babb *et al*, 2007; Peltzer *et al*, 2008). In South Africa, Peltzer *et al* (2008) found that 51.3% of 618 HIV treatment naïve patients from three public hospitals in KwaZulu-Natal depended on TCAM. Langlois-Klassen *et al* (2007) reported similarly in western Uganda where majority of AIDS out-patients (N = 87, 63.5%) used TM after HIV diagnosis.

In this study, herbal preparations (23, 70.0%) were the main form of TM used by the HIV infected persons while majority of the study participants (88.0%) consulted and accessed care from the THs. This finding compares favourably with earlier studies (Peltzer *et al*, 2006; Langlois-Klassen *et al*, 2007; Peltzer *et al*, 2008; Hughes *et al*, 2012).

The potency of maintaining the health status of the patients and the relative cost-effectiveness are the cornerstone in the wholesome usage of TM care by HIV/AIDS victims. Moreover, most antiretroviral (ARV) drugs are found to be deficient. Inequitable access to these therapies, as well as the often exorbitant costs of conventional health care that impede frequent and/or sustained use, explain the continued and potentially increasing use of TM among HIV/AIDS patients (Burford *et al*, 2000; Geissler *et al*, 2000; Tsey, 1997). Improved access to ARTs in terms of cost and spatial distance is potential and prospected to reducing exclusive reliance and dependency on TM by the PLWA in the study prefecture (Langlois-Klassen *et al*, 2007). However, the government and stakeholders ought to evaluate the practices of the THs and offer them the necessary attention. The practitioners should be used as agents of communication in the efforts, programmes and strategies to skirmish the HIV/AIDS pandemic and its concomitant opportunistic infections, co-morbid illnesses and other symptoms.

Over 93% of respondents included in this survey indicated that they did not disclose any information on use of TM to their orthodox health care providers. The health care professionals were naive about herbal and other traditional medical modalities accessed by their HIV/AIDS infected patients. This compares with the findings of previous studies (Furler *et al*, 2003; Langlois-Klassen *et al*, 2007; Peltzer *et al*, 2008; Babb *et al*, 2007). Hughes *et al* (2012) reported that more than 92% among South African HIV infected outpatients chose not to report use of TM to their healthcare professionals. This disclosure is subject to fear of stigmatisation and any form of indoctrination that might arise from the orthodox health care providers that could be a contingent to treatment and mar the personal relationships with their doctors. This is based on the fact that there is mistrust between biomedical providers and TH. The former and other medical staff usually advice patients against adherence and use of TM (Wynia *et al*, 1999). For example, Ladenheim *et al* (2006) observed that among 54% HIV patients who discussed TCAM use with a healthcare provider, 11% of this cohort were advised to discontinue TCAM use either because of potentially dangerous side effects or the products could lower the amount of ARV in the blood. A further 14% were advised to use TCAM with caution because of potential side effects and risk of interaction with their ARTs. Patients therefore consider it unnecessary to stage over any discussion in this perspective. This may also reflect the poor concern and knowledge over the possible positive or negative drug-interaction between TMs and ARV drugs (Mar *et al*, 2008). Future studies on barriers to effective discussion on TM use between the physicians and the patients, and their clinical impacts, would be useful.

It is crucial to notice this finding. Concomitant administration of ARTs and TM may have the potency to increase toxicity early after initiation of treatment, while later on enzyme induction could result in sub-therapeutic ART levels. Negative effects can result from lack of communication between patient and health care provider (Southwell *et al*, 2002). The potential for adverse reactions and drug interactions requires that health care providers' awareness of TM use is critical to optimize patient care (Furler *et al*, 2003; Peltzer *et al*, 2008; Babb *et al*, 2007; Mills *et al*, 2005). It is important and urgent that, more open and effective patient-physician communication is prioritised. Leonard *et al* (2004) suggested that although patients' belief systems and views should be respected, health care providers need to convey the potential for adverse effects and drug interactions in relation to traditional therapies. Health care professionals ought to be fully notified about TM use for both HIV-related illnesses and other co-morbid conditions as part of their history taking and clinical assessments (Langlois-Klassen *et al*, 2007; Peltzer *et al*, 2008). This could serve as a conduit to avoiding serious adverse effects and negative interactions between the use of ARV and TM (Hsiao *et al.*, 2003; Ma *et al*, 2008).

The study found that chunk of the study participants reported a high degree of satisfaction with the orthodox medical practitioners and their medical practices. Patients therefore had no intention to discontinue antiretroviral treatment. This finding is vindicated by other previous surveys (Peltzer *et al*, 2008; Sutherland & Verhoef, 1995). This is key to easy access to ARV drugs and its attendant potential to scuffle the HIV/AIDS pandemic. HIV/AIDS-related stigma, discrimination and any form of bigotry have the potency to stifle the crusade against the pandemic. Efforts to strengthen and sustain patients' satisfaction and trust with health care providers are urgent. Traditional medical modalities such as herbal therapies, faith healing, spiritual therapies and exercises were utilised by the patients.

Among the major reason for use of these approaches of treatment were pain relief, stress relief, improving appetite, immune supplementation and to improve overall wellbeing. Furler *et al* (2003) found among HIV-infected outpatients in Ontario, Canada, that the most common patient-cited reason for TCAM use was general wellbeing, followed by relaxation, pain, stress, spiritualism and healing.

In British Columbia, Dhalla *et al* (2006) found among HIV patients that major reasons for TCAM use were to improve energy level, to supplement dietary intake and to enhance immune response. A survey found in USA that the most common treated conditions by traditional, complementary and alternative medicines were anxiety and or fear, depression, pain and neuropathy (Kirksey *et al*, 2002). Contrary to our results, other studies report that TM is used to alleviate some of the negative side effects of ARV drugs including nausea/ vomiting, anaemia, dizziness, insomnia, pain, skin rash, weight loss, diarrhoea and higher degrees of suffering (Chang *et al*, 2003; Langewitz *et al*, 1994; Ostrow *et al*, 1997; Astin, 1998; Langlois-Klassen *et al*, 2007). Only a few (3.0%) of the participants believed that they could cure HIV with TM. This is not different from reports of previous surveys. Peltzer *et al* (2008) found that 4.1% of 618 HIV infected South Africans claimed that TCAM could cure HIV. A study reported in Canada that 9% of study participants believed that it was possible to cure HIV solely with the use of TCAM (Furler *et al*, 2003).

The study revealed that PLWA experience serious symptomatic conditions. The top 10 reported symptoms of HIV/AIDS included body weakness, headaches, memory loss, chills, thirst, joint pains, depression, loss of appetite, fever and fatigue. This is similar to the findings of previous studies (Hughes *et al*, 2012; Voss *et al.*, 2007; Banda *et al*, 2007; Peltzer & Phaswana-Mafuya, 2008). In a study conducted in Botswana, Lesotho, South Africa, and Swaziland, Makoae *et al* (2005) found similar symptoms with the current study. Studies show that higher HIV symptom frequency was associated with more frequent TM use but not herbal therapy use. There is also an association between increased use of complementary therapies and higher degrees of suffering (Ostrow *et al*, 1997; Peltzer *et al*, 2008). Langlois-Klassen *et al.* (2007) also found that the majority of the AIDS patients in their study in western Uganda used traditional herbal medicine for fever and pain.

In this study, we found association between TM use and formal educational level. Other independent predictors of TM utilisation by HIV patients include place of residence and employment history of the patients. Respondents were more likely to report using TM if they reside in rural areas. TM use amongst those ever educated was found to be lesser than those never educated and amid employed were less likely to access TM as compared to patients who were unemployed. Other studies have, however, shown significant correlations between TM use and socio-demographic variables (Peltzer *et al*, 2008).

5. Study Limitations

The study was conducted in the three public hospitals in Kumasi Metropolis of Ghana. It involved HIV/AIDS infected patients accessing ARTs who have attained statutory age of 18 and over. Therefore our findings may not be generalizable to HIV patients outside the study prefecture and population cohort and those who have never accessed care from the public hospitals. Further research to determine the extent of TM use in other settings in Ghana would be useful, particularly as ART becomes more available.

The cross-sectional study design did not permit an investigation of the cause-effect relationship between HIV/AIDS and use of TM. Indispensably, recall bias of study participants be eliminated. Most of the study participants were not ready to avail themselves to be interviewed by the researchers partly due to the stigma factor associated with their conditions. The interviews of the study sample were therefore executed by external research assistants from the health facilities owing to the difficulty associated with interviewing by the researchers themselves. This might results in poor explanation of questions to the patients which may elicit with poor responses. Related concern is the fact that health care professionals continue to discourage patients on ARTs against TM use. This may prevent the patients from giving correct and unbiased responses. Another bias-laden condition regarding this study was the small sample size utilised. This has the potential to influence the study findings one way or the other. This makes generalisation of the finding a fiasco.

6. Conclusion

The study concludes that TM is commonly utilised by HIV/AIDS outpatients on ARTs in the Kumasi Metropolis. So long as they are safe and effective, TM may be considered more advantageous for developing countries as they are relatively cost-effective, more accessible and widely accepted by local populations.

Evaluation of traditional healers' role in the management of HIV is need and should be considered with urgency. Mechanisms that will enable the THs to be part of ARTs programmes and administration ought to be explored. However, concomitant TM use with ARTs may have the potential for drug interactions and should be discussed routinely in ARTs counselling sessions. An evaluation of the potentials of traditional remedies to interact with ARTs may be helpful in improving the clinical outcome of HIV patients. The clinical staff involved in ART dispensary and delivery need to inquire ardently about natural products that patient may use outside the regimen of ARTs, either self-administrated or obtained from TH. Further research option is suggested to investigate efficacy and safety of use of traditional therapies by PLWA and the pharmacological interactions between ARTs and TM. The need to identifying the potential risks, benefits, and interaction or non-interaction associated with concomitant ARTs and TM use is also recommended.

Strong links and collaboration amongst MOH, Ghana AIDS Commission, Universities and other research oriented institutions, civil society organizations (including NGOs, families, etc), TH and biomedical health managers are indispensable to improving health status, welfare and general wellbeing of the citizenry, particularly PLWA.

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Table 1: Sample Characteristics

Variable	Number (N=62)	Per cent (%)
Sex		
Male	19	30.7
Female	43	69.3
Age (in years)		
18-29	28	45.2
30-39	11	17.7
40-49	19	30.6
50 and above	4	6.5
Educational attainment		
None	17	27.4
Basic	21	33.9
Secondary/Technical/Vocational	14	22.6
Post-sec/Tertiary	10	16.1
Marital status		
Never married	37	59.7
Married	9	14.5
Cohabitation	14	22.9
Divorced/separated/widowed	2	3.2
Religious affiliation		
Christianity	42	67.7
Islam	4	6.5
African Traditional Religion	9	14.5
Others	7	11.3
Ethnicity		
Akan	34	54.8
Others	28	45.2
Residence		
Rural (outside Kumasi)	13	22.2
Urban (within Kumasi)	49	77.8
Employment history		
Employed	15	24.2
Unemployed	47	75.8
Parity		
At least one child	24	38.7
No children	38	61.3
Income source		
Regular	14	22.6
Irregular	48	77.4
Insurance status		
Yes	42	67.7
No	20	32.3
Living arrangement		
Alone	32	51.6
With relatives	8	12.9
With spouse	15	24.2
With friends	7	11.3

Table 2: Clinical Characteristics

Variable	Number (N=62)	Per cent (%)
<i>Period since diagnosed HIV positive</i>		
< 1 year	5	8.1
1-2 years	14	22.6
3-5 years	32	51.6
>5 years	11	17.7
<i>Period living with HIV/AIDS</i>		
≤ 5 years	34	54.8
> 5 years	28	45.2
<i>Cluster of Differentiation 4 Cells count</i>		
1-50	7	11.3
51-100	13	21.0
101-150	17	27.4
151-200	22	35.5
> 200	3	4.8
<i>WHO HIV stage</i>		
Stage I	30	48.4
Stage II	17	27.4
Stage III	11	17.7
Stage IV (AIDS stage)	4	6.5
<i>Cluster of Differentiation 4 Cells/ viral load count monitoring</i>		
Yes	61	98.4
No	1	1.6
<i>Number of symptomatic conditions</i>		
<5	46	74.2
5-9	13	21.0
10-14	3	4.8
<i>Other medical/clinical conditions aside HIV</i>		
Yes	14	22.6
No	48	77.4
<i>Degree of trust in conventional medical provider</i>		
High	53	85.4
Moderate	8	13.0
Poor	1	1.6
<i>Discrimination by health care provider</i>		
Yes	2	3.2
No	60	96.8
<i>Use of TM</i>		
Yes	33	53.2
No	29	46.8

Table 3: Use of TM

Variable	Number (N=33)	Per cent (%)
TM use before HIV diagnosis		
Yes	13	39.4
No	20	60.6
Who recommended use of TM		
Self	6	18.2
Relatives	14	42.4
Friends	9	27.3
Others	4	12.1
Administration of TM		
Self	4	12.1
Traditional healer	29	87.9
Types of TM utilised		
Herbal therapy	23	70.0
Faith healing	3	9.1
Spiritual/prayer healing	5	15.2
Physical/body-mind therapy	1	3.0
Others	1	3.0
Reasons for TM use		
Pain relief	29	87.9
Stress relief	21	63.6
Immune supplementation	19	57.6
Strength restoration	17	51.5
Improve appetite	30	90.9
Symptom relief	23	69.7
Improve general wellbeing	25	75.8
Curing HIV/AIDS with TM		
Yes	1	3.0
No	32	97.0
Informing orthodox health care provider about TM use		
Yes	2	6.1
No	31	93.9
Informing traditional healer about ART use		
Yes	15	45.5
No	18	54.5

Table 4: Association between socio-economic variables and use of TM

Variable	N (%)	Coefficient	P-value
Sex			
Male	20 (60.6)	0.277	0.083
Female	13 (39.4)		
Age (in years)			
18-39	21 (63.6)	0.283	0.538
40+	12 (36.4)		
Educational attainment			
Never educated	7 (21.2)	0.486	0.013**
Ever educated	26 (78.8)		
Marital status			
Never married	24 (72.7)	0.121	0.602
Ever married	9 (27.3)		
Residence			
Rural (outside Kumasi)	10 (30.3)	0.572	0.001**
Urban (within Kumasi)	23 (69.7)		
Employment history			
Employed	11 (33.3)	0.391	0.043**
Unemployed	22 (66.7)		
Insurance status			
Never	20 (60.6)	0.284	0.241
Ever	13 (39.4)		
			0.785

† Adjusted R²

** Significance

† Adjusted R²