

Indigenous Knowledge and HIV/AIDS Prevention and Management in Local Communities in Africa South of the Sahara

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Abstract

The aim of this paper is to establish role of indigenous knowledge (IK) on prevention and management of human immune virus/acquired immunodeficiency syndrome (HIV/AIDS) in local communities in south of Saharan countries. Published articles in books, peer reviewed journals and gray literature that focused on HIV/AIDS and IK in south of the Saharan countries were critical reviewed. Literature reviewed showed that traditional remedies helped many HIV/AIDS to cope with illness. Traditional remedies mainly from herbs, honey and psychosocial counselling arrested symptoms of HIV/AIDS that would lead to AIDS. Some of traditional remedies formulations had food components for patients who had no appetite. IK with its practitioners has a significant role to play on HIV/AIDS both in prevention and treatment. It can be captured, translated and be used for the general public for both in prevention and treatment among the HIV/AIDS patients.

Keywords: South of the Sahara; HIV/AIDS; Indigenous knowledge; Traditional remedies; traditional health practitioners; Nutritious foods

Introduction

In recent years, indigenous knowledge (IK) and human immune virus/acquired immuno deficiency syndrome (HIV/AIDS) is the main talk worldwide on health care and socio-economic development sectors [1-4]. There is no universal definition of IK [4]. However, Tanzania IK gateway [2] defines IK as “local or traditional knowledge that is unique to every culture or society, which sometimes influences local decision-making in different areas”. In some communities, IK is regarded as a problem solving mechanism to rural communities in case of conflict, building harmony within the family or community [1,4-6]. IK is recognized as having relevance to the daily life routine of most individuals, economic development, health, culture preservation and political transformation, which lead to poverty reduction [2,4]. It is embedded in community socio-cultural practices, institutions, relationships and rituals [1,4,7,8]. It has to be noted that IK is not biological inherited, but learned by observation and practical experience in community where one is born and brought up. This knowledge is transmitted from one generation to another either verbal or in writing [1,2,4].

Like other knowledge, IK as system is dynamic. New knowledge from technological development and innovation within and outside the community is continuously being added accumulated and internalised in day to day's activities in a community [1,2,4,7]. Further, the community adapt and use external knowledge to suit local situation and socio-cultural practice [2,4]. The quality and quantity of knowledge that individuals possess vary with age, education, social and economic status, daily experience, outside influence, roles and responsibilities in the home and the community, profession and available time [4,6,7]. In addition, it is being influenced by aptitude and intellectual capability, level curiosity and observation skills, ability to travel and degree of autonomy and control over natural resources [2,9]. In general IK is implicit knowledge; and thus difficult to systemize.

Even though, each member in an ethnic group has rights to draw from common heritage, perfection and protection of valuable folk information is often treasured heritage of certain families [3,4,9]. In some cases it is restricted to specially gifted or ordained members of community such traditional health practitioners (THPs), traditional

leaders as Mwene among the Wasafwa ethnic group and others key people [2,7,9]. These are custodians of special knowledge in healthcare in the community [5,9]. In human healthcare, IK has a significant role in nutrition, human disease classification systems, traditional medicine (TRM) and the use of herbal remedies in treatment of disease/illness [1,2,4,6]. IK helps to show location of effective medicinal plants and proper time of collection [9]. Further it helps to show the most useful parts, methods for preparation and sorting medicines [2,4,9]. But these need special skills to be learned gradual. However currently there is problem, because most of the youths are not interested in IK. Only few performing artists, picture drawing as “*Tinga tinga*” in Tanzania and sculpture artists attempt to capture some IK to fit in their dreams.

HIV/AIDS, on the other hand, is a worldwide documented as public problematic health problem both in prevention and treatment especially in developing countries [10,11]. HIV is the virus that causes AIDS [12]. This virus is passed from one person to another through blood-to-blood and sexual contact [12]. In addition, infected pregnant women can pass HIV to their babies during pregnancy or delivery, as well as through breast-feeding. AIDS slowly destroys the body's immune system. According to Gillespie [12] this virus attacks the immune system, the body's “security force” that fights off infections. When the immune system breaks down, the patient loses these protection immune systems and can develop many serious health problem, often deadly infections such as cancers, diarrhea, fungal, herper zoster, etc. which are referred as “opportunistic infections” [10-13]. Most of these people will develop to AIDS as a result of HIV infection progression in human body. Without important defenses mechanism in human

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Received November 29, 2012; **Accepted** January 16, 2013; **Published** January 21, 2013

Citation: Kayombo EJ (2013) Indigenous Knowledge and HIV/AIDS Prevention and Management in Local Communities in Africa South of the Sahara. Pharmaceut Anal Acta 4: 204. doi:10.4172/2153-2435.1000204

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body, a person with AIDS can't fight off germs and cancers [12]. Above all, the disease touches the socio-cultural practices related to taboos on sexuality and shame when considered how one acquired it. HIV/AIDS is a highly stigmatised health problem worldwide since its onset; and this creates difficult in both intervention and treatment.

HIV/AIDS has spread all over the world, killing many people and leaving a huge force of orphans [10,11,13]. UNAIDS [10,11] statistics show that in developed countries the problem of AIDS is on the decline. In developing countries on the other hand, there is slight decrease of HIV infection in some countries and an increase in others [10,11]. The latest UNAIDS [11] estimates of 2010 worldwide show that the number infected people with HIV/AIDS is 33.3 and caused death to 1.8 million by 2009. Further, 1.8 million adults and children were newly infected with HIV.

UNADS report of 2010 shows that it is being estimated that 89% of HIV/AIDS patients are in developing countries. Approximate 67.6% of this is from the sub Saharan Africa; and most of whom being of age 15-49 years [10,11,13]. However there are no statistics available in Africa south of the Sahara that show the proportion of old people (50 years and above) who are infected with HIV/AIDS. It is very likelihood that there is a good proportion of old people who are infected with HIV. For instance, in Kenya, Nairobi slums 5% of the infected people are old people above 50 years [14]. Thus it might be a more or less the same proportion of old people who are HIV positive in African countries south of the Sahara. Of all types of sexes that had led to HIV infections, heterosexual sex accounts for the majority of HIV infections [10,11,13,15]. It should remembered these are not exact figures because many people in African countries south of the Sahara do not test themselves, die in their home villages/towns and unrecorded or related HIV disease not recognized by doctors [15].

In Tanzania, on the other hand, it is being estimated 1,400,000 people are HIV positive [15-17]. Of these 70.5% are young adults aged 23-45, 54.6% are women aged from 15-49, 15% are children aged 15-24 and 11% are children aged from 0-14; and 96,000 have died because of HIV/AIDS leaving a huge force of 1,300,000 orphans [15-17]. The age structure infected with HIV in Tanzania reflects to other African countries south of the Sahara [10,11,13].

Since the onset of HIV/AIDS in African countries south of the Sahara has initiated and implemented many strategies for both prevention and treatment [10,11,13,16]. Some of these strategies are; awareness creation on HIV, VCT service and treatment of the affected people including PMTCT service [10,11,13,16,17]. The impact of all these is high level of awareness of HIV/AIDS. But it is not known the magnitude of the African population who have comprehensive knowledge of HIV/AIDS in terms of transmission and effective methods for prevention.

The intervention of HIV/AIDS needs comprehensive strategies that involve all stake holders in healthcare and the general public in general on how to take measures of prevention and treatment for those who are infected. For example, even though it is being known that more than 70% of the African population are treated by traditional health practitioners (THPs) who are the guardians of IK [3,5,9]; are not included in the intervention strategies. Focus has been mainly to the conventional medical personnel. Where necessary THPs are only included in awareness creation to their clients. In recent years, UNAIDS and WHO turned their eyes to THPs if they have anything to offer on HIV/AIDS. Number of studies has carried to THPs on the remedies used for management of HIV/AIDS. Based from these studies the questions we are asking include:

1. Is it true that IK with its practitioners has no role to play on HIV/AIDS both in prevention and treatment in an affected community; and that is why they are not included in the intervention programs?
2. If IK with its practitioners has a role to play; can it be captured, translated and be utilized at a wide scale at least to delay development of HIV patients to AIDS, relief and alleviate the suffering from HIV/AIDS?
3. The aim of this paper is to answer the raised questions by using literature search.

Methodology

International documents from UNAIDS and WHO, published articles in books and peer reviewed journals as well as gray literature that focused on HIV/AIDS and IK in African countries south of the Sahara were critical reviewed in order to establish the role of IK in both prevention and management of HIV/AIDS infected patients. The findings were summarised and are presented below.

Results

Forty two documents including international documents from WHO and UNAIDS, peer reviewed articles in journals, books and gray literature that focused on HIV/AIDS and IK were critical reviewed and analysed.

Indigenous knowledge and management of HIV/AIDS

The analysis of the findings showed that Africa south of the Sahara was home to roughly 605 million people (9% of the world's population), most of them (80%) lived in rural areas [18]. About 70% of these people were working in farms and were not able to feed most of the people [18]. Again most of the countries south of the Sahara have limited options for conventional healthcare [18,19]. It becomes worse with the increasing HIV infections and other infectious diseases which were becoming periodical [18,19]. In some parts of African countries south of the Sahara, a single health facility served as many as 350,000 people, and the ratio of doctors to inhabitants was 1:50,000 [20-23]. Even among those who could afford the modern health treatment, healthcare could be seen as a luxury [15]. There was no wonder to see many patients to THPs with different age group, level of education and occupation seeking healthcare; as an option or as an alternative after the failure of the conventional medicine [3,5,21,22,24]. Again, because of the stigma attached to the HIV/AIDS some people did not want to be known by their peers; and hence, resort to THPs as the best option for concealing the health problem suffered [5,25].

The problem with HIV/AIDS is the multi symptoms of the diseases; and these puts the clients at the crossroad where to seek the right treatment at the right time [3,8,14]. For instance, in reviews it was learnt that some of the symptoms of HIV/AIDS were common ailments which people suffered in the communities and could be treated by popular common known traditional herbs in the popular health sector [3,5,12]. These symptoms included over breeding during the monthly period for women, dizziness, diarrhoea and coughing [3,5,11] to mention few were being managed by known traditional herbal medicine in the community [3,5,22,25-27]. Most of the people would use the known herbal remedies to treat such ailments. When the illness did not respond to these remedies, then the patient either went to *maduka dawa* (pharmaceutical stores) or to THPs or to dispensary depending to the believed cause of the illness/disease [1,5,6]. Kayombo

[5] in his study found that there were more males (56.1%) who sought health care to THPs than females (43.9%). But Kayombo [5] findings deferred from the HIV/AIDS and Traditional Medicine a project carried by the Institute of Traditional Medicine (ITM) in 2003-2005 of Muhimbili University of Health and Allied Sciences (MUHAS) in Arusha and Dar-es-salaam where it found 79.1% were using THPs for treating HIV/AIDS were females [28]. The main reasons for using traditional medicine products of IK were stigma attached to the disease and shortage of drugs a common problem to many health facilities in Tanzania and other African countries in the rural areas [5,10-12].

The role of IK through THPs in managing HIV/AIDS has been documented in many literatures [2,3,5,11,20]. For example, Tanga AIDS working Group have treated over 5000 AIDS patients with opportunistic infections using herbal medicine [27]. Project manager of Tanga AIDS Working Group, has shown that herbal remedies had increased appetite, gained weight, stopped diarrhoea, reduced fever, treated oral thrush, resolve skin rashes and fungus, cure herpes zoster and clear ulcers [27]. Most patients reported seeing positive results within 7-30 days during the treatment. In addition, Tanga AIDS Working Group has become the referral centre for patients who came to hospital for testing, treatment or counselling [20,27]. In collaboration with THPs, Tanga AIDS Working Group has identified three efficacious herbal remedies. It has developed these herbal plants for the treatment of a variety of ailments commonly associated with HIV/AIDS.

The HIV/AIDS and Traditional Medicine Project [28] of the Institute of Traditional Medicine (ITM), Muhimbili University of Health and Allied Sciences (MUHAS) on other hand reported 155 HIV/AIDS were being treated by THPs in Dar-es-Salaam and Arusha [28]. The findings from this study have shown over 70% of the clients had clinical symptoms like headache, dizziness, abdominal pain, vomiting, herpes zoster, skin rashes and diarrhoea [28]. All these were being managed by THPs. In the period of study no serious side effects of the traditional remedies were reported [28]. In collaboration with THPs, the ITM of MUHAS has come with five formulations from herbal remedies. These were cough mixture, *morisela* for various opportunistic infections, *Alovera* cream for skin infection, *tumbo* mixture for stomach ulcers, *ini* remedy for liver infection. Again Kayombo et al. [22,29] in East African Network of Traditional Medicine and Medicinal Plants project (2004-2008) have shown that health workers in rural areas reported most of the HIV/AIDS patients went to THPs because there was no drugs to alleviate the suffering of different ailments in their respective health facilities. Also Kayombo [5] in his study in Njombe District documented several herbal plants that were used to treat AIDS and AIDS related patients. These patients got relief from the pains and symptoms were eliminated. Further Kayombo [5] has shown that during the home visit some of patients were seen to be engaged in socio-economic activities after getting relief from the pain.

Not only in Tanzania but also studies on IK done in Kenya showed THPs managed more than 48 conditions including opportunistic infections such oral thrush [3,30,31]. Further Burford and Boderker [32] in Uganda reported that herpes Zoster could be treated with herbs that worked more rapidly and had fewer side effects than Acyclovir, the conventional treatment for herpes Zoster. Also *Warburgia salutaris* was found to be effective against opportunistic fungal infection and respiratory infection [32]. Besides the above, Eamonn [33] in his work in Ethiopia has shown that women used plants to treat AIDS related opportunistic infections. *Azadiracta indica* plant has shown positive

results on HIV/AIDS [34] suggesting that the plant might be useful immunopotentiating agent that may help HIV/AIDS patients to arresting opportunistic infection. Ministry of health in Zambia has allowed Godfrey Shilalukey to operate from the largest hospital in Zambia, the University Hospital (UTH) as an alternative healthcare provider for HIV/AIDS [33].

The use of traditional herbs is not only in Africa, but also in developed countries. For example, in United States of America people with HIV use many kinds of alternative approaches including traditional herbal medicine [35-38] to delay AIDS. Many HIV infected patients look for complementary medicine as a way to prevent or relieve AIDS treatment side effects; because some of side effects are not easily treatable with conventional medicine. There was a growing demand for complementary therapies that might boost immunity, relieve stress, or improve general health and wellbeing [37,38]. Eiznhammer et al. [39] have argued that scientists have already identified one plant extract that acts like an antiretroviral drug. It is possible that there are others as well. Studies need to be carried to assess some of claimed herbal remedies to have a positive effect to HIV/AIDS patients and establish the dose.

Despite many HIV/AIDS patients visiting THPs for seeking healthcare as shown in studies reviewed, some of the bio medical practitioners were still pessimistic on using traditional herbs for treating HIV/AIDS. For example one of the experts in immunology of UTH argued he wanted to know what components of medicine neutralize or deal with the virus. But human body is complex and the present scientific knowledge cannot explain everything on health. There is a lot in IK which cannot be explained by the present scientific knowledge. Also it has to be remembered that every simple treatment to HIV/AIDS prolongs life of the patients [12].

In addition these herbs might be delaying HIV patients from developing AIDS, strengthening the immune system, help to reduce stress, maintaining good nutritional practice and appropriate exercise regulation [38]. In the Workshop held in Nairobi on HIV/AIDS and Traditional Medicine a study by the ITM, MUHAS revealed that several plants that were indicated for treatment of HIV/AIDS and opportunistic infections from THPs, some of them have subsequent been shown in laboratory test to contain molecules effective in inhibiting HIV replication [28]. These results supported Eiznhamer et al. [39] argument that there were some herbal plants that might have ARVs ingredients. That is why it is being strongly argued that in the intervention strategies should also include IK with its practitioners.

Above all, an important aspect, which was most forgotten in biomedicine practices, was the importance of spiritual and cultural aspects in taking care the patients. It is only in recent years these aspects were being acknowledged in developed countries in the biomedicine practices. In IK, these aspects were central in healing process with focus psychosocial healing that focuses at setting the mind of the patient at peace. While the author was in the fieldwork he observed THPs were offering prayers, special methods of collecting plants at different times in 24 hours of a day. Further they instructed the herbal remedies as human beings what they should do to the patients [5]. It seems psychosocial healing accompanied with rituals was crucial in the healing process of HIV/AIDS and other diseases/illnesses [6,8,7,40]. Further, it was noted that psychological and spiritual counselling were important aspects when faced with disease that carried a high social stigma [28,40]. All in all there was wide spread agreement that holistic approach was of great importance in treating HIV/AIDS [5,8,36].

Indigenous nutritious food and HIV/AIDS

Nutrition plays a critical role in comprehensive care and support for people living with HIV/AIDS [21,41]. Literature reviewed showed that nutritional interventions could help to manage symptoms, promote response to medical treatment, slow progression of the disease, and increase the quality of life by improving daily functioning [21,41-43]. Further literature review showed that some remedies used by THPs, the media for administering was food. For example, Kayombo [5] and HIV and Traditional medicine HIV project [28] have shown that most of THPs' remedies were administered with either honey or *uji* (thin porridge) mainly from finger millet or with juice from traditional fruits as media. It was being acknowledged that natural juice and traditional foods were very important in medical system of AIDS patients if well managed [21,41-43].

Again, a study at Mefopla centre in Bamenda-Cameroon has shown the immune system of AIDS was boosted by indigenous plants with enzyme rich in food [41-43]. This included oils from plants like soya, cashew and shear butter saturated fats, wild fruits, vegetation with high fibre content, which the patients were encouraged to consume. These were helpful in cleansing alimentary canal system [41-43]. Furthermore foods or substances derived from foods (garlic, Chinese vegetables, bitter lemon, turmic) vitamins, minerals and amino acids were also used to boost immune system [41-43]. Studies have revealed that HIV infected persons with inadequate nutrition were likely to have an increased susceptible to opportunistic infections and more rapid disease progression [39,41-43].

Conclusion

Even though IK with its practitioners are neglected in healthcare, literature reviewed show that they have a significant role to play both for prevention and treatment of the HIV/AIDS infected peoples. The scarcity of many essential drugs including anti-retroviral drugs in rural and also in some urban centres in developing countries means that most people will continue to use traditional herbal treatments for HIV related conditions including opportunistic infections [22,30]. The reviewed literature suggest IK remedies can be captured translated and be utilized to the general public. Thus, there is a need to identify the useful herbs, which can be used to inhibit dissemination of HIV/AIDS and treat HIV/AIDS patients as shown by Tanga AIDS Working Group and the ITM [27,28]. The identified herbs should be screened for toxicity level and some possible side effects. If the side effects are not significant, make them for public consumption after establishing standardized dosage. Dosage of TRM is a common cry from biomedicine and some researchers [22,29]. The Chairman of Tanzania AIDS Commission on discussion about the results of ITM HIV/AIDS and Traditional Medicine Project had this to say:

"Herbal remedies that have shown to reduce and clear symptoms of HIV/AIDS, develop dosage and give to infected HIV patients in order to delay the development to AIDS.

However researchers should continue doing the scientific work of developing the drugs".

THPs are the main providers of health care in rural areas in African countries south of the Sahara. These THPs could also be enlisted to work on preventive AIDS programs like PMTCT condom distribution and sensitization on sexual transmitted disease. Further THPs could help demystifying HIV/AIDS propaganda, use of condoms and reducing risk socio-cultural practices such as wife inheritance;

cleansing ceremonies to widow (socio-cultural practices in some African communities) and stigma including the use of ARVs. Above all, THPs could improve in management of HIV/AIDS particular with respect to nutritional advice, spiritual emotional and counselling as shown in literature reviewed.

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